

# Liberal Arts in a Future Tense

Written by A UCHRI Working Group






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**Original Graphics, Illustrations & Designs by Sonaar Luthra & Sarah Szalavitz**



# Liberal Arts in a Future Tense

How can the liberal arts enable students to navigate and counter social worlds shaped by disinformation and fracture? *Liberal Arts in a Future Tense* is a call to design institutionally agile liberal arts ecosystems in which individual flourishing and collective wellbeing are creatively enabled by commitments to the social good.

## 1. Making the Case

For much of their existence, universities have been recognized as the principal institutions where knowledge is formed. Historically, knowledge proceeded outward from universities to the world at large. Today this terrain appears to be thrown into uncertainty. Over the past two or three decades, as sources of authorized knowledge production have spread beyond its walls, the epistemic authority of the university has come under skeptical attack. Some [have argued](#) that even as it has become increasingly entangled with the state, the global knowledge economy, and technology, the university has resisted responding to the changed environment in which it operates. State and federal government funding, along with its diversifying stakeholders and constituencies, have brought institutions of higher education into the ambit of civil rights and equity legislations and regulations, while also subjecting them to greater public accountability. At the same time, many of the contemporary university's financial logics drive it away from the public towards profit and privatization.

On these counts, if the fate of the humanities has signaled a larger set of challenges to the university since at least the financial crisis of 2008, today it is clear the predicament is not that of the humanities alone. The proliferation of [Black Lives Matter](#) and [feminism](#) in the natural sciences, like renewed interest in [geology](#), [climate change](#), and [neuroscience](#) in the humanities and social sciences reveals anew what we have always known: politics, science, culture, and society are thoroughly entangled. Beyond the academic interests they share, humanists, natural, and social scientists are fast discovering how implicated they are in the wider socioeconomic and cultural fluxes affecting society. From (student) debt and racial justice to decarbonization and the future of democracy, the academy is no longer sustainable as a space of disinterested reflection. At a time like this, it is not

out of place to ask: What kind of institution is the university? And what forms of thinking, practice, and futurity does it invest in?

For many of its defenders, the liberal arts have something positive to contribute to this conversation by training students to think critically, engage others with empathy, and influence the world conscientiously. Taken as a proxy for the humanities, in such a view the liberal arts are advocated for offering 'soft skills' that foster 'well-rounded' individuals who can live up to ideals of productivity and citizenship. There are three reasons we do not advance this argument, even if we share some of its concerns.

First, we see this position as primarily a defensive one. It begins from a premise where the value of the liberal arts are believed to require justification, which puts one in the position of apologizing for the formation not being as empiricist as some fields in the social and natural sciences. Instead, we do not offer a defense of the liberal arts, but clarify with precision the capacities, skills, and habits of mind and body that defenders of the liberal arts claim for themselves: empathy, critical thinking, flexibility, problem solving, and the like. If these are the primary qualities bequeathed by a liberal education, then what do we mean by them? In what way do the natural sciences, for instance, *not* train one to think critically? How do the social sciences fail to equip students with the ability to solve problems with agility?

Second, we think the position outlined above draws distinctions between the liberal arts (taken as a proxy for the humanities), on the one hand, and the social and natural sciences, on the other. In our view, this distinction is not only unproductive. It is also false. The liberal arts have traditionally indexed learning that occupies the intersections and interstices of the natural, human, and social sciences—not an artificial divide separating them. As a result, our effort is to return the liberal arts to its own kind of intersectional habitation: between disciplines not across, threading like fabric not connecting like a bridge. In taking such a view, we speak simultaneously to the history of the liberal arts as well as to its future. If sciences we now consider to be discrete have historically overlapped more than we care to admit today, their future, too, lies in such entwinement. For none of the most urgent challenges confronting the world—from racism to climate change—can be responded to from within disciplinary boundaries. Some older notions of expertise, many of which the academy continues to cradle, are no longer terribly useful.

Relatedly, third, we suggest that the conventional defense of the liberal arts invests too much and too uncritically in an image of the morally good, well-rounded individual as the horizon of its success. What does well-rounding amount to? And why is it the task of formations *other* than the natural and social sciences to (merely) round people off? Is this all, or the most, we can say about the virtues of the liberal arts—that it rounds off the person other fields make? Setting aside its modesty, the claim also simplifies vibrant debates within the human and social sciences on matters like [morality](#), [freedom](#), and [citizenship](#). Once we return the liberal arts to its home within the social, natural, and human sciences, we can inquire into the conditions that separate these disciplines in the university in a way they rarely are in lived experience. Consider the virus that has disrupted planetary life since 2020. Consider pollution. Factory farming. Nuclear waste. Poverty. In which of these domains can we sift the social from the natural? In which can we say with confidence that only one, discrete domain of expertise is sufficient?

Without coming to terms with this question, we are like Carol White, the affluent Southern California housewife played by Julianne Moore in Todd Haynes' prophetic 1995 film, *Safe*. She is plagued by an enigmatic illness situated on the borders of the environmental and psychological that escapes both her understanding and that of experts because neither can fully come to terms with the possibility that psychology, society, and environment are not unrelated domains of existence, despite how hermetically-sealed their study is.

Another word for being able to see the interconnection of these disparate elements and forces is [ecology](#). Here interconnected parts move, in sync and in disharmony, as components of a system. So, it would be wrong to say humanists have a monopoly over critical thinking and empathy, just as it would be wrong to say the future of democracy is not a concern for biologists and mathematicians. The churn around us—where science and politics are thoroughly entwined, and where the university can no longer project itself as a space of thoughtful reflection away from the concerns of the world—is a good one for reassessing where we stand. For envisioning vibrant, ecologically interconnected futures of learning. Futures that do justice to the complex textures of ordinary life.

There are many places you can look for quantified versions of the stories we tell. Our endeavor is not to convince by numbers but to make a case. The case, in the words of the late literary and cultural theorist [Lauren Berlant](#), is “a genre that organizes singularities into exemplary, intelligible patterns, enmeshing realist claims ( $x$  really is exemplary in this way) with analytic aims (if we make a pattern from  $x$  set of singularities we can derive  $y$  conclusions) and makes claims for why it should be thus. It is a professional genre pointing to the form information takes so that it can be judged: legal case, medical case, a thing that merits interpretive recontextualization.”

Arguing from an instance—making a case—is an accepted and established form of reasoning in many disciplines, especially in the human and social sciences. Many defenses of the liberal arts, too, take the form of particular cases: stories of success and failure, personal narratives and biographical accounts of life within and beyond institutions of higher education. Though we emphatically argue for the importance of statistical and information fluency as an essential skill for thriving in the world, we home in on specific events, trends, and encounters. Before COVID-19 effectively rendered travel and in-person meetings all but impossible, we were set to conduct case studies and interviews to bring forth a range of exemplary practices that operationalize elements of a future-oriented liberal arts ecology.

Once the pandemic made such visits unviable, we shifted tracks to combine site visits with a more generalized yet fine-grained assessment of the landscape of higher education. To this end, by combining site visits and focus group interviews with interpretations of popular discourse, we advocate in this report for *reading*—texts as much as people, institutions, and problems—as a skill essential in the world today. This approach became especially helpful as discord about campus culture increased with debates on pandemic restrictions and the fallout of a summer of antiracist protests that affected everything, from funding to curricula. These matters bubbled to the surface with particular ferocity in a year when conventionally held (and [erroneous](#)) views of the academy as a hotbed of liberalism took hold with ease. Arguably, one critical matter at stake in these debates is our collective culture of evidence.

How can two people encounter the same facts but come away with differing—opposing even—points of view? Were they simply not, in fact, privy to the same facts? Or did they interpret those facts differently? If the

latter, then what factors influenced their capacity to correctly interpret the data? Is giving people access to better information, and teaching them how to make sense of it a sufficient response to this situation? Or is the matter trickier because one's capacity to receive and interpret data is not only related to skill but also to patterns of socialization? And what makes us so sure we have it right—that it is other people who lack the analytical clarity offered by critical thinking? How can we teach students to accept the trustworthy authority of news media, policymakers, and scholars when it is precisely their authority that has come under scrutiny?

These are some of the questions we address in these pages. And these are questions we feel equipped to address *because* we begin from the case, the example, the instance—attending to aspects missed in broad overviews or quantitative analysis.

In a sense, this report is an exercise in what sociologist Erving Goffman called “[frame analysis](#).” The term references mechanisms by which people organize their experiences: what they choose to focus on, and what is excluded from their fields of vision. Frames are just as easily derived from social institutions as dictated by personal experience. Taking this view, we develop a layered analysis grounded in a picture of people as psychologically complex entities, whose reasons for acting cannot be explained by superficial indicators like how empathetic or culturally knowledgeable they are. Reframing the problem this way, we understand the predicament of the liberal arts not simply as a matter of structural limitations like tuition costs, debt, and career prospects, but also as a product of how we talk about the liberal arts in public discourse.

By offering particular cases as ways of articulating a general problem about the liberal arts, we are inspired by WEB Du Bois who, in philosopher [Nahum Chandler's rendering](#), understood the historical and global establishment of racial distinctions through the exemplarity of the African-American subject: “Is it possible for the most particular or ‘subjective’ history to tell the most general of truths, perhaps precisely because such histories do distort, or magnify, and so on, in particular sorts of ways?” Spelling out the significance of the method, he argues that “the study of the making of African-American subject positions, identities, or histories . . . is one of the best historical sites of study for clarifying the most general social processes of our time.”



Far from being impoverished compared to quantitative methods, by diving into specifics, frame analysis and exemplarity reveal elements hidden in aerial overviews. The big picture may provide a bird's eye view of the terrain. However, to live and thrive on any territory, we have to know and experience it, to understand its environment with the disposition of inhabitants as opposed to surveyors. Only then can we make sense of what the big picture misses about the details of our everyday life, and how those details let us see the picture differently.

## 2. Shuffling the Deck

In January 2021, a [\*USA Today\*](#) opinion column reflected on the COVID-19 pandemic and its lessons for medical practice. David J Skorton, president and CEO of the Association of American Medical Colleges, and Lisa Howley, its senior director of strategic initiatives and partnerships, argued that

In historical terms, our present era of hyper-specialization in medicine and far beyond is an anomaly. So is the de-emphasis we're seeing on liberal arts programs in favor of science, engineering and other disciplines that promise a greater bang for the buck, vocationally speaking. But today, perhaps more than ever, health professionals must be able to draw from many disciplines.

What is signaled when two senior administrators associated with a national medical consortium turn to the liberal arts to suggest that “science in itself is insufficient” for addressing the social, cultural, and medical effects of COVID-19? What is the significance of this invocation of the liberal arts and its ethos in trying to understand myriad dimensions of a pandemic that has definitively exposed the connection between medicine and society: from the development of effective therapeutics to their contestation and politicization in the public sphere?

Those partial to the liberal arts might take comfort from scientific and medical authorities justifying and valuing humanistic practice, our ways of being in and engaging with the world. We might rest easy in the knowledge that specifically humanistic virtues—critical thinking, empathy, problem solving, cultural knowledge, creative thought, speculative reasoning, narrative, etc.—are finally being recognized by those outside our disciplinary specializations. But, of course, Skorton and Howley's claims are neither uncommon nor unusual. Most celebrations and justifications of the liberal arts take recourse to such language, restating the necessity of skills like critical thinking without ever clarifying how such skills are specific to a liberal arts education. Should we, then, rest satisfied that medical professionals and scientists are recognizing the worth of the liberal arts (used, in these contexts, interchangeably with the humanities) in a time of global crisis? Or is this an opportune moment to *specify* precisely how a worldview shaped by the liberal arts can decisively impact the ways in which we grapple with urgent global and local challenges?

COVID-19 provides an object lesson in problems falling squarely between the social, the natural, and the technological. Once scholars, journalists, policymakers and the informed public began assessing the social and cultural dimensions of the pandemic in the summer of 2020, popular discourse was flooded by reports and thinkpieces remarking on, for instance, the racially shaped toll of the pandemic—in terms of both the patients dying and the medical professionals striving to save them. Unsurprisingly, Black and Brown people precariously employed in healthcare, service work, and the gig economy were most perilously exposed to the virus. Many of those affected had no insurance or access to healthcare. The situation of undocumented workers was, doubtless, worse. From prisons to meat-packing plants, the coronavirus spread through the nation’s carceral and logistical infrastructures, exposing how thoroughly inequality and violence define life for millions of Americans. Almost overnight, the entire planetary economy was thrown into turmoil, with millions of workers rendered further precarious or unemployed. Who could possibly have seen this coming?

Arguably, liberal arts scholars with some proficiency in humanistic and qualitative social scientific methods did see aspects of this coming. For anyone familiar with the decades-long work critical race scholars, feminists, literary theorists, and science and technology studies experts (among others) have done, the racially structured fallout of COVID-19 was something of a foregone conclusion. Even as the public was newly introduced to terms like ‘comorbidities,’ scholars of [environmental racism](#), [architects](#), and [urbanists](#) could have pointed to entire bookshelves diagnosing how race, toxicity, and economic injustice have, for long, been cross-hatched in the United States. Even as opinion columns were populated by writings about domestic violence, depression, and (house)work for women escalating in lockdowns, [feminist theorists](#), [philosophers](#), and [poets](#) could have unveiled libraries of work on the sexual division of labor underpinning the modern economy. Even as experts puzzled over vaccine hesitancy, [historians](#), [sociologists](#), and [cultural theorists](#) could have proffered elaborate accounts why different social groups, for different reasons, express skepticism about science. Even as pundits lamented the broken state of contemporary capitalism, [political economists](#), [literature scholars](#), and [anthropologists](#) could have invoked generations of work unraveling dangers of industrial monopolies, insecure labor practices, and the lack of social safety nets.

In saying this, we are not claiming an inherent superiority on behalf of the liberal arts. Rather, we are suggesting that a liberal arts way of knowing entails a relational approach to problems that appear to be isolated in particular areas of expertise. And it entails a practice that draws generously from varied fields of expertise cutting across disciplinary formations. Beyond the acquisition of 'soft skills' like problem solving or empathizing with the pain of others, a rigorous, innovative, and purposeful training in the liberal arts equips people with the tools to better comprehend their world as composed of interlocking *systems* where histories of discrimination based on racial, gendered, and national identities are threaded into banal repertoires of everyday transactions.

Grounded in a holistic assessment of culture across disciplinary and ideological boundaries, such a perspective is essential for thinking about and acting on the most urgent problems of our time. Climate change, for instance, can hardly be relegated to a concern limited to the environmental sciences. From denialism and the covert machinations of fossil fuel companies to the dismantling of [petroculture](#) in favor of a renewable economy, it is obvious how an ostensibly scientific and technological problem is constituted by political economy, cultural conditions, histories, states of mind, and beliefs. We could make similar claims in numerous other arenas: is the fight for a fair living wage primarily an economic struggle, or does it also require the development of cultural consensus on the rights of the working-class? Can we stem rising tides of mis-and-dis-information simply by breaking tech monopolies and circulating good, reliable information, or will any effort to combat fake news have to remain attentive to how cultural common sense is [manufactured](#)?

Few matters of common concern can be sequestered in specialized corners of society where narrowly-trained experts attack the problem at hand. Quite the opposite. Aside from reinforcing the fundamental interconnectedness of life in reassuring and terrifying ways, COVID-19 has brought us to the brink of a different world. There is no going back from where we have arrived, for any desire to return to the world prior to the pandemic would also be a desire to return to the structural inequalities, systemic, and infrastructural failures that contributed to the upheavals of 2020. Any path forward must simultaneously learn the lessons of that year, and conjure futures where collaboration across heterogeneous formations can thrive. For these reasons, this is perhaps an important moment to realize a new model of the

university—an institution that has, in many ways, stopped working for those it should serve most.

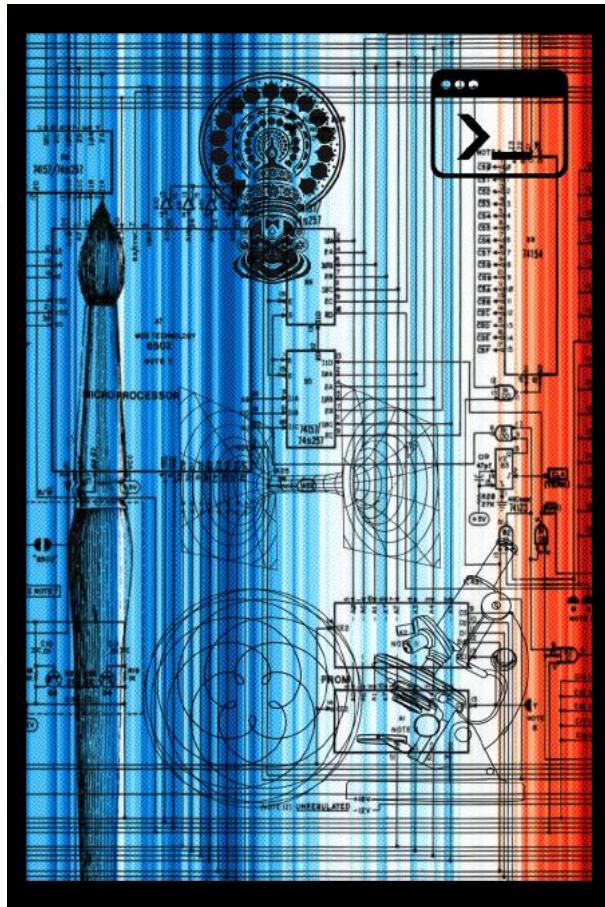
In fact, work offers a useful axis for reconceptualizing a future-oriented liberal arts ecology impacting curricula as well as the institution as a whole. Ever since the crisis in (public) universities led to increased tuition costs and student debt, cuts to humanities and liberal arts programs, and the adjunctification of the workforce, we have encountered instrumental defenses of the liberal arts and humanities. Contrary to popular perception, the soft skills provided by these disciplines, their defenders argue, are in great demand among employers beyond the academy. Transferable skills, such reasoning goes, give financial value to disciplines like art history, literature, and film and media studies by allowing students to capitalize on their capacity to think critically, parse complex information, and solve problems without easy answers. Many of these arguments are valid and necessary to proliferate into public discourse. Nevertheless, assuming a defensive posture, they justify the liberal arts for offering skills compatible with the established, unequal, divided societies we inhabit. Moreover, this defensive position again misleadingly conflates the humanities with the liberal arts.

Our intention, by contrast, is to argue for a systematic reframing of how the liberal arts are thought of and enacted in departments, programs, and indeed beyond the university. To this end, we maintain some skepticism about a defensive justification of such work. We think the liberal arts have a more proactive, constructive, and speculative role to play in figuring our ways out of the mess we have collectively made of the world.

We insist that the liberal arts are not fully contiguous with the humanities. Historically, liberal arts pedagogy has included the best of the human, social, and natural sciences. The liberal arts are *inherently interdisciplinary* (as thoroughly *intertwined* disciplinarity). The tragedy of the perennially unresolved public debate on their future stems from a temptation to collapse one formation into the other. That reduces the interdisciplinarity necessary to address the challenges we face to traditional kinds of authority and expertise.

To make a case for a vibrant, economically productive liberal arts, we have to revise commonly held ideas of work. If we are serious about facing up to

challenges that require immediate, collective attention before the earth, ecologies, and social systems reach tipping points, we will have to hold firm to the belief that flourishing financially by fitting oneself into an unjust world is not sufficient justification for the liberal arts skills we tout as socially enabling.



## CURRICULA FOR COLLECTIVE FUTURES

To be attuned to a planet that disrespects artificial boundaries between the social, natural, and human, our learning must assume a spirit of indiscriminate and boundless curiosity.

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Work, today, is part of something larger, something that exceeds transferring skills from the university to corporate, nongovernmental, or other sectors. To rethink work as a way of advocating for the liberal arts we have to ask how we can live creative, composed, generative lives in the 21st century. What does it mean to live a good life in these circumstances, on this planet? How can we articulate the collective, common good in a way that simultaneously addresses social need *and* personal flourishing? What does

personal flourishing look like if we are to accommodate the needs of others as a crucial metric for gauging individual success and well-being?

Besides being sufficiently well paid to live comfortably, existing in a complex, heterogeneous world is also a part of the challenge of living a productive life. As the differentially impactful racist and gendered implications of the pandemic are brought to light with forceful clarity, it becomes imperative to recognize that just as no one could be safe from the virus unless their neighbors were, we cannot advocate for education or its value in individualized terms. At a time when for billionaires and the precariat alike (albeit in very different ways) distinctions between life, labor, and leisure have become increasingly meaningless, those fortunate enough to enter the workforce in possession of advanced degrees from institutions of higher education are challenged also to reconceptualize (their own) happiness in dynamic, socially responsible ways.

By reevaluating what constitutes meaningful work, developing novel skill sets to adapt to a fast-changing world, and generating concepts to make sense of this uncertain terrain, we can begin to make a case for the liberal arts without recourse to the defensiveness of soft skills.

Making a case, arguing through instance and example, models the best of a holistic liberal arts training: informed and backed up by quantitative data but explained qualitatively through narrative. The trope is common to many [excellent books](#) extolling the virtues of the liberal arts that relay stories of personal success where enterprising initiative-takers capable of thinking out-of-the-box innovatively translated their humanistic and social scientific expertise for curious, open-minded business persons, technocrats, scientists, government officials, NGOs and the like. Inspiring as many of these stories are, they often propagate the value of a job through some metrics (say, salary) over others (say, type of employer). Should liberal arts graduates treat coercive state institutions (such as the [Department of Homeland Security](#) in the US) the same way as any other employer looking for cultural competence in its workforce? Should enormously wealthy venture capitalists who succeed in the world of business with degrees in philosophy or English be our exemplary models of success? Do questions of this kind merit consideration when we speak of success? And if they don't, then what, really, is the *value* of a liberal arts worldview in the final calculus?

With these points in mind, we identify the following as one set of possibilities for constructing a renewed liberal arts ecosystem:

- A curriculum integrating the human, social, and natural sciences
- Data, media, and information fluencies, and
- Project-based or experiential learning

In this document, we sketch scenarios for a future-oriented liberal arts ecosystem where institutions work for those trained by them. The examples we draw on are not exhaustive but index communities of learning whose practice and thinking we believe are creatively instructive. From interdisciplinary research centers to institution-wide initiatives, and the rhetoric of public discussion on the liberal arts, the cases engaged here reflect our belief that a path forward must, simultaneously, strive for curricular and institutional change. For this, top-down models of transformation have to give way to more participatory methods of decision-making, even as unconventional, generative leadership remains crucial for effecting real change.



## 3. A Liberal Arts Ecosystem

### 3.1 An Integrated Curriculum

A key place to begin rethinking a liberal arts education as a *worldview* is the curriculum, which speaks to different scales of experience in the university. Students may experience it partially in the form of the syllabus presented on the first day of class. But the reach and scope of a curriculum is broader—articulating a vision for the totality of students’ pedagogical experiences, spanning the entire range of courses they can take, and learning experiences and outcomes offered by each element separately as well as all together. Therefore, a curriculum rigorously integrating human, social, and natural scientific knowledge lays the foundation for a systems view quintessential to the liberal arts.

Curricular overhaul has been at the center of national discussion about liberal arts pedagogy for a considerable period of time. Recently, it has found its most prominent expression in a landmark 2018 report titled *[The Integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education: Branches from the Same Tree](#)*. The report was produced by an interdisciplinary committee under the auspices of the National Academies of Sciences, Engineering, and Medicine and the Andrew W Mellon Foundation. Commencing with Albert Einstein’s famous declaration that “all religions, arts, and sciences are branches of the same tree,” it recommends an integrative model that “*intentionally* seeks to bridge the knowledge, modes of inquiry, and pedagogies from multiple disciplines—the humanities, arts, sciences, engineering, technology, mathematics, and medicine—within the context of a single course of program of study.”

*Branches from the Same Tree* considers a “broad and interwoven” education as “essential to the preparation of citizens for life, work, and civic participation.” Such education includes emphasis on “increased critical thinking abilities, higher-order thinking and deeper learning, content mastery, problem solving, teamwork and communication skills, improved visuospatial reasoning, and general engagement and enjoyment of learning.” An “educated and open mind,” the authors continue, “empowers the individual to separate truth from falsehood, superstition and bias from fact, and logic from illogic.”

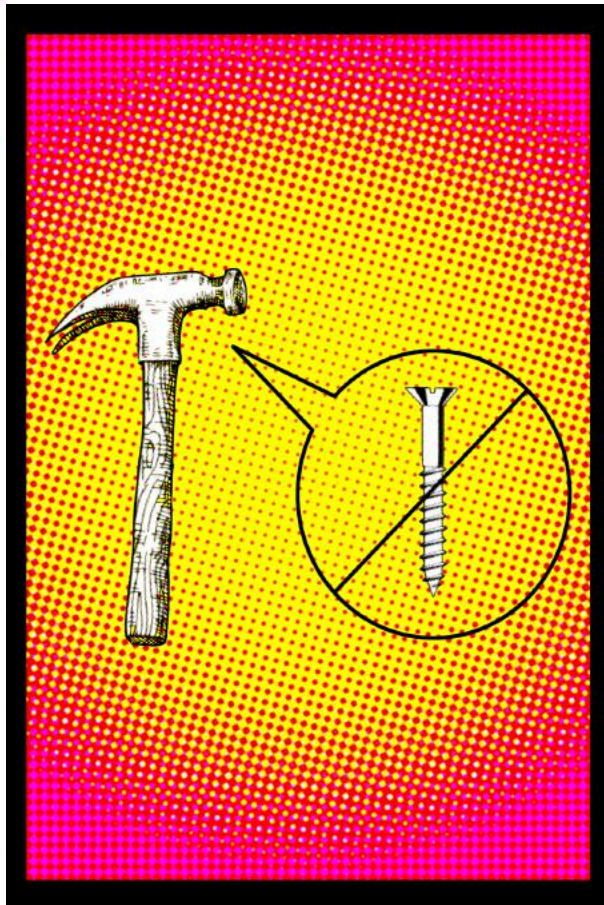
In general, we are in agreement with these ideas, and appreciate the admirable exhaustiveness of *Branches of the Same Tree* in simultaneously mapping integrative programs and offering a synoptic overview of their importance for liberal arts learning. The framing offered does, however, raise important questions. Even though the document calls for breaking disciplinary silos, as one member of our working group pointed out, “you get the sense that the stakes in this marriage are different. The sciences are the default: you teach for vocation and you train for life, which implies the humanities are an add-on meant to round people off.”

The intimation, accordingly, is that we develop an integrated system where the natural (and perhaps some social) sciences produce educated students, while the humanities (i.e. one slice of the liberal arts pie) are relevant insofar as they resemble what we might call a cherry on top, producing well-rounded citizens. The disciplinary weight of the humanities, what the humanities bring to integration in this vision, remains unclear. As several members of our group pointed out, though the report clears significant ground in defending a more rigorously interdisciplinary curriculum, it does not convincingly demonstrate *how* the skills “essential to the preparation of citizens for life, work, and civic participation” are *specifically produced by* integrated learning. Nor is *Branches from the Same Tree* unique in this respect. Most defenses of the value of liberal education subtly suppress such specifications.

Part of the problem emanates from the report’s sense of the stakes of a liberal arts education. Like many other arguments making a case for the value of the ‘fuzzier’ sciences (shall we say arts?), *Branches from the Same Tree* assumes that the preparation of free thinking, civic minded, hardworking citizens ought to be the ultimate horizon of humanist and social scientific teaching. But as we emphasize throughout this document, these ideals misrepresent the driving scholarly trends in disciplines such as anthropology, comparative literature, sociology, political science, history, etc.

It is an open secret that while vociferous defenses of these disciplines turn on their investment in ideals like civic virtue, by and large, the disciplines themselves are (no longer) unambiguously committed to the concept of a free, liberated, individuated citizen who participates in public life, votes

every four years, earns a decent salary, and accommodates to the world. If anything, since at least the final decades of the 20th century, humanists and social scientists have dedicated considerable labor to showing how dominant concepts of citizenship and allied ideals implicitly traffic in a propertied, racially shaped, gendered view that takes the white masculine



## **REVISABILITY SUPPORTS CULTURES OF EVIDENCE**

Students and instructors are challenged to approach learning with an openness to revising their worldviews, refusing to exercise authority conventionally, pedagogically or institutionally.

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subject as the invisible norm against whom others are measured. In other words, in debates internal to these fields, it is recognized that ideals of this kind need to be unpacked and disaggregated rather than uncritically reinforced. And yet, when publicly advocating for the liberal arts, defenders invariably lean into a model of civic responsibility that eschews this essential point. There is, then, a disconnect between how the humanities and qualitative social sciences have ethically and politically evolved in the last

few decades, and how they continue to be talked about and represented in public discourse.

Consider media theorists [Matthew Fuller and Andrew Goffey](#), who playfully and polemically suggest that

[u]nder a classical understanding of the place of education in society, the biography of a citizen might look like this: birth, education, work, species reproduction, work, retirement, death. Under conditions of lifelong learning, it is likely to look more like this: birth, trauma, therapy, training, internship, recruitment, role-playing, training, deployment, trauma, therapy, retraining, deployment, therapy, death.

If their intuition about this transforming map of life, labor, and leisure is even partially correct, it is because standards of civic participation touted as the ideal of citizenship in the postwar Western world no longer hold. The [fragmentation](#) of society, [financialization](#) of lifeworlds, and [privatization](#) of common resources have dovetailed with a deepening insistence on individual responsibility to yield the kinds of repetitive precarities outlined by Fuller and Goffey. In this context, fantasies of democratic midcentury access to education are premised on elisions of racist and sexist histories that meant those prior moments of inclusion were [never fully democratic](#). This is why we repeatedly emphasize the inadequacy of conceptualizing the value of the liberal arts in terms that have not kept pace with various disciplines' internal wrestling with history, ethics, and politics. Nor can we endorse an image of socially divisive pasts as sufficiently inviting models for the futures we want collectively to populate.

In contrast to such trends, students at the University of California, Los Angeles' Institute for Society and Genetics (ISG) are exposed to an integrated curriculum with clear, real-world political and intellectual commitments. A proposal for establishing the Institute, submitted to UCLA's College Faculty Executive Committee in 2007, identifies "as its intellectual focus the idea of *co-evolution* of society and genetics in shaping each other in a dynamic relationship." Further, "at every level, human genetics is inherently social: genes, gene expression, genetic research and medical therapies all co-evolve with society."

ISG's commitment to "integrated knowledge" may have found contemporary resonance through public debates around the Human Genome Project. Their institutional philosophy, centered on co-evolution, nevertheless, has a longer history. Their story begins with Norton Wise, one of the founding members of the Institute, who holds two PhDs (in the History of Science from Princeton and in Nuclear Physics from Washington State University). Extending his attunement to the interdisciplinary demands of formations like nuclear science and the Cold War arms race, the 2007 proposal argues:

Many of the decisive problems and possibilities of the twenty-first century are located at the intersection of the biological and human sciences. And yet, the contemporary research university, organized into discrete departments and schools, is ill-suited to meeting the challenges that demand an integrated approach to knowledge creation and problem solving ... Today, no university has a major forum for bringing together the insights of the natural and human sciences to mutually inform each other in a thoroughgoing and systematic way. Nor do universities adequately grapple with the breakdown of the distinction between the pure and applied sciences.

An acknowledgment of the limits of traditional ways of teaching and knowing in the university has led ISG's leadership to strive to better connect their pedagogy and research to the interests, needs, and lived experiences of their students. Rather than provide a sophisticated education whose practical value to everyday life has to be translated and explained, ISG's pedagogic model starts by asking: what compels students in their learning?

Our conversations with faculty and students alike drove home the fact that those passing through the Institute have distinct ideas of serving their communities with the knowledge and expertise acquired in college, without always having a clear sense of how an education in the life sciences can facilitate those ends. If students leave the Institute with a more tangible sense of how, say, concerns surrounding equality and justice have a direct impact on the production of knowledge in the pure *and* applied sciences, then this is in no small part because of innovative coursework introducing them to new ways of enacting knowledge in the world.

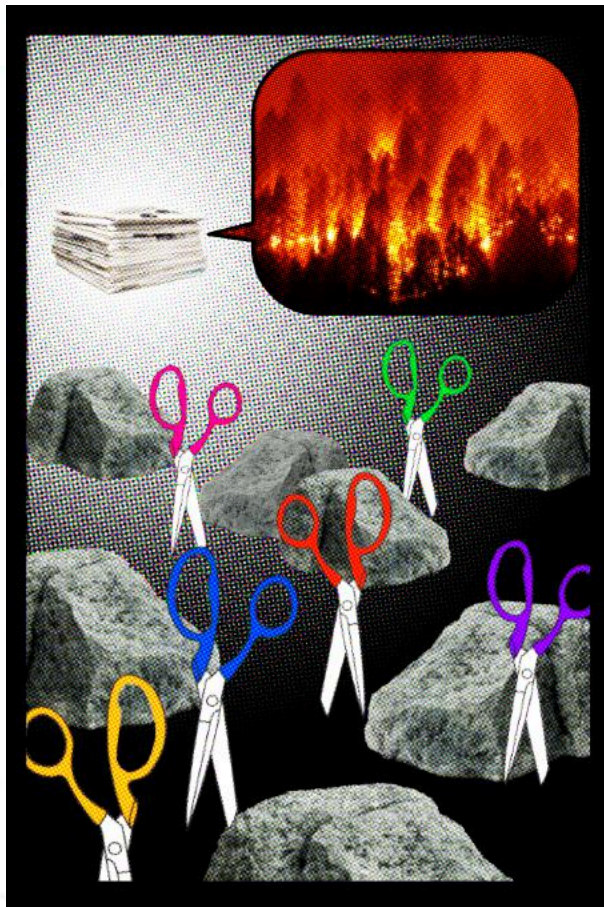
Many classes—often on potentially contentious topics like race and religion—are co-taught by ISG's core faculty. Their specializations include fields as

diverse as sociology, anthropology, evolutionary biology, pathology and laboratory medicine, religious studies, and history. A number of faculty are bench scientists. One suggestive possibility about this model of teaching together comes from how to handle disagreements. When instructors do not agree with each other about a matter under consideration in class, instead of papering over their differences to present a false model of consensus, they use the point of disagreement as an occasion to demonstrate the ethics of argumentation and engagement with those who hold different points of view. Aside from an instruction in how to engage those with divergent ideas from oneself, the method also demonstrates how debate and disagreement are critical for growing and furthering knowledge—not impediments to that end.

One can say the ISG's pedagogical philosophy is rooted in imparting a *style of thinking*, what some faculty described as learning how to learn. Hannah Landecker, the Institute's director at the time of our visit, spoke of providing students with "epistemological infrastructure." By providing a foundation in how to know and think about the world, courses at the Institute go beyond discipline-specific training, helping students develop research methods that can be applied to understanding diverse issues straddling disciplinary boundaries. Thus, for example, the lower division course, Integrative Approaches to Human Biology and Society, identifies genetic concepts (such as obesity, immunity, and antibiotic resistance) in fields like molecular biology, population and quantitative genetics, and evolutionary biology to underscore the coevolution of genetics and society by showing how "gene-environment interactions" have to be studied together in such instances. An approach of this kind consistently grounds science in society, thereby serving as a reminder that the notion of scientific knowledge being truer than or divorced from society is neither historically accurate nor a good account of the relationship between scientific theory and practice.

The interdisciplinarity discerned in Integrative Approaches informs, in turn, ISG's signature upper division class, Ways of Knowing. As a summary in one of Christopher Kelty's [syllabi](#) has it, "in this class we move to the next level: *understanding how the different styles of knowledge underlying these disciplines actually work*—and might be made to work together." In other words, Ways of Knowing foregrounds questions of epistemology ("how we know, not *what* we know") to help students develop the capacity to differentiate between different styles of thought in science, from

observational and laboratory to statistical and theoretical. Such a course, then, maps how epistemological questions are framed by philosophers and historians of science (Ian Hacking, Lorraine Daston, Karl Popper), anthropologists (Bronisław Malinowski), social psychologists (Stanley Milgram), and scholars of science and technology (Bruno Latour) among others. Rather than arm students with a theory of knowledge, Kelty's class helps them see how knowledge itself—or ways of knowing and identifying



## READING IS A SKILL

All experts are critical thinkers within their domains. Reading transgresses narrow expertise by acknowledging facts & values are shared - and disputed - together.

LIBERAL ARTS IN A FUTURE TENSE

what constitutes knowledge—is shaped differently by different disciplines.

These practices elucidate two aspects of integrated learning that get overlooked in an eagerness to model superficial interdisciplinarity. First, as the scholars mentioned indicate, the syllabus at ISG focuses on *research evaluating* scientific methods as much as empirical and experimental scientific practice. In doing so, the course holds theory and practice, and

abstract thought and empirical work in the same frame without privileging one above the other. Second, many of the names populating the course—in the same vein as Steven Shapin and Simon Schaffer’s classic *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life*—exhibit the value of working deeply across disciplines, methods, and styles of thought. Together, these factors help elaborate a vision of integrated learning that strives less to teach students a wide array of practices than equip them with the capacities to interpret and assess the efficacy of varied bodies of knowledge by asking the right kinds of questions. While, today, it has become a truism to assert that one must try to ask better questions before leaping towards answers, there aren’t many good examples modeling such practice. A deceptively simple yet crucial lesson afforded by ISG is that to teach students how to ask good questions about problems adjacent or parallel to their own concerns, one must be intentional about it. By learning how varied disciplinary modes of apprehending the world can complement (instead of compete with) each other, students are able to evaluate the worthiness of approaches different from theirs without presuming recourse to a narrow language of expertise.

This foundation yields to a capstone course articulating the cumulative payoff of conceiving of learning in a dynamic way. Here, students extend their research skills by identifying problems in the world at large that occupy the intersections of science and society. Their method approximates the attention science and technology studies pays to controversy as a site of analysis. Since they often erupt after a problem has been delimited, the affected social actors identified, and anticipated solutions proposed, controversies upset clearly defined boundaries of (expert) knowledge. A matter that was thought to have been settled, becomes unsettled and open anew to public debate and scrutiny. The problem as it was initially identified is suddenly revealed to have heretofore unseen, unexpected, or suppressed dimensions. As Michel Callon explains in *Acting in an Uncertain World: An Essay on Technical Democracy*, a book on science, technology, and politics authored with Pierre Lascoumes and Yannick Barthe:

Decision makers think that the parameters of the questions to be dealt with have been suitably and properly defined, from both a technical and political point of view, and now overflows identified by the actors demonstrate the opposite: that controversy allows an inventory to be made of the different dimensions of what is at stake in a project.



Controversy brings about the discovery, for example, that the mobilizations provoked by the introduction of major facilities (motorways, high-speed trains, airports, or the storage of dangerous waste) is not explained simply by the fear of pollution experienced by the resident populations, but also their relationships with the territory, its history, and its elites.

We see, immediately, how when considerations of territory, history, and class formation (not to mention race, gender, and other axes of difference) come into view, issues that had supposedly been resolved by the work of engineers, scientists, urban planners, and government officials are reopened for debate, scrutiny, and revision. To find solutions to the newer, unanticipated problems caused by the emergence of social actors previously unaccounted for, one has to look beyond the narrow domain of technical specificity to the wider arena of messy, democratic life. This requires an element of anticipation—of having some ability to predict how communities can respond to particular projects. Anticipation in this key does not amount to wild conjecture. Rather, it is borne out of deep engagement and study factoring in varied ways of knowing, attempting to account for lives and geographies in as holistic a way as possible.

The ISG's collaborative, research-driven capstone encapsulates this spirit, drawing attention to a number of important factors: (1) identifying problems requiring natural as well as social scientific and humanistic expertise, (2) learning how to research multiple facets of a problem, and eventually, (3) communicating one's findings effectively through group work while assessing the work of one's peers. In Kelty's 2020 course offering, this structure is underwritten by a fun, gamified model of grading where "when you enter you have exactly 10 points (an F)," and the student's goal "is to collect points until you have achieved the grade you desire. You cannot lose points, and if you miss an assignment or do not score as highly as you had hoped, *the only recourse is to try and get more points by doing more assignments.*"

This model of integration, premised on teaching *how* to know rather than *what* to know strikes us as key to learning widely and deeply across fields of knowledge. Apart from showing how matters of social and scientific concern transgress disciplinary boundaries, the approach takes a well-rounded and holistic view of education. The capacities and skills students obtain through

a rigorous interdisciplinary liberal arts learning help develop a worldview—ways of knowing, thinking, inhabiting, and acting in the world—beyond the limiting confines of expertise. The ‘real-world’ usefulness of developing worldviews through integrated learning need hardly be commented on. But for one recent example we can consider an article by Siddhartha Mukherjee (a doctor as much as storyteller).

The puzzle at [the heart of his piece](#) is captured by a simple question: Why does COVID-19 ravage some parts of the world worse than others? After rehearsing a range of possibilities—from the relative median ages of populations being lower in some countries to potential levels of immunity stemming from prior exposure to viruses—Mukherjee falls back on a literary analogy. When renowned detectives like Agatha Christie’s Hercule Poirot or Miss Marple deploy their ability to reason and think critically to solve a case, they usually tie up loose ends, leaving readers with a clear picture of cause and effect that (re)solves, once and for all, the mystery at hand. Challenges thrown up by COVID-19 death rates, by contrast, follow more closely the plot of Christie’s *Murder on the Orient Express*. In that novel, when usual procedures of reasoning and scientific explanation fail, Poirot is no closer to knowing who murdered a passenger on the train. Eventually, he

realizes that the murder is a long-planned act of collective revenge. There wasn’t one murderer; there was a plurality of murderers. What researchers have described to me as the pandemic’s most perplexing feature may turn out to be the epidemiological version of that mystery on the *Orient Express*: there’s no one culprit but many.

The anecdote is instructive for a vision of integrated learning because in it literature does not stand in for a simplified translation of complex scientific phenomena. Rather, in Mukherjee’s telling, the *Orient Express* shows science where to look and how to think when conventional explanations for phenomena are inadequate for making sense of them. Connecting this spirit of engaging the literary to Callon’s discussion of controversy, we can make the bold claim that literature (or culture more generally) helps develop worldviews. One turns to these realms not when scientific knowledge has to be supplemented, but when that knowledge is shown to be insufficient without an acknowledgement of culture. And all significantly impactful knowledge is socio-culturally formed, embedded, ordered, and applied.

## 3.2 Teaching Truth

Barely a week after the insurrectionary attack on the US Capitol on January 6, 2021, *The Chronicle of Higher Education* published “[Teaching in the Age of Disinformation](#),” a substantial article lamenting a condition where, with disinformation and propaganda rapidly spreading throughout society, “traditional sources of authority are under siege, and people increasingly live in politically polarized media ecosystems.” How can colleges and universities—which have “traditionally been places where professors and their students use the tools of reason and inquiry to get to the truth”—respond to this situation? At its outset, the article cited two preliminary surveys indicating faculty are increasingly hesitant to address politically tricky and divisive issues in the classroom, preferring (in one case) to “de-escalate in the classroom and deal with [such questions] privately.”

It is likely not coincidental that sections of two successive paragraphs cited above reach for the word “traditional” to identify the social purpose of institutions of higher education. Campuses have historically been spaces where traditional sources of authority have delivered knowledge to those who have come to learn. As such, we can extrapolate that the crisis created by relentless avalanches of fake news and disinformation has as much to do with the destabilization of the professor’s identity as it does with broader social transformations. In other words, the challenges fake news and disinformation pose to collective cultures of evidence do not emanate merely from the supposed fragility of students (who, let us grant for the moment, can no longer tell bad information apart from good). They also emerge from the professor’s loss of authority as an expert. But how new is this way of experiencing the classroom?

Taking a broader view, we can historicize the crisis in question by thinking of controversial but important texts like Allan Bloom’s [The Closing of the American Mind: How Higher Education has Failed Democracy and Impoverished the Souls of Today’s Students](#) (1987). The self-explanatory subtitle of that publication, with its gesture to anxieties about the upsetting of traditional arrangements of power in educational institutions, marks a moment some repeatedly went back to after the election of Donald Trump as US President in 2016 by (unfairly) [castigating](#) postmodernism for our post-truth contemporary. Then, too, professors like Bloom worried that under the influence of so-called radical social and political thought, students

who claimed to be subversive and open-minded were, in fact, imprisoned by a new culture of conformity. That these words feel familiar, and that they echo [conversations](#) about coddled minds and “cancel culture,” signals the anxious underpinnings of traditional authority.

More recently, under the aegis of the #MeToo movement and popular upsurges in defense of Black life, new [concerns](#) and [questions](#) have emerged, repeating similar tropes. They circle difficult but perennial questions about who is read in classrooms, how they are read, and what is left unread. In each case, traditional authority finds it has lost some of its sure-footedness. All of which suggests that the roots of the disquiet unleashed by fake news and post-truth in classrooms run deeper than we sometimes think. Undoubtedly, virally circulating media cultures variously create, amplify, distribute, or manufacture consistent evidence of culture wars. To see through the fog, one has to know how to identify untruth, and learn how each wave of moral panic borrows from older tropes.

Consider Jennifer Mercieca, a historian of political rhetoric at Texas A&M University at College Station. Apart from writing [an important book](#) about Donald Trump’s political rhetoric, for the past half-decade she has taught a course on propaganda. Mercieca spoke eloquently to *The Chronicle* about the difficulties of interpreting and analyzing propaganda in a context where many of her students—who consume a range of media (often conservative)—are already predisposed to questioning her expertise. In classes, she walks a “tightrope” by taking a holistic view, and trying to unpack the nature of propaganda, the mechanisms by which it spreads, and who it entraps. She does not accuse students of lying or being misinformed, but brings “the theory” while “students bring the examples.” Once they begin to understand how propaganda can be identified, they can apply it to different objects and occasions:

She asks her students to apply this analysis to all manner of propaganda campaigns, whether it’s how Edward Bernays, considered the father of public relations, persuaded Americans to eat bacon and eggs for breakfast, or how the United Daughters of the Confederacy erected statues around the South in the early 20th century to reshape the narrative of the Civil War. “Once you understand how it works,” she notes, “you see it everywhere.”

*Once you understand how it works, you see it everywhere:* how is such a sentiment distinct from the ways in which conspiracy theorists know the world? What buttresses a sense of confidence that pedagogy oriented towards the identification of pervasive patterns can steer clear of the temptations of bad information? Can one be sure that the patterns identified are not, in fact, [apophenia](#)? And who arbitrates true patterns from false ones?

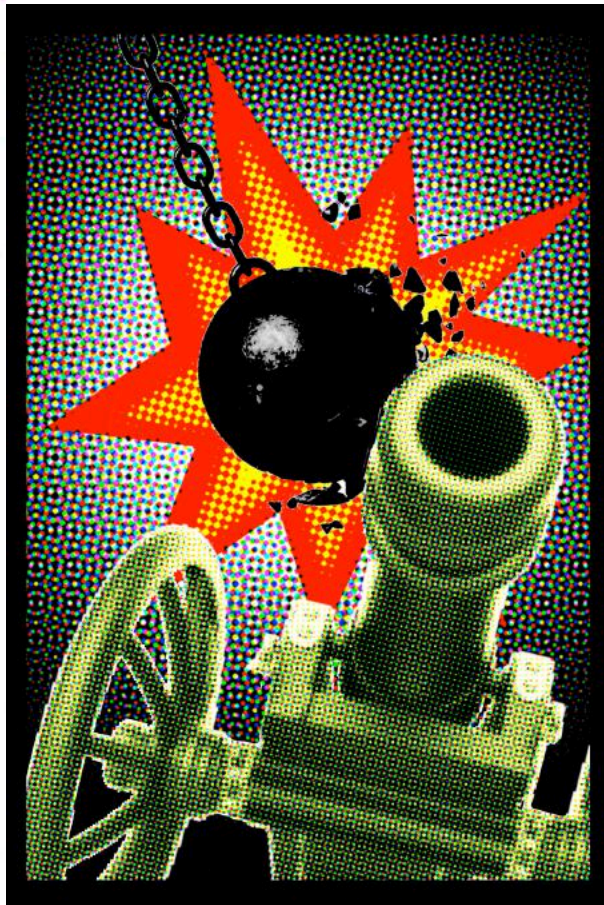
On the one hand, we find here a careful reassertion of the professor's expert judgment as the final measure for sifting truth from falsity. A version of this approach can be found in [The Misinformation Age: How False Beliefs Spread](#). In the book, philosophers Cailin O'Connor and James Owen Weatherall end their investigations on a note resurrecting faith in expertise, and expressing skepticism towards democracy—or more specifically, what they refer to as “vulgar democracy” characterized by an ignorant, manipulated population of voters who, for the most part, “have no idea what they are talking about.” O'Connor and Weatherall eventually settle on an idea of “well ordered science” where “the notion of a popular vote as the proper way to adjudicate issues that require expert knowledge” is abandoned, and politics is made “responsive to fact.”

Relatedly, in this model, we discern a call to trust experts because they know what they are talking about, and can critically interrogate truth claims in their areas of expertise. Less factored into this view is the distinct possibility that those we sometimes think of as ‘duped’ by bad information are either experts themselves or believe themselves to be [thinking critically](#). So, when we step back to suggest that the professor who wields traditional authority can teach how correct patterns are to be told apart from misleading ones, we overlook that it is precisely *this authority* that is rendered suspect by contemporary vortexes of mis-and-dis-information.

As the STS interlocutors we encountered in examining integrated learning remind us, controversy (usually) erupts without fail, regardless of how settled a matter appears to be. It is hard to be “responsive to fact” when what constitutes a “fact” is precisely the matter of debate. Who will adjudicate a good account of “seeing it everywhere” from a bad one? Who will authenticate “facts” as facts? As philosophers of science like Hilary Putnam have [long suggested](#), even the most apparently “objective” scientific

fact includes considerations of judgment, of decisions made, and choices exercised.

Further, we must note that it would be inconsistent for a report such as ours, which is invested in making a case for integrated learning, to take recourse



## **CANONS ARE NOT SET IN STONE**

To illuminate what it means to be human, the canon has to incorporate the fullness of human experience. The Classics can be made present to our times, just as the cutting-edge can feel most out of touch with what matters.

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to the language of narrow expertise in defense against disinformation. Part of the wager of learning to engage rigorously across the human, social, and natural sciences has to do with giving students a wider, more agile and heterogenous set of skills to navigate the contemporary world. By advocating for a particular view of expert authority we run the risk of undercutting the cases where, despite knowing the tools of critical thinking relevant to their disciplines, experts mislead others (and, arguably, themselves too on occasion). What causes a white anthropologist trained in

the language of critical race studies to pass herself off as Afro-Caribbean? How does a dissident media scholar go from dissecting the capitalist and imperialist logics of the US media ecosystem to amplifying Covid-19 fake news in undergraduate seminars?

In these cases, the matter of who judges a fact to be a fact is, at times, obscured, if not erased. On occasions when it is not, institutions are invoked as spaces where a robust, democratic collectivity of experts can arrive at a consensus over what constitutes matters of fact. This is a democracy responsive to fact. Of course, that a consensus must be *arrived* at shows there is no consensus as such, no facts without their making, standardization, and acceptance as fact.

Arguably, institutions do have an important role to play in mitigating the production, circulation, and consumption of fake news and propaganda. Understanding *how* they do so is as necessary for becoming media literate as gaining the ability to spot fake or bad information. By attending closely to institutional politics and processes of decision-making we can start thinking acutely about the complex conditions that make people receptive to misinformation. In *The Chronicle* article on disinformation, Michael Caulfield, director of blended and networked learning at Washington State University at Vancouver, approximates a position close to this. Criticizing the “mythology of direct verification” (i.e. the idea that one can identify the truth and reason on one’s way to it) in education, he calls for a different conceptualization of knowledge and truth.

When Caulfield argues that what someone believes depends on who or what source of information they trust, he voices an opinion similar to those we have encountered before. The wrinkle comes in regarding where we go from there. Despite recognizing that what one believes is intimately tied to who one trusts, many discussions of disinformation invariably end up reinforcing traditional authority: the professor, *The New York Times*, science. But what happens when one encounters a student who doesn’t believe *The New York Times* has the authority to arbitrate fact from fiction? Or who thinks science (as many critical social scientists have also told us) is—or can often become—an expression of politics?

Here, Caulfield offers something different. Show students how you reason, he effectively says. Demonstrate how decisions are arrived at in any

scholarly or expert community, and how those decisions are debated, implemented, and refined. Or indeed, revised and occasionally retracted. For example: “Describing to students how the World Health Organization comes up with its guidance around Covid-19, and how that differs from the CDC’s decision-making process ... is of greater long-term value for most students than understanding how mitochondria operate.” In this way, rather than verifying the facticity of this or that claim, one teaches how claims are made, understood, and interpreted. As a result, rather than trying to understand how someone can be duped by fake news or identify patterns of propaganda, one bolsters a pedagogical program teaching how information is generated, verified, and established as social fact. And students learn, effectively, to think about and evaluate these procedures.

By becoming fluent in reading media and information like this, one can better apprehend the ways in which bad information is taken in and spread. Caulfield’s online open-access guide, [\*Web Literacy for Student-Fact Checkers\*](#), lists four methods to cross-reference the authenticity of information: (1) checking for previous work, (2) going “upstream” to the original source of a story, (3) reading “laterally” to corroborate information, and (4) “circling back” to the beginning when it looks like one is going down a rabbit hole. Along similar lines, in an article for [\*Science News\*](#), science writer Laura Sanders enumerates the reasons that lead people to believe false information. These range from a susceptibility to accepting as true any information that supports one’s existing points-of-view, information that tugs on emotional heartstrings, that claims to share the findings of new research, or is repeated ad nauseum.

These are good rules of thumb, and have become increasingly common pedagogical practices since the global political shocks of 2016. But questions remain. Even sophisticated frames like these—more interested in developing methods to assess the value of information than shore up particular political perspectives—turn on assumptions that can appear to rest on shaky ground. Let’s take the case of lateral reading as an example.

Caulfield’s chapter models an excellent pedagogical approach for exhaustively teaching students about the political and cultural sensibilities of websites and news sources one consults. Thus, when you come across a story that raises an eyebrow, first, “evaluate the website or publication’s authority” (that word again) by examining the process by which the



organization arrives at decisions (say, peer review), the nature of expertise demonstrated in the article (scholarly or journalistic), and the aim or goal of the information at hand (what does it intend to do?). Next, there are basic things to keep in mind when searching for more information about the story. Suppose you read a report in a newspaper called *The Baltimore Gazette*, and time spent researching its website reveals that the fact-checking site, *Snopes*, has identified the *Gazette* as a “known purveyor of fake news.” That’s the end of that. You know the report cannot be trusted. With academic journals, one can undertake similar steps by searching a journal’s impact factor and looking up an author’s larger body of work on sites like Google Scholar.

Secondary research is an important method in lateral reading. This means, when one encounters a story even in a generally-reputed publication like *The New York Times* or *Washington Post*, one should follow-up on the experts or sources of authority the story cites to verify their credibility. To do this, knowing how to look for high-quality secondary sources is imperative: which journals to trust, and which to be skeptical of (based on impact factor, for example). Caulfield makes an important point that is sometimes under-emphasized when students are taught research methods: it is far more reliable to trust new research that broadly bolsters existing bodies of knowledge than research which claims to break entirely new ground. The former speaks more accurately to how communities of expert consensus develop by incorporating disagreement and debate as part of an ongoing conversation.

While much of this is exemplary pedagogical practice, searching laterally to back up truth claims and better understand how organizations make decisions doesn’t overcome some of the basic difficulties we have gestured at. We may take a more institutional view of how truth is arrived at. We may develop tools to tell authentic websites apart from fake ones. But that doesn’t mean we cannot rationally (by following all the protocols of good research) arrive at the wrong conclusions.

Suppose one person believes *The New York Times* is, indeed, a paper of record, and *Fox News* is, indeed, a malicious purveyor of bad information, and another person thinks parts of *Fox News* are reliable enough while *The New York Times* can sometimes publish misleading information. There is enough evidence to suggest they could both be correct to some extent.

Rather than adjudicating such a dispute by taking one side over another, it is useful to think of such cases as produced by peoples' patterns of socialization—where worldviews are shaped by years of interaction and conversation with peers, friends, and family. The point, in such contexts, is less to decide which of the two has a more accurate interpretation of the news than to examine how those interpretations are formed, and how they can be *transformed*. The challenge is making this our primary pedagogical purpose and method, the very design built in as the centerpiece of the curriculum.

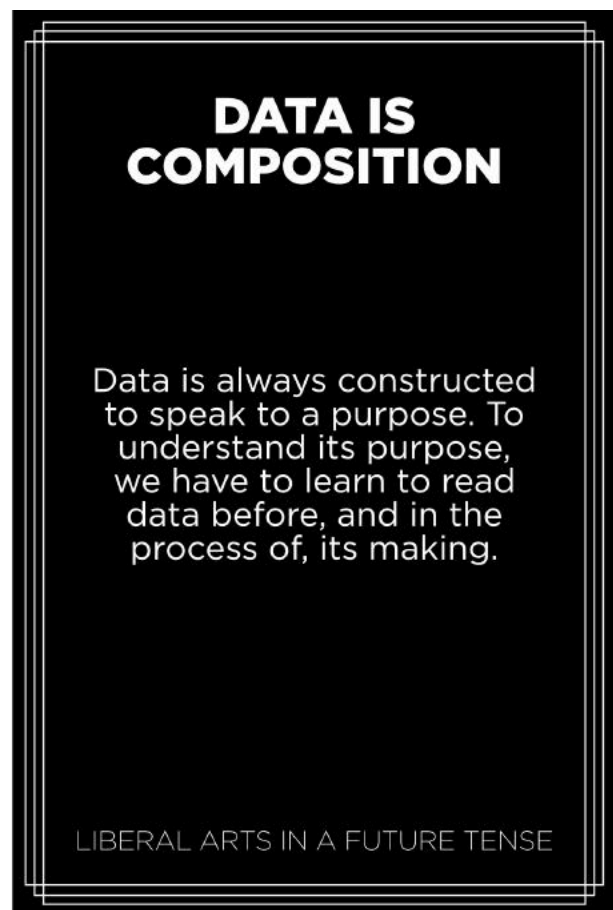
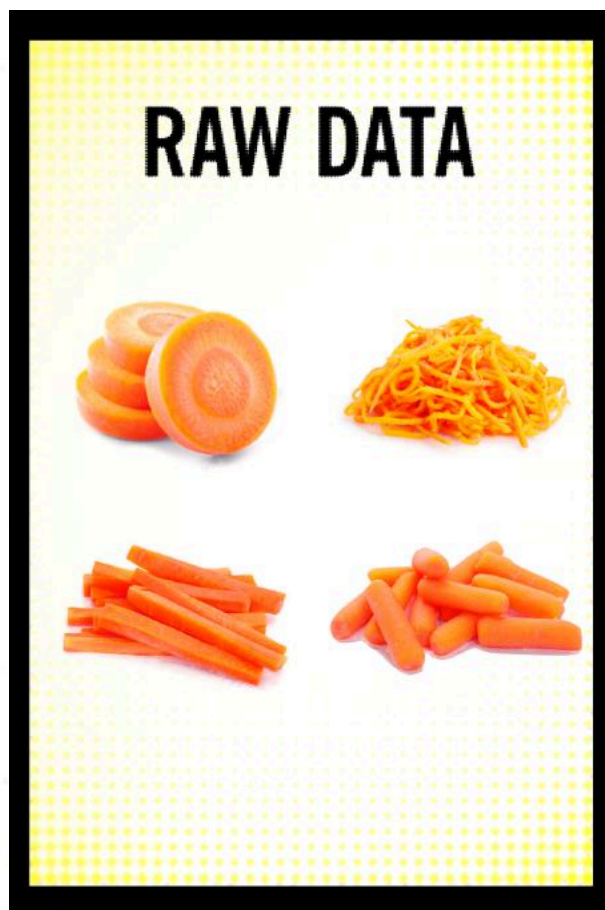
Perhaps no recent scene illustrates this better than the progression of the pandemic in the United States. From the beginning, issues like mask wearing, aerosol transmission of the virus, and social distancing have been up for debate *within* the scientific community. Even as the country turns a corner on the pandemic, experts continue to weigh in on when it is safe to start fully unmasking and reopening not just the economy but social life more generally. It is deeply inaccurate to claim there is scientific consensus on these matters, no matter how much some of us may *want* there to be one. Nor is it easy to point out in polarized climates like ours how there is rarely ever scientific consensus on any matter, regardless of how urgent or pressing. Such occasions demonstrate, one again, how controversies (can always) erupt. That few things are ever settled as matters of fact.

Informed by these methods, but pulling away from the immediacy of controversies around fake news, another, complementary approach to disinformation pedagogy scrutinizes processes by which information—or numbers and data specifically—take on lives of their own. Where the methods discussed so far rely on the authority of experts or decision-making processes in organizations, this method turns our attention more squarely to platforms and infrastructure.

Over the past decade, data literacy has gained traction among various stakeholders: from universities and governments to the United Nations (UN). In 2014, the UN released a report on the “data revolution” calling for “global data literacy” as a way of ensuring sustainable development. The UN’s [data revolution website](#) defines data literacy as a skill situated at the intersections of informational, statistical, and technical literacies. This framing, which is also common in public discourse, identifies one’s ability to use and interpret data as a mark of being data literate. However, as scholars engaged in data

studies from various disciplines have argued, conceiving of data literacy this way gives the impression that the skills to be acquired relate to one's capacity to read how data is represented for the public. An infrastructural or platformist view, on the other hand, begins from the premise that "raw data is an oxymoron."

Infrastructure and platform studies reminds us to look more closely at the background functions of the smooth, glitzy software that powers modern life. Rather than assume data as it appears to us in the media represent facts, we have to learn to understand mechanisms by which data are



generated, classified, and made. Nor is this process innocent of power. Data presented as merely neutrally representing facts are used, nonetheless, to buttress arguments, laws, policy, and the like. In other words, what appears as raw is, more often than not, cooked to a degree.

By closely examining how neutral data are created, we see how facts are not—contrary to the “believe science” signs held high after the 2016 elections—divinely ordained, but established through experimentation, argumentation, and deliberation. We make a category error when we think of ‘post-factuality’ in terms of deciding whether or not it is raining outside. Those kinds of empirical observations are never the factual propositions being contested by critics of scientific knowledge. “Universal masking unambiguously reduces the transmission of COVID-19”: this is the genre of statement that becomes a casualty in debates over fact. And no one who followed the trajectory of scientific debate over the pandemic can suggest factual statements in this vein were settled prior to debate within the scientific and political communities.

Historians of quantification and statistics like [Ian Hacking](#) and [Theodore Porter](#), among others, have shown how numerical regimes categorize and produce people in certain ways, often to bolster political objectives of governance and administration. So, while it is useful to learn how to navigate an online ecology of mis-and-dis-information by better reading websites to gauge their ideological proclivities, something essential about the world is missed if media and data fluency stops there.

In the words of the authors of a paper titled “[Data Infrastructure Literacy](#)”: “an expansion of the concept of data literacy” would include “not just competencies in reading and working with datasets but also the ability to account for, inventively respond to and intervene around the socio-technical infrastructures involved in the creation, extraction and analysis of data.” These socio-technical infrastructures consist of relationships between “people and devices, software and standards, words and instruments. Data infrastructures articulate and project social worlds ... which afford their own ways of knowing and possibilities for action.”

Similarly gesturing to the inherent integration of disciplinary knowledge required to make sense of this kind of formation, Geoffrey Bowker (a pioneering scholar of science and infrastructure) and his [co-authors ask](#):

What kind of a thing is the internet? We do not do it justice when we see it as wires and modems, bells and whistles. Conceptually, let us for a moment imagine it as a very large database, an outcome of the late

eighteenth-century encyclopedist impulse to record all of the world's knowledge and make it freely accessible. It was rendered possible by not only the development of electricity but also by the development across the nineteenth century of large-scale classification systems in any of a number of domains ... Now it is clear that how we arrange information in encyclopedias has social and political dimensions (do we look under 't' for 'terrorist,' 'f' for freedom fighter, or 'i' for 'insurgent,' for example?).

Comprehending all this intellectually is one thing. You are likely doing it now as you read these words. Such is also the promise of media fluency approaches grounded in a belief in the necessity of traditional authority and institutions: develop skills to critically parse information, learn how information is put together, and question its appearance as naturalized fact. But we know such processes rarely work. Ultimately, these models take recourse to the trustworthiness of expertise, thereby requiring students repose faith precisely on sources they are least likely to find trustworthy (the professor, the paper of record). The expert's ability to differentiate right from wrong, and good from bad derives, in most cases, from their distance from the scene of fake news: if one learns to think critically enough, one can see bad information for what it is. And one can see it everywhere.

As we have highlighted, however, if it is the expert who eventually secures the grounds of truth, then endeavors to make people fluent in reading data and information are bound to fail. It requires them—in the lonely hour of the final instance—to cede their abilities to a person or organization they have learned, over time, to distrust. A hands-on approach offers a different texture of experience.

Writing about her graduate seminar, [Data Sense and Exploration](#), Lindsay Poirier, an STS scholar at the University of California, Davis, says “students draw out these [diverse cultural] forces through immersive, consistent, hands-on engagement with the data, along with reflections on their own positionality as they produce analyses and visualizations.” Emphasizing the materiality of working with data, Poirier argues that data studies courses not requiring hands-on work can end up looking like after-the-fact analysis undertaken to uncover evidence of “harm and discrimination”: “Research in critical data studies has indicated that this divide between data science and

data ethics pedagogy has rendered it difficult for students to recognize how to incorporate the lessons of data and society into their work.”

One of Poirier’s labs “prompts students to acknowledge the judgment calls they make in performing calculations with data, including how these choices shape the narrative the data ultimately conveys.” Students work on data while trying to remain mindful of how and where they make cuts into a dataset, i.e. select what to include, exclude, or classify a certain way. What, in turn, do these choices indicate about one’s assumptions, biases, invested interests, and positionality? While the lab helps students get an experiential sense of how sociocultural factors impinge on decision-making to produce supposedly objective facts, Poirier reports having

noticed that some students complete this lab feeling uncomfortable with the idea that the choices they make in data work may be framed, at least in part, by their own political and ethical commitments ... They express concern that their choices may be biasing the analysis in ways that invalidate the results.

Similarly, in another lab, students develop an understanding of how geography, temporality, and cultural factors influence the production of data as well as the stories data tell. For instance, a group of students in Spring 2020 analyzed a [dataset](#) compiling domestic violence calls made to different law enforcement agencies across California. Closely interpreting the dataset, one student discovered how factors as divergent as population density and levels of trust (or lack thereof) in law enforcement affect the number of calls reporting domestic violence. Some findings emanating from such analysis were insightful for how they counterintuitively offered evidence for something activists may already have known at an anecdotal or experiential level. “A paradox in which the counts of calls related to domestic violence can be higher in communities that have done a better job responding to them,” to note one example.

Needless to say, a practical-material method for studying data is not free of the guiding hand of experts. Nor have we claimed that expertise can be dispensed with. Our effort is to point out that when we *rest our case* on the expert’s authority, we reveal that we don’t comprehend the depth of the difficulty at hand. The troubling fact is not that public space is flooded by misinformation, propaganda, and fake news. Those phenomena have a [long history](#). Moreover, although one hardly remarks on it, the very adoption of

the term ‘fake news’ to refer to this landscape is a capitulation to the Trumpian playbook of linguistic distortion. Let’s not forget it was he who first popularized the term in its present form to refer to *real news he called fake*. Confronted by this situation, we suggest that expertise cannot fall back on its own sense of authoritative knowledge; that to be a productive pedagogue, experts have to consistently revise and reflect on the basis of their expertise—while also opening that basis up to criticism and questioning. These aspects are worth exhibiting in one’s teaching, rather than concealing.

Practical learning doesn’t shine a light showing a way out of this tunnel so much as give us the tools to navigate the darkness more competently. Whether by breaking apart datasets or collaborating with community organizations, beyond connecting theory and practice, learning by doing allows students to understand themselves as embodied actors. It teaches them when, how, where, and why they should trust the evidence of their senses—as well as when such evidence is insufficient for arriving at the facts of the matter.

### 3.3 The Doing of Learning

Practice-based learning can take numerous forms: project- or community-based or experiential learning, to name three iterations. Far from a new innovation, it has been around in different disciplinary formations for a long time. Nor are these forms quite the same, though each draws on similar ideas about the limits of learning without doing. Engaging with the world beyond and outside the classroom is crucial to a forward-looking liberal arts ecosystem attuned to how education occurs *in media res*. Not only do students carry their worlds into classrooms, it is likely wrong and unfair of any instructor to expect they do otherwise. Conventional notions of disembodied learning, as we stress throughout, are unsustainable for the manner in which they signal a division between mental and manual labor, or the classical Aristotelian contrast between “theoria” and “praxis,” which, in turn, frames the pursuit of knowledge as a largely disinterested affair. Theory not parsed through practice looks different, even self-absorbed, than when it is informed by practice—just as practice lacking theoretical insight or generalizability can be dismissed as a one-off.

At the same time, acknowledging the outside world inside classrooms has suffused pedagogic practice with a pervasive sense of anxiety and suspicion. Consider, for instance, the case of the professor who, in *The Chronicle* article discussed in the prior section, said their classroom has increasingly become a space of “de-escalation,” where thorny issues on the minds of students and flaring in public discourse are set aside, leaving students to work out such issues on their own, in private, at home. It is easy, in the face of these developments, to say faculty need to carry on regardless, unconcerned with their students’ emotional or psychological well-being. It is equally easy to suggest instructors should give in to students’ feelings of fragility without having them reflect on how being unsure of oneself and one’s thoughts is a mark of education. The more difficult yet important lesson, however, is that it is untenable for classrooms to morph into quasi war zones from which participants retreat into privacy. What promise can a liberal arts education hold when matters of disagreement become too fractious to talk about? (Even spellings—quasi- or quasi, data set or dataset—can become indices of political contestation, between “old” and “new school”).

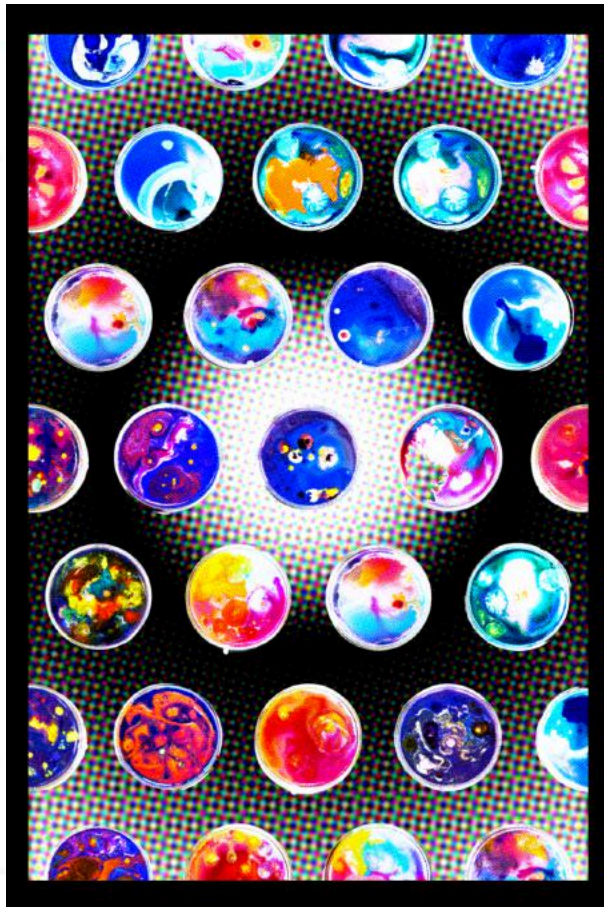


On its own, experiential learning is not a panacea to this condition. However, its collaborative and public-facing nature is vital, especially when combined with the broader areas of restructuring we outline. Collaborations and engaged practice in the community are essential from both conceptual and practical points of view. Conceptually, by connecting students from different backgrounds through processes of hands-on learning, practice-based models expose individuals to differing points of view while still helping them establish common ground. One has to work together to work things out. This doesn't imply experiential learning is inherently democratic. Nothing ensures that the mere presence of other people will result in productive conversation or the overcoming of barriers. There is democratic potential in this endeavor; but only if such potential is consciously fostered.

Simultaneously, in a practical key, experiential learning generates connections between applied skills and a collaborative disposition that serves students well long after graduation. In a situation where employers sometimes worry that the liberal arts do not offer enough by way of workforce development and career preparedness, practice-based learning connects theoretical concerns and ethical sensibilities to actually existing problems that can only be addressed in conversation and collaboration with other people. Well-conceptualized programs in experiential education add depth to the conversation around the liberal arts and career trajectories by broadening our ideas of an agile workforce beyond transferable skills and salary as the singular measure of success while, at the same time, helping students advocate for themselves on those instrumental terms. Individual flourishing and collective well-being alike are essential elements for living responsibly on an increasingly fragile planet. Where conventional workforce development initiatives are concerned with efficiently translating degrees to dollars, thoughtful efforts at experiential education can amplify links between personal success and the social good without making the latter appear abstract and distant from the former. When democratic sensibilities are nurtured through practically useful work, students learn organically to articulate the value of their capacities for employers beyond the academy while arriving at a sophisticated understanding of the kind of workers they want to be.

For over half-a-century, the Center for Project-Based Learning (PBL) at Worcester Polytechnic Institute has led the way in this regard. Faculty and administrators with the Center [suggest that](#) although minority-serving

institutions often have more open-ended admissions policies that weigh prior educational achievements with other axes of learning and success, “many of the most highly visible proponents of PBL are selective institutions primarily serving disproportionately advantaged student populations.” This means the potential PBL has to democratize access to education and postgraduate success is severely undercut since those who could benefit most from such hybrid and blended knowledge rarely have opportunities to gain from the same.



## **LEARNING IS AN INVITATION TO HETEROGENEITY**

Education is incomplete  
when difference is  
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initiatives. To learn is to  
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LIBERAL ARTS IN A FUTURE TENSE

In conceiving of ways to adapt experiential learning rigorously into an integrated liberal arts curriculum cutting across the social, natural, and human sciences, we will have to move beyond binaries structuring commonsense concepts of learning in these fields. While incorporating aspects of fieldwork, experimentation, or community-based practice into

curricula can close gaps between the classroom and the world beyond, an innovative approach to such work would have to flow from an understanding that text and practice are not opposed. The tendency to relegate, say, literature to a domain outside or beyond practice and practicality stems, in large part, from a view of texts as passive objects, and reading as a solitary activity. The collection of knowledge ensconced in a book is assumed, therefore, to be already distant from the world.

Of course, texts are not outside the world. We bring our worlds—habits of mind and body, ideologies, passions, preferences, and prejudices—to texts we read. There is nothing solitary about reading. Texts activate [socialities](#), connecting readers to worlds beyond, not only in sync with other readers but also by revealing geographies and times that broaden one's horizons. Thus, reading and practice are not oppositional and discrete activities but can and do unfold together, helping us think about how we act on, and in, the world—and how the world shapes our everyday lives.

Some of these challenges are at the front and center of the “University Studies” program (UNST) at Portland State University. UNST has developed a unique model of community engagement through an innovative undergraduate curriculum culminating in a community-based capstone. As one faculty member put it, UNST sees itself as an inquiry-based program departing from the more familiar notion of general education courses that are unrelated to each other. By contrast, a selection of thematically interlinked Freshman and Sophomore Inquiry (FRINQ and SINQ) courses offered by UNST aim to provide students with what the program identifies as the “foundations for lifelong learning.” The courses are supported by peer mentors who are not teaching assistants but help students develop writing and argumentation skills.

At the close of the 20th century, a hybrid, interdisciplinary version of UNST emerged from a broader structural rethinking of PSU's philosophy of education, glossed as a paradigm shift from “requirements to learning.” In 1993, a General Education Working Group was established in response to a question posed by then-provost Michael Reardon. He asked faculty if they could genuinely claim that general education at PSU offered anything meaningful to students. One member of the group, Charles White, reports faculty could only answer the question in the negative. This was the internal impetus to reconceptualize the trajectory of learning at the institution:

recognizing that the existing GE model was not serving students as it was meant to.

There were external factors too. Members of the Working Group attended the 1993 annual meeting of the organization now called the American Association of Colleges and Universities (AACU), where they were exposed to fields of research on student and learning experiences of which they were previously unaware. [As White writes](#): “Few members of the group were aware of the existence of scholarship on student learning, curriculum design, or the educational experience. Attending conferences focused on higher education itself, rather than on disciplinary specializations, had not been faculty practice.”

In the overhauled framework, FRINQ and SINQ courses prepare students to take upper division Junior Cluster courses that are part of UNST’s overall structure but offered at the departmental level. Clusters on offer (of which students select three) interrogate themes as wide-ranging as American Identities, Global Environmental Change, and Interpreting the Past. After passing through the Junior Clusters, students return to UNST for a final capstone course. In theory, every student admitted to PSU (except those in the Honors College) begins with the FRINQ and SINQ sequences before transferring into the Clusters. In reality, however, a vast majority at PSU are transfer students who move directly into the SINQ sequence and Junior Clusters, which means that some of the foundations these inquiry-based courses offer are unavailable to those who may benefit from them the most. Unlike courses oriented to inquiry, the Junior Cluster follows a more traditionally text-based approach to learning.

Armed with a feeling that GE was not achieving its aims, and that there were chunnings in the way student engagement was thought about in the academy, the 1993 working group set out to reimagine the structure of education at Portland State while remaining mindful of their specific status as an urban-serving institution. One of these challenges related to the composition of the student body, which, consisting of a large population of commuters and students working multiple jobs, made it harder to nurture the sense of a close-knit campus community. To foster a student-centered curriculum with a focus on active, engaged learning in this context was not easy. Nonetheless, several factors the working group identified to make education at PSU more active and engaged have become the bedrock of

UNST's identity today: a focus on student-centered teaching, peer mentorship, interdisciplinarity, and the purposeful inculcation of social justice values into the curriculum, to name a few.

Although UNST does not explicitly articulate itself as a liberal arts undertaking and accentuates the natural and social sciences more than the humanities, one of the guiding ideas informing the overall architecture of the program is metacognition, or learning about how we learn. The faculty and staff's understanding of this concept is shaped by environmental historian William Cronon's influential essay, "[Only Connect](#)." Cronon argues that "more than anything else, being an educated person means being able to see connections that allow one to make sense of the world and act within it in creative ways." In this description, we see once again, the idea of liberal education as an education in worldviews. Put in terms of language popular in the human sciences today, a liberal arts education is *relational*.

Further, UNST's teaching philosophy draws substantially from an influential article, "[Traditional vs. Critical Service-Learning](#)," by Tania Mitchell, a professor of higher education at Stanford University. As the title indicates, Mitchell distinguishes between what she calls "traditional" and "critical" types of service learning. The former valorizes service without attending to structural discrimination and injustice. The latter intentionally develops a political and interventionist model of service oriented to explicitly questioning and dismantling unjust systems. Traditional service learning focuses entirely on those doing the learning, often to the detriment of the spaces, organizations, and communities in which learners are embedded. This leads to a rigid, one-sided exchange where service work has no transformative impact. Critically interactive service work, on the other hand, requires something beyond the identification of community organizations with which a campus or program can partner: "faculty, students, and staff must all be involved in a dialectic and responsive process that encourages analysis and action to address issues and problems facing communities."

Mitchell's framework is important enough to UNST's vision that faculty proposing capstone courses have to submit a reader response to her article as a metric for gauging how valuable the proposed course is to the overall mission of the program. Her work also informs UNST's primary pedagogical goals, which were mentioned frequently in our discussions with faculty and staff, and were first formulated by the 1993 working group. Of the four

goals—(1) communication, (2) inquiry and critical thinking, (3) diversity, equity, and social justice, and (4) ethics, agency, and community—the last two stand out as especially significant. These were revised in 1996 to meet the demands of changing social expectations. As Óscar Fernández, the program’s diversity, equity, and inclusion coordinator, explained, the reformulated goals abandoned the language of appreciating human and



## KNOWING FOR LIFE

How can our present predicament help us reimagine what it means to live and thrive beyond a single-minded focus on careers and growth? How, in Samuel Beckett’s words, can we *fail better*?

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social diversity in favor of an explicit acknowledgement of structural inequalities and power relations. As the diversity pillar was revised to incorporate an active, politically committed learner who is also an agent of change (rather than someone who merely appreciates difference), other pillars such as that on ethics and agency also had to be rethought.

Together, the goals furnish an identity for UNST, whose sense of self as an institution serving its locality finds expression in a motto emblazoned on the side of a bridge leading to the campus: “let knowledge serve the city.” Experiential learning is a critical component of this identity. The faculty we spoke with were clear that PSU has gained recognition in the field not because its efforts are exceptional, but because UNST has baked service learning—and by extension, the city of Portland—into the curriculum. The campus’s historical connections to the city, alongside student demographics skewing to older, first-generation students who are often interested in applied learning, infuses a sense of purpose into community engagement. The ramping up of community-based courses to address a wide array of issues—from homelessness and food insecurity to support networks for vulnerable populations—was initially inspired by the campus’s engagement with veterans who were keen to enter the workforce after graduating from PSU.

Today, over 200 capstone courses serve more than 4000 students whose general education ends on this note, preparing them for active engagement in the world. In 2018-19, the selection of courses offered in partnership with local organizations included ones focused on bat diversity in Portland’s parks, community psychology, farm education for youth, social justice in K-12 education, cultivating gardens in women’s prisons, water scarcity, and grantwriting for environmental defense and language sustainability. Along with its peer mentor program, the capstones qualify as what are called “high-impact learning practices.”

A regime of assessment is indispensable to the undertaking. Initially, Judith Ramaley, president emerita and distinguished professor of public service, insisted on fostering a culture of evidence-based learning to track key shifts brought on by the new approach to dynamic and experiential pedagogy. In the words of Rowanna Carpenter, director of assessment and research, UNST deploys a relational method for assessments, one departing from standardized methods which are neither careful nor subtle enough to accurately assess the ethos and impact of an expansive experiential learning-based curriculum. Since this model strives to enhance the program’s communal and collaborative culture, it unfolds at an aggregate level rather than being centered on individual students and faculty. As was emphasized to us, UNST’s focus on cultures of assessment, experiential

learning, and investments in diversity emerged roughly together—indicating none of these endeavors can be supported without the other.

Within the multilayered system put in place, the most crucial axis of assessment is that of the faculty themselves. Recognizing the importance of “training the trainer,” UNST refers to faculty development as a form of “support.” Capstone courses, especially, require a rigorous program of training for faculty since these courses stretch beyond the gates of the university in collaboration with community partners who have their own ethical and political frames for addressing the issues their work addresses. Moreover, it is arguably difficult (if not unethical) to send students out into the world to comprehend and tackle complex problems without adequate knowledge of how to do so in collaboration with diverse stakeholders.

Thus, when a faculty member pitches a course, administrators ensure it amplifies learning goals. If the course is viable on those grounds, then faculty work with the faculty development coordinator to implement it. Apart from the community-oriented and outward-facing nature of capstones, such training is critical because scholars who offer interdisciplinary community-based courses are not always equipped with a sophisticated vocabulary for addressing questions of race, justice, and equity while teaching in their areas of expertise. In other words, a seminar on the logistics and infrastructure of the food system in Portland might, for instance, steer clear of matters beyond immediate concerns around how that system is organized. However, when a student goes to work at a food pantry, they, as much as the professor who sent them there, will have to know how to interlace knowledge of that system with deft awareness of how to interact sensitively with those marginalized segments of the population the system serves. The faculty development coordinator helps those proposing courses to work through these questions, as well as figure out methods for grading, assessing, and conducting an experiential learning course. (It is worth noting in passing that we heard more than once how much easier it is to train community members or adjunct faculty to teach in accordance with the capstone than training faculty to go into the community).

If one worry is that an operation on this scale can be difficult to sustain in a financially strapped public institution like Portland State, the concern is not unrealistic. Sustaining high-impact practices is one of the biggest challenges faced by UNST. For many public universities, general education is a major



source of revenue generation. Because UNST is an educational unit (as opposed to a department), it does not partake in faculty governance, and inhabits an ambiguous space in PSU's institutional infrastructure. This means that revenues generated from its widely popular general education courses are for the most part redistributed to departments. Additionally, when the university administration wishes to make cuts in the budget, it is invariably high-impact practices like peer mentoring and capstones that come under threat. This unhappy dynamic, in turn, propels formations like UNST to cut costs where it can by, for instance, recruiting increasing numbers of non-tenure-track and adjunct faculty to undertake much of the teaching. Here, then, are the sobering facts: 60% of SING and capstone faculty are adjuncts. 25 are either continuous or non-tenure-track faculty, 23 are housed in home departments but also teach in UNST, while another 30-50 are adjuncts.

As this discussion bears out, a vibrant campus-wide, practice-based, interdisciplinary model like UNST is challenging to establish and sustain along a number of axes: budgetarily; in terms of the coherence of the program; the systematicity and evenness of pedagogical standards; and maintaining buy-in from administrators, faculty, students, and those in the city it serves and with whom it engages. The labor, creativity, and agility of thought and action such initiatives require thread scholarship with administration and networking, not to mention everyone's goodwill. To structure the totality of a student's experience on campus the way UNST envisions, exciting coursework must be backed up by an innovative culture of assessment, feedback, and community relations. When done well, institution-wide initiatives of this kind demonstrate the sort of impactful application we envision for a forward-looking liberal arts ecosystem. But to have a chance at flourishing sustainably institutional structures, infrastructures, and imperatives must also be addressed with careful attentiveness. For institution-wide initiatives can rarely reach their full potential unless the institution as a whole is open to transformation.

## 4. (How) Do Institutions Change?

This work is motivated by a conviction that most arenas of crisis unfolding in the world today—climate change, racism, technological acceleration, antidemocratic politics—cannot be adequately addressed by siloed disciplinary formations. Nestled at the junctures of different disciplines, such problems are thoroughly interrelated. The climate is no more a monopoly of scientists than democracy is of historians and political theorists. Technology is enmeshed in patterns of racial, sexual, and economic discrimination, but also offers a potential to create infrastructures for enacting more equitable futures. If this is true, even in part, then existing modes of thinking about the value of the liberal arts require reassessment. And if examining anew the meanings of terms like interdisciplinarity informs one part of the problem, then rethinking the place of the university in modern life informs the other.

The university as we have historically known—and idealized—it is no longer sustainable. For critics like [Davarian Baldwin](#), universities are among the “most central and least examined social forces shaping today’s cities. In today’s knowledge economy, universities have become the new companies, and our major cities serve as company towns.” Apart from the contradiction between profit and the ostensible mission of serving the public good, the phenomenon points to a situation where boundaries between the university and its outside have become blurred. Where once universities were seen as the primary institutions from where knowledge made its way into society, today the landscape of knowledge production is vastly more heterogeneous. Contemporary skepticism about expertise stems in no small measure from a state of affairs where traditional coordinates of learning and authority have become murky.

Being defensive about the liberal arts is unhelpful as a response to this condition because defensiveness holds on to a nostalgic vision of the university to which we no longer can (and, arguably, should) return. By proffering capacities like empathy and critical thinking as among the most significant contributions of a liberal arts worldview, the defensive position undermines the variations within that formation—which, as we suggest, is not the lone province of the human, social, or natural sciences. This claim amounts to its own kind of intersectionality, reminding us that matters of fact and matters of concern are always muddled. Rather than separate those domains into their ‘proper’ areas (philosophers grapple with ethics,

mathematicians crunch numbers), we can embrace their mutual entanglement. Data is as much [about aesthetics](#) and the design of classification as it is about quantification, just as art is as much about [social and cultural capital](#) as it is about aesthetics. Learning today is as much about how to do things with data as it is about how to do things with words, and often inter-relationally.

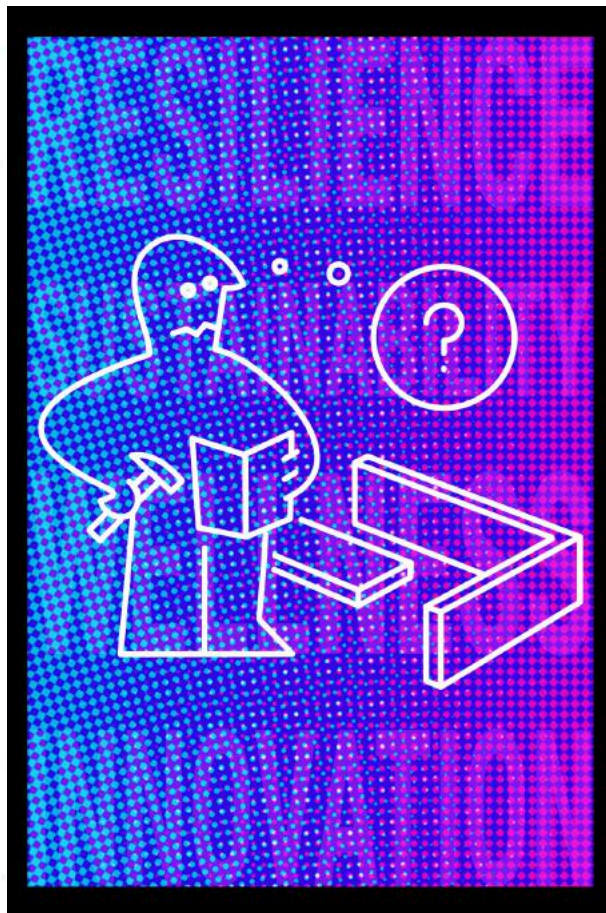
To fully embrace the implication of this point-of-view, one will have to move beyond paying lip service to interdisciplinarity and experiential learning, and restructure the shape of institutions, from departments to campuses as a whole. Our emphases on (1) a curriculum integrating the natural, social, and human sciences, (2) developing capacities to better inhabit media-saturated environments, and (3) structurally incorporating project-based learning into undergraduate education, derive from an understanding that piecemeal measures will no longer do.

Still, there is often a gap between theories of change and their impact in practice. Scholars point out that one reason for this gap is a deficiency in what [Ann Austin calls](#) an “evidence-based” and “systems approach” to institutional transformation. Evaluating developments in teaching, research, and administrative cultures in STEM, Austin argues that a systems view helps better understand how individual faculty simultaneously inhabit multiple cultures and contexts in the same institution: “Given that higher education institutions are complex organizations, change efforts are most effective when they use both a ‘top-down/bottom-up’ approach, take into consideration the factors at work within the multiple contexts that affect faculty work, and strategically utilize multiple change levers.”

Cultivating a systems disposition necessitates developing a complex view of institutions of higher education and their relation to society more generally. From its entanglement with the global knowledge economy to government funding and investment, the rise of for-profit institutions, novel pedagogical methods, and an internationalization of the student body, transformations at various levels have substantially changed the mission, values, and purpose of universities in the past few decades. At the same time, revenue generation has emerged as a dominant framework for operationalizing institutional change. When revenue generation through practices such as online classes and increased enrollments takes center stage, a broader view of how and

why an institution needs to change is often sacrificed. A holistic, systemic view of change turns, instead, on maintaining a balance between -.

One reason for these gaps—between change theory and practice, mission and market—is a lack of attention to context. Theories of institutional change come in many guises: scientific management stresses strong leadership and linear progress, evolutionary theories focus on slow adaptation, while



## **GENUINE TRANSFORMATION CANNOT BE OUTSOURCED**

There is no context-free blueprint for institutional change — except being alive to the voices of all stakeholders involved.

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cultural approaches take a nonlinear, long-term, and relatively decentralized view. However, as Adrianna Kezar argues in *[How Colleges Change: Understanding, Leading, and Enacting Change](#)*, none of these models is useful when applied as a blueprint without adequate consideration of context. Kezar suggests that a lack of contextual awareness explains why “colleges and universities with very distinctive missions have shifted over

time to become more similar in character—in terms of their student bodies, mission statements, focus on research over teaching, curriculum, and other components that make up the organization.” When leaders do not attend carefully enough to what requires transformation, and how that transformation can be effected in their particular contexts, they sometimes “misread the situation and offer up a change initiative that is a poor fit” for the instance at hand. While those at ground level implementing the learning mission of students can be inclined to hold onto familiar pedagogical practices, those in the suites can be removed from the baseline challenges and interests. Effective institutional change takes a sustained and open collaborative engagement across these sometimes divides.

A “second-order” view of change, on the other hand, adopts a systemic lens, attempting to cause a deep transformation in attitudes and culture, affecting the institution’s structural elements as well as its day-to-day activities. In higher education, this kind of change usually occurs not through revenue generation but via significant changes to curricula, pedagogical methods, assessment practices, and the like. Kezar and her collaborator, Peter Eckel, [propose a model](#) they call “sensemaking” to better understand and implement contextually relevant change in institutions of higher education. As the word indicates, “sensemaking is about changing mindsets, which in turn alters behaviors, priorities, values, and commitments.” This social and relational model of change already finds expression through established procedures and practices like collaborative leadership, flexible vision, staff and faculty development initiatives, and cultures of collective conversation. Sensemaking introduces new cues in established social environments, and as Kezar puts it in her book: “People need cues that can help them in rethinking assumptions and reflecting on their identity, such as new tenure and promotion guidelines or revised procedures. Cues help people to begin making new interpretations and rethinking their assumptions.”

A similar perspective was elaborated by Regina Stanback-Stroud, a member of our working group during her tenure as the president of Skyline Community College in San Bruno, California. Drawing on her training in critical race studies, and experience in administration, she discussed how major transformations at the institutional level in Skyline required investing time and resources in collaboration with diverse stakeholders across campus even to define and identify elements that needed changing. Rather than entrust the identification of problems to external consultants, Skyline built

what Stanback-Stroud called “a research question” around figuring out the contours of what had to be changed. The process, which began by focusing on revamping campus *culture*, went beyond raising uncomfortable questions to implementing curricular changes, establishing a Center for Transformative Teaching and Learning, transforming patterns and practices for hiring faculty and staff, rethinking modes of communicating with peers and across hierarchies, and the like.

One of the points of difference in her approach stemmed from the fact that Skyline began with the predicament of students. Analyzing a distressing record of student success and falling rates of graduation, she and her colleagues decided the problem was not students but the institution itself. Instead of asking how Skyline could help students improve, they questioned how the institution could better serve those it was meant to—those who were entering its gates with expectations that remained unfulfilled. What had been envisioned as a year-long process based on the recommendations of external consultants now stretched into a three-year effort. Without establishing new committees and sub-groups, Skyline reoriented existing campus resources towards addressing the problem, pooling together diversity and development committees that were established, and rethinking how investments (financial and social) already made could be directed to serving transformed ends.

Stanback-Stroud’s own experiences as a senior woman administrator of color schooled in the vocabulary of critical race studies and social justice were fascinating, to say the least. On the one hand, she spoke of how her hierarchically superior position and disciplinary training led to her being shut out of the room from time-to-time when colleagues wanted to discuss uncomfortable questions without feeling monitored or judged. (To be clear, in her view this was not an exclusionary practice, but spoke to a level of trust among stakeholders). On the other hand, she hired coaches for high-level campus administrators to help them learn how to cultivate different perspectives, and used her relationships with faculty to think of ways of better prioritizing the needs of students.

The entire enterprise was underwritten by a theory of leadership developed by Stanback-Stroud deriving from her social scientific and humanistic background. Called “Leading to Transgress,” it is a theory grounded in a multiracial, multicultural, gendered framework driven by leaders who are not

removed from their communities but situated close to marginalized populations they want to serve. Such leaders seek not to generate financial investments for the sake of abstract causes or campus enrichment, but strive to allocate resources—monetary, social, cultural—in a way that transgresses dominant systems of power and privilege, opening avenues for a more just and equitable system geared to those who need it most. She summarized the goals of this theory as: “Leading to liberate, strengthen, and educate. Leading to free the oppressed and to change the racist and sexist structures of power and privilege. Leading to develop the depth of humanity and to maximize human potential. Leading to make a difference in this world.”

A primary implication of “Leading to Transgress” is that there can be no one-size-fits-all model of transformative practice. Institutional contexts as well as the personalities and dispositions of the stakeholders involved are critical for such a program to succeed. To that end, we offer it here less as an overarching solution than as an example of the kinds of fine-grained work indispensable to any effort aimed at changing the status quo. For such transformation to be effective, stakeholder buy-in can neither be assumed nor enforced from above. It must emerge from within the institutional ecosystem, and will inevitably be subject to the exhaustions, negotiations, and satisfactions that any (democratic) practice of this kind affords.

If one conviction motivating this text is that conventional defenses of the liberal arts have, for the most part, run their course, then another is that the university as we know it will not end with prior notice. Quite to the contrary, the university as we know it is already ending. Confronted by this fact, it is not useful to devise ways of preserving a model of an institution that no longer serves the majority of the people it seeks to prepare for the world beyond its bounds. It is imperative to determine how, as the institution changes, one can intervene to productively shape change. Where “Leading to Transgress” offers one vision of intervening at the interstices of disciplinary formation and existing structures of power, the practices and shifts in ways of thinking advocated throughout this text motivate us also to reimagine transformation at other scales.

In a recent conversation, novelist and cultural critic Jeanette Winterson [evocatively describes](#) education as the transformation of data: “We’re all programmed on datasets aren’t we? All the stuff that went in is the stuff that

made us. If we're lucky, we're programmed on myriad, multiple datasets so we can address our own prejudices and biases. That's what an education is for. If you educate people, you're challenging the datasets that we carry around with us."

Transformation in this spirit, which is close to the habits of body and mind we hope—and urge the liberal arts—to cultivate, can be characterized as *diffusionist*. It urges the construction of an ecosystem where the liberal arts and their sensibilities proliferate throughout an institution and beyond, saturating its ways of acting and reasoning. A diffusionist liberal arts ecology is not merely housed in departments, or indeed across them. Leveraging practices and histories, it seeps into the fabric of an institution (and society more generally), transforming it by becoming a part of its bloodstream.



## 5. Guiding Considerations

- 1. Genuine transformation cannot be outsourced:** There is no context-free blueprint for institutional change—except being alive to the voices of all stakeholders involved.
- 2. Learning is an invitation to heterogeneity:** Education is incomplete when difference is quarantined to homogenizing institutional initiatives. To learn is to make your world with others.
- 3. Canons are not set in stone:** To illuminate what it means to be human, the canon has to incorporate the fullness of human experience. The Classics can be made present to our times, just as the cutting-edge can feel most out of touch with what matters.
- 4. Reading is a skill:** All experts are critical thinkers within their domains. Reading transgresses narrow expertise by acknowledging facts and values are shared, and disputed, together.
- 5. Revisability supports cultures of evidence:** Students and instructors are challenged to approach learning with an openness to revising their worldviews, refusing to exercise authority conventionally, pedagogically or institutionally.
- 6. Data is composition:** Data is always constructed to speak to a purpose. To understand its purpose, we have to learn to read data before, and in the process of, its making.
- 7. Curricula for collective futures:** To be attuned to a planet that disrespects artificial boundaries between the social, natural, and human, our learning must assume a spirit of indiscriminate and boundless curiosity.
- 8. Knowing for life:** How can our present predicament help us reimagine what it means to live and thrive beyond a single-minded focus on careers and growth? How, in Samuel Beckett's words, can we *fail better*?

## 6. Credits and Acknowledgements

*Liberal Arts in a Future Tense* is authored by Anirban Gupta-Nigam and David Theo Goldberg in collaboration and consultation with a national working group, whose members are:

**David Theo Goldberg** | Project PI; Director, UC Humanities Research Institute; Distinguished Professor of Comparative Literature, Anthropology, and Criminology, Law and Society, University of California, Irvine

**Anirban Gupta-Nigam** | Postdoctoral Scholar, UC Humanities Research Institute

**William D. Adams** | Former Chair, National Endowment for the Humanities; Former President, Colby College

**Ruha Benjamin** | Professor, Department of African American Studies, Princeton University

**Harry Brighouse** | Mildred Fish Harnack Professor of Philosophy and Carol Dickson Bascom Professor of the Humanities; Affiliate Professor of Educational Policy Studies, University of Wisconsin-Madison

**Wendy Hui Kyong Chun** | Canada 150 Research Chair in New Media, School of Communication, Simon Fraser University

**Ainehi Edoro** | Assistant Professor of English, University of Wisconsin-Madison; Founder and Editor-in-Chief, *Brittle Paper*

**Bryan Garsten** | Professor, Political Science and the Humanities; Chair, Humanities Program, Yale University

**Mariam Beevi Lam** | Associate Professor, Comparative Literature and Southeast Asian Studies; Director, Southeast Asian Studies Program; Vice Chancellor for Diversity, Equity and Inclusion, University of California, Riverside

**Karen Lawrence** | President, Huntington Library; President Emerita, Sarah Lawrence College

**Christine Ortiz** | Morris Cohen Professor of Materials Science and Engineering, MIT; Founder, Station1

**Clayton Spencer** | President, Bates College

**Josh Wyner** | Vice President, the Aspen Institute; Founder and Executive Director, College Excellence Program

## History of the Initiative

In 2017, under the then leadership of President Earl Lewis and Executive Vice-President Mariët Westermann, the Mellon Foundation established the Mellon Research Forum on the Value of Liberal Arts Education. The undertaking was to promote qualitative and quantitative research into the makings and outcomes of a liberal arts education. An Advisory Committee of national university administrators and faculty was established, jointly chaired by economist Michael McPherson and psychologist William Damon.

The Forum sought to assess the contribution of liberal arts education across a range of categories: impacts on economic well-being, cognitive and psychosocial development, physical and mental health, and civic and political participation. David Theo Goldberg, a member of the Advisory Committee, proposed a forward-looking study devoted to thinking what a viable liberal arts education relevant to twenty-first century needs and interests might look like. The Mellon Foundation provided a grant to pursue the project. The pandemic interrupted the range of proposed case studies, raising new challenges for our time. *Liberal Arts in a Future Tense* is the outcome of a series of intense discussions with our working group, and broader consultations with colleagues and institutional organizations.

We take this opportunity to thank the Mellon Foundation under the guidance initially of President Earl Lewis and Executive Vice-President Mariët Westermann, and now President Elizabeth Alexander. We thank also Mellon Foundation program staff, and our interlocutors Armando Bengochea and Dianne Harris, as well as Camilla Somers. Discussions with the Mellon Research Forum's Advisory group proved enormously useful too.

The distinguished working group that helped so creatively and productively to structure the range of thinking that went into our project was composed as a result of extensive conversations between David Theo Goldberg and Mariët Westermann. None of

the members hesitated in agreeing to participate when approached, and the outcome was made possible only by their individual and collective generosity.

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Finally, it goes without saying but needs to be said nevertheless: we are fully responsible for the views expressed, and any disagreements should be with us, not with any of the people with whom we so generatively engaged.