

**THINK PIECES ON UMD'S LIBERAL EDUCATION PROGRAM
AND THE VALUE OF THE LIBERAL ARTS**

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Foreword

Rebecca de Souza

Chair, Faculty Senate (2018–19)

Joseph Bauerkemper

Vice Chair, Faculty Senate (2018–19)

As Chair and Vice Chair of the Faculty Senate at UMD, we have been privy to murmurs and rumblings about the liberal education program at UMD. Concerns center around the mission and vision of the program and whether or not it is fulfilling its stated objectives. There are concerns about resource constraints and how they impact class sizes: some classes are overenrolled and others are underfilled. The liberal education program is the largest program on campus, yet faculty have not had consistent opportunity to engage in shaping the program. Conversations at University of Minnesota Duluth (UMD), as with other institutions of higher education, have been driven by budgetary constraints and not necessarily guided by broad-minded intellectual and critical thinking around the role, value, and purpose of liberal education.

Often confused terms, liberal education is an approach to learning that empowers individuals and prepares them to deal with complexity, diversity, and change, while liberal arts refer to specific disciplines such as the humanities, arts, natural sciences, mathematics, and social sciences.

In Spring 2019, UMD’s Faculty Senate extended a call to faculty members for short essays that deal with the role of a liberal education and/or the liberal arts for undergraduate students. In the call for papers, we highlighted interest in particular epistemological and disciplinary positions and encouraged specific and illuminating examples. We were especially interested in crosscutting examples that emphasized evocative and interdisciplinary thinking.

From a shared governance perspective, the purposes of this collection of thought pieces include:

- to provide faculty a space to articulate and express their voices about an important issue
- to revitalize UMD’s commitment to liberal education
- to generate conversation and meaningful dialogue around liberal education
- to provide valuable insights as we move forward in thinking about UMD’s vision, mission, and obligations as a comprehensive regional public university
- to help UMD’s Faculty Senate and its subcommittees in the coming year as we engage in decision making with regard to the liberal education program

A Liberal Education Task Force was constituted in late Fall 2006 and charged with proposing a future direction and mission for the liberal education program at UMD, which led to the report penned by the University of Minnesota Duluth Liberal Education Task Force and titled “Liberal Education at UMD: Recommendations for the Future.” The task force identified focal areas and a vision. The task force also “urge[d] that the many dedicated faculty members who currently teach liberal education classes at UMD be recognized and encouraged to participate in the revitalization of liberal education on our campus.” Also recommended was support for

faculty to learn about “the current debates surrounding curricular reform in higher education, particularly with respect to liberal education.” A decade later, concerns persist around the execution of elements of the proposal. This current collection of essays contributes to the revitalization of this ongoing effort.

We hope that the insights gathered here and the conversations these pieces stimulate will influence the trajectory of liberal education at UMD, inform the review of the liberal education program and, most importantly, benefit our students and their communities.

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Introduction

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The Liberal Arts, as a vast and varied field of humanistic pursuits, and a university's liberal education program, a refereed group of undergraduate coursework (sometimes called general education), share the common goal of liberal learning. At its most basic definition, the terms stem from the Latin, "of or pertaining to free [humans]" (Zakariah 2015, 42). Conversations surrounding the liberal arts and liberal education circle around the relationship of breadth and depth, the skills and attributes ideally developed through a liberal education, and the perceived dichotomy between the useful and "useless," concrete and abstract, theory and practice. The Association of American Colleges and Universities (AAC&U) (1998) provides a more detailed and modern description: "Liberal education requires that we understand the foundations of knowledge and inquiry about nature, culture and society; that we master core skills of perception, analysis, and expression; that we cultivate a respect for truth; that we recognize the importance of historical and cultural context; and that we explore connections among formal learning, citizenship, and service to our communities." This description, which encompasses the concept of liberal learning developed in this introduction, emphasizes the importance of both disciplinary and interdisciplinary knowledge, the development of essential skills, and a commitment to social engagement and collaboration, allowing students to develop the capacity for critical thought and participation in a free society.

Historically, there have been two basic trends for liberal education in the United States: the core curriculum, which includes a set group of courses that every undergraduate university student is required to study, and distribution requirements that give students choice among a variety of courses in a variety of disciplines. In the recent past, the latter has dominated US institutions. Within the category of the distribution requirement, there have traditionally been three main models: a great books model, which looks to the past (and brings up important questions today about who determines a canon and which voices are highlighted); a scholarly discourse model, which focuses on a general introduction to various disciplinary fields; and the effective citizen model, which purports to prepare students as citizens in the twenty-first century (Bourke 2009, 223). More recently, colleges and universities have attempted to address the problem of the "laundry list," where liberal education is seen merely as the checking of boxes. In some cases, the challenge comes from not communicating the purpose and importance of these requirements to students, parents, and yes, even faculty members. In other cases, it is because the liberal education program may lack intellectual coherence. This has led some higher education institutions to make radical changes, either returning to a core curriculum or creating distribution requirements that are not based on exploring multiple disciplines, but are based on themes, or skills, or experiences in an effort to build more cohesion (Flaherty 2018).

Indeed, the perception of liberal education as a burdensome laundry list is one of the reasons it is useful to consider both the liberal arts and liberal education in this discussion. As an interest in career training and pre-professional programs has grown in the United States, universities are shifting resources and curriculum to meet demand. With the rising cost of tuition, one cannot fault students and parents for wanting to see a clear path from college to career. In this climate, courses that do not immediately appear useful to each student's chosen career path are perceived as a waste of time.

This false dichotomy between pre-professional programs and liberal learning extends to both the liberal education program and to the Liberal Arts. However, liberal learning is not a luxury, but rather a necessity for meeting the challenges of the twenty-first century (Gregory 2003). Transdisciplinary concerns, like the consequences of climate change, social justice issues, and global political and economic structures, require people with creative mindsets who are prepared for complex challenges. Solving such challenges requires a “T-shaped” individual: one whose depth of knowledge is connected to breadth of knowledge, rather than an “i-shaped” individual, whose focus is too narrow and who is unable to make connections (College Learning). So why does UMD’s campus—and many university campuses in the United States—often report disdain towards the liberal education program? Could a devaluation of liberal education be connected to a devaluation of the Liberal Arts and liberal learning in general? In which ways do the structures of our institution implicitly or explicitly support or hinder the Liberal Arts and liberal learning?

As we enter into our first external review of UMD’s liberal education program in Fall 2019, we will be faced with decisions about which model of liberal education will support our core values. There are advantages and disadvantages to each model of liberal education, and what works for one type of institution may not work for another. We would be remiss not to recognize that choices universities make about liberal education are not based solely on pedagogical concerns, but are often driven by financial decisions. To ignore that is to obscure the way that our liberal education program might be influenced by budget difficulties, but also the ways that our liberal education program might structurally support disciplines that do not succeed in a culture that prioritizes career preparation at the expense of a broad education. Knowing that broadly educated students are sought by employers and succeed in the workplace (Supiano 2013) and are necessary for the survival of democracy, how can we incentivize intellectual exploration on this campus? How can we encourage collaboration rather than competition? Knowing that a commitment to liberal learning is bucking a cultural trend, which stakeholders should be involved in changing the narrative surrounding liberal education and the Liberal Arts at UMD and how can we communicate a new story?

This collection of essays is organized around two principles: doing and being. Liberal learning requires both: thoughtful and intentional action and deep and critical thinking. Consequences arise when one acts without thinking; such would be a life of automation, of little reward or fulfillment, and might lead to self-alienation and loneliness. Alternatively, when one spends too much time in contemplation, nothing gets done. Liberal learning bridges action and critical thinking, and opens up the possibility to fulfillment. Doing is rooted in being and being requires doing.

The first section of this collection, titled “On Being: Possibilities in Twenty-First-Century Learning,” includes four essays. David Gore inspires readers to consider how liberal learning can open up a life of joyful contemplation and engagement in personal formation. Inspired by an undergraduate student’s research project, Samuel Shanks states that an effective liberal education program encourages students to make innovative connections across disciplines and to be curious enough to ask questions. In his essay, John Pastor emphasizes that the purpose of student learning is to explore the question of what it is to be human and to give students the curricular freedom to do that. Mary Caprioli links the importance of a broad education in the Liberal Arts and everyday life. She reminds readers that even areas outside of the traditional notions of liberal learning, like healthcare and science, benefit from humanistic contemplation and the challenging of stereotypes.

“On Doing: Liberal Learning Moves Us,” the second section of this collection, includes five essays. Adam Pine pinpoints the key role of liberal learning in helping to find solutions to Grand Challenges with the goal of equity and well-being for all. Elizabeth Minor and Krista Sue-Lo Twu return to the historical origins of the seven liberal arts to advocate that literacy and numeracy are crucial skills for all students. Dana Lindaman, representing the CLA Design Thinking Group, writes about an important Design Thinking initiative currently taking place at UMD with the goal to deeply understand perceptions and misperceptions about the Liberal Arts and our liberal education program. David Beard explains how the Liberal Arts teach how to solve complex problems. Kristen Hylenski identifies language and culture learning as a key aspect of liberal learning.

“Our Stories: What We Do and How We Do It” concludes the collection. These personal stories answered the call to speak about the influence of the Liberal Arts and liberal education on one’s own life. David Syring, Rich Maclin, and Richard Gran creatively describe their individual experience with the liberal arts in their academic and personal formation.

It takes time, engagement, and difficult conversations to reflect upon and potentially improve our liberal education program and UMD’s support of the Liberal Arts. These essays are a beginning. We are hopeful UMD will allow for robust and deep engagement with our liberal education program that will lead to deeper support for liberal learning more broadly across campus. Ultimately, UMD’s liberal education program will reflect our values and beliefs about the purpose of higher education.

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On Being: Possibilities in Twenty-First-Century Learning

Liberal Learning, Leisure, and Letting Go

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The substance of liberal learning is leisure and its greatest achievement is a theoretical life. Leisure is a kind of work, but it is work founded on what William James (1962) calls “the gospel of relaxation” (99–112). To be leisurely is to live in a certain manner, the manner of contemplation, of solitude, of refinement, and of ease. Anyone who has ever been stressed out knows that being leisurely is the hardest thing in life to achieve, both in how we speak to other people and especially in terms of how we are in the world. Liberal learning can only at best facilitate the self-awareness and self-reflection that make genuine leisure possible. That leisure, in turn, must be directed toward how we live in the world, including especially the promotion of a theoretical life.

What does it mean to live theoretically? Liberal learning provides students with something “so improbable in the evolutionary sense and so weighty in empirical terms”: “the phenomenon of *bios theoretikós*, the reflective life” (Sloterdijk 2012, 2). The appearance of the theoretical life, of the life of theory, of living theoretically, of what is often translated as the examined life, of a life of examining the meaning of life itself “has morally unsettled and cognitively advanced human communities for over two and a half millennia” (Sloterdijk 2012, 2). Liberal learning provides the conditions for examining life, which requires that we be exposed to different lives across as many histories, cultures, languages, places, times, and theories as possible. Without a breadth of exposure, what could we draw upon to reflect on our own lives? Contesting the meaning of the phrase, “the examined life,” is, of course, part of what the phrase means. If we are unsettled and preoccupied with the meaning of life, and if liberal learning unsettles and preoccupies you, then this is most likely a sign that liberal learning is working on you and in you to disrupt however you were living before. Liberal learning means exploring “the conditions of the possibility of theoretical behavior” (Sloterdijk 2012, 2).

A hundred years ago the psychologist William James noted that Americans denied “the gospel of relaxation” and neglected what he called their “mental hygiene” (99). Everyone knows that a muscle must be repeatedly broken down and worked if it is to grow stronger and the same thing is generally true of minds. Daily exercise in reading, writing, speaking, and thinking is what it takes to strengthen a mind. If anything, in the last century with the rise of mobile technologies our amount of over-tension has only increased and our time dedicated to liberal studies, to poetry, to music, to philosophy, etc., has decreased. We live excitedly and hurriedly and more and more of the world has adopted the “bottled lightning quality” of life of which James (1962) was critical, neglecting our mental well-being in favor of the power of technology to engage, entertain, and even think for us (104). This has promoted a widespread lack of inner harmony and ease, producing an age of anxiety and a culture out of joint with itself, intent on disrupting the conditions of its own possibility.

Our age of anxiety and disruption calls for a calm and calming response. Learning has long been one of the greatest sources of centering strength and thoughtful reflection on the human condition, including its myriad of possibilities. Students enrolled in courses designed for liberal learning should be prepared for the possibility that their own anxieties might be disrupted by new concerns and new considerations and that their lives might take on new and richer preoccupations. The practitioners of the liberal arts model what is possible when leisure is

expressed dynamically and in the flesh. Their teaching must be matched by a desire on the part of students to take risks in thinking and living theoretically for themselves.

One of the best ways for us to imagine and adopt new and better ways of orienting ourselves toward theoretical life is to encounter those who have transformed their lives through learning and leisure. One literary example from mythic history is the life of Numa Pompilius. The example signifies preeminent virtue, if also an idealized illustration of one who was perhaps too perfectly transformed by the impulses of reverence, graciousness, and leisure. Numa Pompilius is said to have succeeded Romulus as king of Rome. Many of Rome's religious and political institutions were founded by Numa. Indeed, Plutarch records that Numa initially refused to rule because he claimed that the qualities of his character for which he was most praised made him unfit to rule, namely:

1. a love of leisure
2. a love of studies inconsistent with business
3. a passion for peace
4. a passion of un-warlike occupations
5. a passion for the society of those whose meetings are for worship and kindly intercourse and whose lives are spent on farms and pastures. If called upon to reign, Numa claimed, I could only teach the people to worship, to love, to pursue peace and justice. (Plutarch 1902, 128)

In short, Numa was pious, sought to treat all people alike, united a divided kingdom through the leadership and example of one committed to leisure and liberal learning. Once in office, Numa worked to rid society of class and social distinctions in order to create "a general harmony and intermixture" (Plutarch 1902, 140). Such moderation is as rare as it is welcome, and the intermixture of loving the uncomplicated things in life goes hand in hand with learning how to let go of desires for wealth, power, and fame.

Living as we do in a time obsessed with wealth, power, and fame it is well to remember examples like Numa Pompilius, examples of moderation, self-control, and a quiet, but certain preference for patient effort and steady gains. Living theoretically means defending the centrality of leisure to a good life. It means not getting obsessed with short-term gains but holding on for the long haul. It means promoting learning about subjects inconsistent with the business of life, focusing instead on the art of life. Among all the work that needs to get done in the world, liberal education calls us to the work of bettering ourselves, of learning how to let go of things that matter less than the things that matter more, it means learning how to tell the difference between good things and the best things as well as between worse things and the worst things. Liberal learning means coming to terms with ourselves, understanding the things that motivate us, and learning to strive after what is best. The unexamined life is not worth living, Socrates famously said, which is precisely the same as saying an unleisurely life is worth less than a leisurely one. Leisure and learning contribute directly to our power to examine our life, thus enhancing the worthiness of the life we are living.

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Toward Empathy and Innovation

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At the Spring 2019 Undergraduate Research Opportunities Program (UROP) Showcase, I had the great fortune to listen to one of UMD's students, Angelica Fleury, give an extraordinary presentation on the limitations and possibilities of robots as autonomous moral actors. Fleury's central argument was that many of the limitations that have been articulated as to whether a robot can act with morality are grounded in a decidedly Western philosophical view of the self, and that interesting alternative models for programming algorithms for such a robot could be gleaned from an examination of Buddhist ideologies instead. Not everything in this presentation was perfect—we can all remember the limitations of our own first research projects as students—but the originality of her argument was stunning.

Fleury's presentation was a reminder that our fields remain connected to one another, in ways that are not trivial. The computer code that makes our ubiquitous devices work stands as a symbol of twenty-first century internationalism, but it is so easy to forget that this code is written primarily in “languages” that are for the most part variants of English, and that are structured according to ideals of logic and property ownership, that are rooted in the Western philosophical tradition. Fleury managed to break out of these confines to see the shape of the forest, and to show that shape to the rest of us in the room that day. She developed a highly innovative strategy, with a practical application within computer science, by using intellectual tools obtained in her Philosophy classes to explore ideas from her own cultural heritage. This is the power of liberal education in the hands of an energetic and well-supported student. Liberal education is about supporting empathy and innovation; in this case one of our students managed to advance both causes at the same time.

When liberal education goes well, students learn alternative points of view and gain perspective on their own unique journey through life. This expanded perspective supports their ability to empathize. This ability to empathize is an important part of their development as the ethical leaders of our communities.

The diversity of experience that liberal education demands also empowers students to develop their own idiosyncratic talents. When liberal education goes well, students take classes that intrigue them, that pique their interest; and often these are classes in which they catch echoes of their own experience. When I was an undergraduate I signed up for a class on North African cultures, primarily to fulfill a requirement, but also because I wanted to know more about the world where my Moroccan uncle Mohammed came from. This class taught me a bit about my uncle's culture, but it taught me much about my own culture, and launched a lifetime of inquiry that has led me to a sub-specialty in theatre of the Islamic world.

Nearly every college and university in this nation struggles with its version of liberal education. Curriculum creep is alive and well, and major requirements have come to dominate Higher Education, leaving less and less room for students to chart their own educational path with “unrelated” liberal education courses and electives.

The insecurities of our world are real, and they have a palpable effect on our students. The financial burden for higher education at a public university like UMD has been shifted heavily from the state onto the backs to the individual students. Our students' desire to be handed a pathway to a life of security is understandable. Their need for an education that feels

“efficient” and “free of waste” is important. But when we marginalize the breadth of their education, when we don't encourage them to make active connections between the disparate corners of their academic lives, when we advise them to “get their ‘lib eds’ out of the way,” we set them up for a lifetime of fear and insecurity. When done well, liberal education can teach students how to successfully navigate a complex and ever-changing world, and to do so with empathy and an eye toward innovation.

What a vibrant liberal education should look like (not intended to be comprehensive):

- Students are taught what liberal education is, why it exists, and why UMD’s version looks the way that it does.
- Students are encouraged to make active connections between the content of their liberal education classes and the rest of their educational experience. Modeling and practice are important in building this skill.
- Faculty members teaching in a single category meet regularly (2–3 times per semester) to coordinate and share best practices. This also builds collegiality across departmental lines, which is part of building a strong sense of communal responsibility for our students.
- Students are encouraged to use their liberal education experiences to practice the development of innovative ideas within their major areas of interest.
- The values and learning outcomes of the different liberal education requirements are debated regularly and in public as a model of how responsible civil discourse happens.

We seek to educate our students liberally because we do not know what the future holds for them. We know it will be different, we know that it will be complex. Employment trends will boom and bust; the world will only become more interconnected and unpredictable. A great many of our students will wind up with job titles that are not synonymous with the name of their majors (even the so-called “practical” ones like education, business, and engineering), and that is a good thing. We do not know what the jobs of the future will look like, but we want our students to be participating in them.

Our society is replete with challenging problems that have no obvious solutions. We need citizens and leaders who can empathize and innovate. We will need thousands of young minds like Angelica Fleury, who can look at existing problems with different eyes, adopt philosophical tools from centuries past, and apply them in ways that we could never predict. This is the promise of liberal education, if it is done well.

Liberal Education in Today's University (especially UMD)

John Pastor

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In 1852, John Henry Newman gave a series of lectures (or “discourses” as he called them) that, for the first time, defined liberal education and codified the modern university. These lectures were later compiled into his classic, *The Idea of a University*. In *Discourse V (Knowledge Its Own End)* ([1873] 1982), Newman says a liberal education forms a habit of mind that “lasts through life, of which the attributes are, freedom, equitableness, calmness, moderation, and wisdom. . . . This then I would assign as the special fruit of the education furnished at a University, as contrasted with other places of teaching or modes of education” (76–77).

In a more recent book, *Prescribing the Life of the Mind* (1993), Charles Anderson argues that the aims of a liberal education are to ensure the competence of citizens and the cultivation of practical reason. He defines practical reason as an art of discovery that explores the different ways humans have distinguished right from wrong, correct from incorrect, quality from mediocrity, and the beautiful from the ugly. A liberal education does not prescribe these things, but teaches a habit of mind which each student can use to guide his or her own life. Through a liberal education, Anderson claims that a student will become uncomfortable with his or her own ignorance about the world. The student will then (we hope) discover how best to proceed in the face of that ignorance. The result is the education of a class of citizens who can contribute practically and positively to the ongoing journey of discovering what it means to be a human being. Given the sad state of our current public discourse about so many things, there is no more important purpose of a university.

If a liberal education is at the core of a university education, then the question “what does it mean to be a human being?” is at the core of a liberal education. This raises a set of subsidiary questions that can integrate all of our disciplines and colleges into a coherent whole:

- Where did we come from? The student learns to think about this question in history, anthropology, and archeology.
- How do we behave to each other in community, and how do cultures define right and wrong behavior? Again history and anthropology, but also sociology, political science, psychology, cultural geography, philosophy, and economics.
- How do we relate to the natural world around us? This is the purpose of the sciences, including physical and resource geography.
- How can we know something is true, probable, or false? These questions are the underlying themes of mathematics, logic, computer science, and parts of philosophy.
- How do we express ourselves clearly and beautifully? This is the role of literature, writing, music, art, dance, and theater; in short, the arts broadly understood.
- How do we make useful things and what constitutes good design? This is the role of engineering, architecture, and graphic arts; these disciplines are often forgotten by liberal education curricula.
- How can we cultivate not only the life of the mind, but the beauty and life of the body? This should be the purpose of sports and athletics as well as dance.

Under UMD's current, overly complex, and confusing liberal education curriculum, very few, if any, students will develop a way of thinking that cultivates the search for their own answers to these questions. Virtually all of our students, including the academically best students, think the liberal education curriculum is something to "get out of the way" or take in a community college before coming to UMD. They have it exactly backwards. Our students are, in their own way, telling us that our liberal education curriculum is not working.

I think it might be useful to think about a liberal education as a framework that helps each student explore for himself or herself what it means to be a human being. The questions outlined above (or similar ones) should be posed to each student at the beginning of his or her freshman year. Perhaps the freshman university seminar course could be partly organized around them. The student should be encouraged to think of a university education as a hero's journey to find the answers for these questions both within themselves and within the great achievements of human cultures everywhere. This is not to say that we should develop a list of courses under the headings of each of these questions to replace the current list of courses under ten headings. We can instead suggest groups of departments as being especially poised where each student can struggle with one or more of these questions and then let them take whatever courses they wish. With their advisor's consultation, each student should be required to develop a plan of courses of their own choosing that helps them address each question. That way, there are no liberal education courses; every course contributes to the liberal education of the student. The syllabus of each course could contain a brief explanation of how that course relates to one or more of these questions. Then, the question should be front and center throughout the course. We need to teach how the great masters of each discipline have grappled with some part of these questions. Then, through homework and projects, give the students the opportunity to grapple with posing and exploring these questions for themselves.

This may sound radical for UMD, but that is exactly the point. Developing a liberal habit of mind is a radical act because it forces the students to question their own ignorance about what it means to be a human being and then seek their own answers to it. Giving the students a little more freedom to develop their own curriculum will force them to grapple with these questions and, in the process, take ownership of their education.

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Liberal Arts: A Compass for Life

Mary Caprioli

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What profession does not require us to engage with and understand others and the world around us? Few, if anyone, goes through life without having to effectively communicate. Political and cultural knowledge is as key to business transactions as it is to office and neighborhood goodwill. Our lives are ever-evolving and require frequent interactions with others. For these interactions to be successful, we need to understand ourselves, how to navigate within society, and how to break free of societal constraints that are vestiges of revisionist history and insupportable social hierarchies. The Liberal Arts provide the necessary compass and the knowledge to use it.

A study of the Liberal Arts allows us to understand the importance of words, their origins, and meaning. Words hurt, and words kill (Klomek 2011; Maynen 2013). Scholarship grounded in the Liberal Arts demonstrates the value of diversity, the need for a variety of perspectives, and the importance of respecting these understandings in our behaviors, social institutions, and state policies, both foreign and domestic. We work and live in communities, not in isolation as John Donne reminds us in *For Whom the Bell Tolls*. And the more equal these communities, the less violence there is worldwide (Hudson et al. 2012): peace as an international public good.

Our financial health, from investments to household expenses, depends on how well we understand the world stage and the intricate relationships of all the actors upon it. Location matters, for the stage is neither static nor level. The actors, as individuals and groups, are influenced by history and politics, as they interact, sometimes violently, using different languages and oft conflicting symbolism.

Even our health is partly determined by the richness of our scientific community's liberal arts education. This goes beyond ethics, though that too, is an important aspect of the Liberal Arts. Rapidly advancing technology is giving rise to a fresh round of discrimination wherein minorities, including women, are suffering and even dying, because their reality is invisible. Women and African Americans are more likely to die from heart disease (Walker 2013); women's pain is often dismissed and undertreated (Billock 2018); and women are underrepresented in data, which fails to capture the safety and efficacy of pharmaceuticals and medical devices for half the population, given women's and men's different physiology (Liu et al. 2016). Even crash test dummies are created with bias, as they are modeled on European and American men's physiology, thus leading to poor prediction of injuries and deaths in motor vehicle accidents for people in other regions and from vulnerable communities, including the elderly (Xu et al. 2018).

There is nothing neutral about data analytics either. Data analytics, used for hiring and promoting, has been shown to be biased against women (Kim 2017). Without the knowledge of the Liberal Arts, the outcome of STEM research is rife with prejudice, partly because the disciplines themselves struggle from prejudice within. Those in the STEM fields are entering a battle that we in the Liberal Arts have been fighting for decades. We can lend our expertise, not only from our experience but also with our research. We study the dynamics of political influence and structural inequalities at all levels of analysis. And, we in the Liberal Arts could use the expertise of our STEM colleagues to aid us with some of our research. Such a

collaboration provides a rich education for our students and prepares them for the reality of our world. A fascinating, though unscientific study by Schweppes for an ad campaign in Brazil used a touch-sensitive dress to track how often three women were touched without consent during a night out: a combined 157 times in under four hours (<https://bigthink.com/sex-relationships/sensor-dress>). This was an innovative use of technology to help explore the complex interplay of power, gender, culture, and more. Creative interdisciplinary work is also needed to explore the evolution of cooperation—the irony!

In general, people may not realize how dangerous the absence of knowledge grounded in the Liberal Arts can be, but they do bemoan the loss of so-called common sense. This comes at a time when the world, no less so the United States, is devaluing the Liberal Arts. This is no coincidence. Common sense requires knowledge about others, about our commonalities and our differences, how these came to be, and how they manifest in our beliefs, behavior, and institutions.

Although we cannot forget our ancestors' rich oral traditions that imparted both cultural values and wisdom, perhaps our ancestors were able to use 'common sense' to stay safe from predators during the Paleolithic Period, but that certainly no longer applies, at least not for women. More than double the number of women were killed (50,000 worldwide in 2017, according to the UNODC) by intimate partner or family member violence than the total number of all battle-deaths thus far in the twenty-first century (<https://ourworldindata.org/war-and-peace>). Who, if anyone, gets punished for these murders is a matter of justice or more often, injustice.

Common sense needs to be learned and is at the very heart of the Liberal Arts. Without the Liberal Arts, common sense is often rooted in stereotypes and prejudice. Nobody intuitively understands another's culture, religion, history, or values, or how these are enshrined in political and social institutions. It is irresponsible to remain ignorant of the complexity of our world or our role in it, and to do so is to the detriment of our society. Indeed, our humanity is rooted in the Liberal Arts.

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On Doing: Liberal Learning Moves Us

The Liberal Arts are Essential to Addressing the World's Grand Challenges

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As part of the Grand Challenges Research Initiative the University of Minnesota is dedicating resources to analyze large and complex societal problems that transcend the reach of any one discipline or academic unit (“Driving Tomorrow Initiatives”). This research initiative examines issues related to sustainability, international development, human health, and social equity that are going to be the defining problems of future generations. The liberal arts play an important role in this project because of their thoughtful attention to understanding the root causes and possible solutions of these problems. Analyzing Grand Challenges demands steadfast interaction between diverse academic disciplines, therefore scholars interested in these questions must embrace a broad understanding of how academic research is conducted and how truth claims are produced. The five Grand Challenges are:

- How will we ensure just and equitable societies?
- How will we foster human potential and well-being across the life course in a diverse and changing world?
- How will we advance human health?
- How will we develop sustainable cities and resilient communities in a world of climate change?
- How will we provide secure food, water, and energy today and for the future?

These Grand Challenges are all problems that the various disciplines that make up the liberal arts study and provide crucial insights into. Writers like Philip Roth (1959) and Chimamanda Ngozi Adichie (2013) explore the themes of assimilation, modernization, and migration that chart the struggles of people moving to new places as they strive to better themselves. These stories get to the heart of how difficult it is to “foster human potential . . . in a diverse and changing world” where self-betterment is often contingent on international migration and the struggle to fit into a new society. Similarly, environmental historians Alfred Crosby (1972) and Brian McCamack (2017) examine the ways in which our society’s shifting relationship with the environment has altered historical trajectories. As we seek to “develop sustainable cities and resilient communities in a world of climate change” thoughtful engagement with how past societies gave grappled with these questions is crucial. The liberal arts’ focus on experience, everyday life, and historical context are essential in order to design solutions that are attentive to the underlying causes of these problems. We engage in the liberal arts in order to understand the emotional turmoil brought by being denied opportunity, living in an environmentally unsafe city, or living in a place without access to a safe supply of food and water.

When we conduct research and teaching around these Grand Challenges we are attending to the work that is essential to the teaching, research and outreach mission that public universities are charged with. For many, the voyage to college is about discovering how local problems are embedded in wider struggles, and learning how our actions are constrained by forces larger than ourselves. For example, in teaching my undergraduates in geography how to understand why 12% of the US population experienced food insecurity in 2017, I draw richly on all the

disciplines of the liberal arts (United States Department of Agriculture). Sociologist Janet Poppendieck's (1999) work on food shelves helps students understand what it feels like to depend on donated food to avoid hunger, while political scientist Frances Fox Piven explores how social movements are formed as a result of hunger and political inequality (Piven and Cloward 1983). Scholars in the liberal arts help students understand how it feel to be hungry, how soil health is related to agricultural productivity, how US agricultural policy affects food prices, and how food in the US is distributed and sold. At the same time, my students also read the work of historian Mike Davis (2000) and anthropologist Sidney Mintz (1985) who place US hunger in the context of the one billion people around the world who experience food insecurity and hunger as a result of war, famine, colonialism, and economic inequality.

The liberal arts, with their focus on different ways of conducting research and inclusion of diverse viewpoints, are essential to exploring and understanding the important questions raised by the Grand Challenges Research Initiative. When we examine these questions we fulfill a central mission of the university: to use academic inquiry to address societal woes. The liberal arts gives us unique and powerful tools to understand and address complex societal problems.

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Literacy and Numeracy are Key Pillars of Liberal Arts

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An education based on the Liberal Arts provides the foundations for all of the specialized disciplines of the modern university. At its heart and from its twelfth-century origins, the university has offered two mutually supportive ways of understanding the world: qualitative (the Trivium, comprised of grammar, rhetoric, logic) and quantitative (the Quadrivium, comprised of arithmetic, geometry, astronomy, music). Although modern quantitative analysis in sciences grows out of the Quadrivium and the qualitative analysis of humanities grows out of the Trivium, the seven liberal arts work together. A complete education requires grounding in both literacy and numeracy.

Clearly modern science requires a strong grounding mathematics, but scientists also need to communicate their findings with each other and with the public. In order to get research or project funding, scientists and engineers need advanced literacy (skills in reading, writing, and logic) to explain their hypotheses and describe not only the experimental design of their projects but also how they will further the aims and needs of society. Following the project, they must communicate their findings. Scientists and engineers, therefore, also need to have an understanding of the history, economics, and politics of, at a minimum, their own country, and in some cases, a global perspective as well. Thus, the Trivium enables successful scientists and engineers to connect with the hopes and dreams of their projects' audiences and stakeholders.

Likewise, the humanities and social sciences use numeracy to apprehend and comprehend qualitative elements with regard to particular perspectives. The humanist and the social scientist understand likelihood through statistics and probability. Good qualitative comparisons recognize and account for particularities of size and scale. Many questions about cultures and the languages that disseminate them depend on the geometries of place, the measures of distance and time, and furthermore the compounding of certain values over time—the basic equations that calculus gives us. Thus, the Quadrivium tethers the work of the writer, the political or social scientist, the historian, the linguist to the material world.

Artists and musicians too depend on numeracy to inform the illusion of perspective in drawings and paintings; to calculate structural integrity for sculpture; to comprehend the complexities of rhythm and meter, pitch, harmonics, and resonance; to apprehend the physics of movement in dance and stagecraft. And, they depend on literacy to enable their artistic production through grants and patronage and public engagement. Consider Leonardo da Vinci or Michelangelo, whose abilities across disciplines enriched their accomplishments. When we praise someone as a “Renaissance man or woman,” we implicitly valorize an era before disciplines moved into silos.

To engage the world most fully, we need both areas of the Liberal Arts, literacy and numeracy. The durable, foundational skills within these allow us to adapt to a changing world, to continue learning outside of a classroom, and to communicate with each other with precision and empathy.

**CLA Design Thinking Project:
A Faculty and Staff Driven Exploration to Vitalize Liberal Arts Education at UMD**

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How might UMD reimagine the roles of the Liberal Arts in the education of its students?

Following a Design Thinking-based approach with a team that draws from different liberal arts disciplines, faculty and staff at UMD are exploring the Liberal Arts in the education of undergraduate students. For inspiration, the group has looked at a variety of secondary sources of information including books, scholarly articles, news items, case studies, UMD's student data using Office of Institutional Research (OIR) findings, as well as a large-scale survey of current UMD students conducted by Political Science students under the guidance of faculty members. With Institutional Review Board approval we have conducted 28 one-on-one interviews with UMD faculty and administrators, students, parents, and alumni, as well as individuals from business, nonprofit and public sectors. We have held discussions with College of Liberal Arts (CLA) departments and faculty. We have analyzed the data acquired to date to identify thematic categories, and synthesized responses to discover repetitive and divergent patterns, and from those, we have gathered the following insights.

Emergent Thematic Categories that Indicate Strengths and Challenges

- *Big Picture Thinking*: The Liberal Arts encourage students to develop habits of inquiry that allow them to consider multiple perspectives, to make connections across disparate bases of knowledge, and from this, to develop nuanced and complex ways of understanding the world.
- *Identity*: The Liberal Arts have the potential to help students understand themselves and how they fit into the world. The Liberal Arts enables students to examine where they are from and where they are going. Some of our participants noted that a liberal arts education provides the most viable path in overcoming material and spiritual poverty.
- *Engagement*: The Liberal Arts are the bedrock of a participatory democratic society. The Liberal Arts can instill enthusiasm for life-long learning, capacity for effective and ethical communication, empathy, intellectual curiosity, risk-taking for the greater good, and community engagement.
- *Institutional Structures*: The Liberal Arts and liberal education requirements are often conflated, which creates confusion and debate about the optimal role of the Liberal Arts in higher education, including when, where, and how it should be delivered. Roles for the Liberal Arts within technical and professional programs beyond an Associate's degree or completion of liberal education requirements are not always clear, but offer an important avenue for growth.
- *Value Proposition*: The Liberal Arts build a capacity for intellectual and personal resilience and problem-solving (in the tradition of the Greek "gymnasium") on which a successful life depends. Several participants described how a liberal arts education instills "awareness" of one's immediate surroundings, the experiences of others, and of history. Despite this, a liberal arts education is often perceived as

a luxury for elites only. From OIR data and student preferences, we learned that the cost of education, debt, and time to graduate and the expectation of a direct link between college education and employment tends to override the perceived value of the Liberal Arts.

The Liberal Arts Major as Problem Solver

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One of the reasons to go to college is to become a problem solver, which entails three skills:

- the ability to recognize a problem
- the ability to see the solutions
- and the ability to work with others to enact a solution

Students of Liberal Arts are uniquely positioned in all three of these areas because Liberal Arts majors and minors are trained to deploy “historical thinking” to solve contemporary problems. In their choice of major, minor, and other opportunities—internships, research projects, and more—people who study Liberal Arts become problem-solvers and leaders.

What is Historical Thinking?

Different majors give students different tools. Engineers are masters of material science and technological systems. Teachers are masters of child development and educational systems. Music majors are masters of their chosen instruments and the systems of music theory. The unique tool of the Liberal Arts majors is “historical thinking.”

Historical thinking is more than just “what history majors do,” or “thinking about history.” Historical thinking is a coin with two sides: an explanatory side and a generative side. Historical thinking explains today as the result of yesterday. We look to the past within our own lives, or to the past within our culture, or to the past within world history, to help us understand the present.

Thus, historical thinking generates choices. We look to the past for resources, options, and inspiration. And, we understand that our choices create tomorrow’s world (the way that yesterday’s choices created our world).

Where Do UMD Students Learn Historical Thinking?

Nearly every student at UMD takes a history course. Many of the best history courses are available through the liberal education program. Students are introduced to historical thinking in classes like “History of World Art,” “Modern World History from 1500 to Present,” and “King Arthur in History, Literature, and Art.”

Many other majors also offer history courses. Psychology offers “History and Systems of Psychology.” Civil Engineering offers “History of Structures.” UMD’s program in American Sign Language offers “History of the American Deaf Community.” History can be a part of other majors as well.

Unlike other majors, students majoring in Liberal Arts make historical thinking a goal—from Anthropology to English, from Philosophy to Geography, from Communication to World Languages and Cultures, and more. Clearly, undergraduate Liberal Arts programs teach students to use historical thinking for solving today’s problems.

Historical Thinking is Key to Problem Solving

Solving a problem works over three steps: 1) recognizing the problem, 2) seeing the solutions, and 3) working with others to take action. Liberal Arts majors excel at all three because they bring historical thinking to the task.

The Ability to Recognize a Problem

Misrecognizing a problem can have consequences. In the doctor's office, for example, misdiagnosis can lead to expensive, useless medical treatments that leave the real problem unsolved. Liberal Arts majors are uniquely positioned to recognize problems in ways that other majors do not. Liberal arts majors are able to look at a problem in the here and now and are able to see its historical dimension.

The benefits of historical thinking are evident in issues of social justice. Without historical thinking, one might assume that income inequality is caused by bad decisions by poor people. One might think that inequities in the criminal justice system are caused by bad decisions by people of color. Historical thinking helps us understand that these problems are created, in part, by past conditions that continue in the present.

The Ability to See the Available Solutions

Once a problem is defined, it is easier to see the solution. A doctor who misdiagnoses a stomach cramp as appendicitis will take the appendix out—the wrong solution. Liberal Arts majors use historical thinking to see the possible solutions. Let us explore some brief examples.

When we are sitting on the interstate, our car crawling at fifteen miles an hour, we experience a problem. There are many solutions to traffic congestion as a problem. An extra lane might be added to the highway. Historical thinking, though, might question that solution. History shows us that within a few years, the new lane will be congested, too. Historical thinking looks forward, then. A possible solution might be to build a light rail line to remove cars from the highway. Another might be to make the city more bicycle- and pedestrian-friendly, so that there are fewer cars. These options both decrease congestion and decrease carbon emissions, which might both solve the problem and make a better future. Historical thinking makes sure that we are not just measuring our success by the speed of the cars on the highway. Rather, we are looking to the past to inform present choice and we are looking to the future to assess the consequences of our choices.

I am a professor of rhetoric, one of the oldest liberal arts. Aristotle called rhetoric “the ability to see the available means of persuasion.” Rhetoric does not guarantee that you will be able to persuade someone. It only guarantees that you will see the available means—the possible solutions—to a problem. Liberal Arts majors walk into a problem-solving situation with the ability to see the solutions. To enact those solutions, there is one more dimension of the Liberal Arts major to talk about.

The Ability to Work with Others to Enact the Solution

Historical thinking gives Liberal Arts majors one more advantage in problem solving. Historical thinking means that, when we work with other people, we understand that they have a story, a past that lead them to their present. When we understand that other people have a story, we know how to make them feel heard, we understand how they see our shared situation, and we are ready to learn to work together.

Increasingly, doctors incorporate this dimension into their work; they listen to patient stories for key information for diagnosis and treatment. Doctors learn to see patients as partners. Liberal Arts majors bring this skill to every situation.

Positive change begins with recognizing that other people have stories and being willing to listen and to work together. Liberal Arts majors have an advantage as collaborators and leaders in enacting change.

How Do I Choose a Liberal Arts Major or Minor?

Historical thinking makes the Liberal Arts major an innovator, a leader, and a problem solver. The degree requirements in the university create opportunities for the Liberal Arts major to define themselves as a problem solver. First steps include choosing a major and minor.

There are two kinds of majors, broadly conceived, at UMD: those that allow for a minor, and those that do not.

Some Majors Offer Little Opportunity for Minors

Majors like Engineering, Education, and Music do not make much space to take the elective credits for a minor. Their majors require additional courses to learn specialized tools and systems; by graduation, students demonstrate that learning to external accreditors. Students that major in Music must demonstrate that they meet the standards of the National Association of Schools of Music. Engineering majors must demonstrate that they meet the standards of the Accreditation Board for Engineering and Technology. Education majors must demonstrate that they meet a web of national and state standards for licensure. It takes time to demonstrate proficiency that these external accreditors require. Therefore, there is not much space for a minor.

Liberal Arts Majors Require Minors

Liberal Arts majors at UMD require that students also pursue a minor. Sometimes, students will ask me why they need a minor. “Why not,” they ask, “do more credits within the major?” When they ask this question, I think that they are bringing the Engineering, Music, or Education model of specialization to the Liberal Arts major. “Why take thirty credits in Writing Studies if you could take sixty credits of Writing Studies?”

I tell them that in my heart, this feels making a sandwich by placing a slice of pumpernickel between two slices of sourdough. You could do it, but it would not tell me a lot about your sandwich making abilities. Liberal Arts majors have a unique opportunity to demonstrate their unique abilities.

If the heart of the liberal arts major is problem solving, a student's major and minor combination demonstrates readiness for the most challenging problems. Liberal arts majors combine a major in Political Science with a minor in Women, Gender, and Sexuality Studies to solve problems of public policy. They combine a major in English with a minor in Biology to solve problems in the interface between culture and science. They combine a major in World Languages and Cultures with a minor in Art and Media to explore communication in a global context. They combine a major in Geography and Environmental Studies with a minor in Outdoor Education because they know that the key to a sustainable future is working with children.

The best of these major/minor combinations begin using their problem-solving skills in internships, in undergraduate research, in Honors projects, etc. During job interviews, such students can talk about the ways that they have put their skills to work.

Being a Liberal Arts Major is an Act of Entrepreneurship and an Act of Bravery

Being a Liberal Arts major is an act of entrepreneurship. Liberal Arts majors enter into the world without the external systems that place a value on a degree in Engineering or Education. Engineers and educators from accredited programs are known quantities, with a value for their degree and a value for their labor calculated before the student sets foot in the classroom in their first year. A Liberal Arts major does not demonstrate value by completing a preset degree; they must demonstrate their own, unique value. A Liberal Arts major demonstrates their value by bravely working on the problems faced by business, by government, by non-profit organizations, and so forth. A Liberal Arts major uses historical thinking to face the problems alive to use today, and Liberal Arts majors lead us to the solutions for a better future.

Liberal Education and the Globally Engaged Citizen

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According to UMD's mission statement: "The University of Minnesota Duluth integrates liberal education, research, creative activity, and public engagement and prepares students to thrive as lifelong learners and globally engaged citizens." But what does it mean to be a globally engaged citizen? What knowledge, skills, and attitudes prepare our students to grow into this identity? And what role might liberal education have in this process?

In order to engage globally, our students must develop global competencies, but we, as many of our peer institutions in the United States, have not articulated what these competencies might be. According to the US Department of Education International Strategy in "Succeeding Globally Through International Education and Engagement" (2018), globally and culturally competent individuals are:

- proficient in at least two languages;
- aware of differences that exist between cultures, open to diverse perspectives, and appreciative of insight gained through open cultural exchange;
- critical and creative thinkers who can apply understanding of diverse cultures, beliefs, economies, and forms of government in order to work effectively in cross-cultural settings to address societal, environmental or entrepreneurial challenges;
- able to operate at a professional level in intercultural and international contexts and to continue to develop new skills and harness technology to support continued growth.¹

Other definitions, like from the National Education Association (NEA) (2010), include the "acquisition of in-depth knowledge . . . of international issues," recognizing an implicit difference between superficial and deep engagement with other cultures (1).² Some, such as the Programme for International Student Assessment (PISA) global competence framework published by the Organisation for Economic Co-operation and Development (OECD), include interacting respectfully with others and taking responsible action "toward sustainability and collective well-being," emphasizing collective over national interests.³ These definitions share a commitment to developing knowledge (e.g., of global issues, of different cultures), skills (e.g., language skills, communication skills), and attitudes (respect, openness, valuing diversity) (OECD 2018).

¹ The previous version of "Succeeding Globally Through International Education and Engagement" (2012–16) also offers a robust and detailed definition of global competencies, as well as a graphic representations with learning outcomes. It also shares more commonalities with definitions and strategies from international organizations such as Organisation for Economic Co-operation and Development (OECD), the Asia Society, and Oxfam.

² NEA writes, "Global competence refers to the acquisition of in-depth knowledge and understanding of international issues, an appreciation of and ability to learn and work with people from diverse linguistic and cultural backgrounds, proficiency in a foreign language, and skills to function productively in an interdependent world community."

³ OECD (2018) describes global competence as "the capacity to examine local, global and intercultural issues, to understand and appreciate the perspectives and world views of others, to engage in open, appropriate and effective interactions with people from different cultures, and to act for collective well-being and sustainable development."

While these organizations articulate important aspects of global competencies, they also obscure essential questions of power and access. In “Soft versus critical global citizenship education,” Vanessa Andreotti (2006) identifies a central issue: “whether and how to address the economic and cultural roots of the inequalities in power and wealth/labour distribution in a global complex and uncertain system” (41). Recognizing that the power to act globally—to see oneself as a global citizen—already comes from a position of privilege that is geographical and/or economic, she challenges her readers to interrogate systems of knowledge that universalize western values and then obscure the historical processes of that universalization. Andreotti (2006) calls for a global citizenship education that empowers “individuals to reflect critically on the legacies and processes of their cultures, to imagine different futures and to take responsibility for decisions and actions” (48). If we want to focus not only on national security and economic competitiveness, but also on peace and justice, this type of critical reflection and decentering must be built into our liberal education program.

One challenge that many institutions in the United States face in educating globally engaged citizens is a disconnect between mission and curriculum. Research by the Association of American Colleges and Universities (AAC&U) suggests “there is little evidence that students are provided with multiple, robust, interdisciplinary learning opportunities at increasing levels of intellectual challenge to ensure that they acquire the global learning professed the mission statements” (2). For some UMD students, three required credits in the Global Perspectives Key Topic may be the only opportunity they have to take a course with an international focus. While many UMD courses address larger issues of global importance, such as sustainability, and certain majors give select students in-depth knowledge of global communities and structures, we must ask ourselves whether *all* of our students engage with a curriculum that gives them the global competencies they need not only from a professional standpoint, but in order to reflect critically on their own identities and positionality.

Although enthusiasm for globally-minded education ostensibly drives our mission, paradoxically our campus and our students seem resistant when it comes to some of the important components of global competencies: study abroad, and the study of world languages. Many major programs at UMD require heavy credit loads so that students who want to study abroad are sometimes not able to, and short-term summer study abroad—a valuable and important part of our study abroad offerings—has surpassed the more robust one semester or one year offerings as the default for our students. Although most definitions of global competency include language proficiency (and usually at a level advanced enough to study or conduct business abroad), students may enter and graduate from UMD without ever having studied a language. In addition, programs that are international in scope do not require students to have any proficiency in another language.

What drives the reluctance of our students and our campus to engage in the study of languages and their cultures? What causes students to see language and culture learning as a difficult burden, rather than an opportunity? Could it be that, deep down, we do not truly understand and cannot really imagine how connected we are to the rest of the world? The belief that knowing English is enough belies a deeply troubling attitude towards the rest of the globe: the attitude that others should accommodate to us. To believe we can raise monolingual global citizens misunderstands something about the nature of language and the relationship of language to power. We tend to view language as a tool, as something we use, and something that is “useful” in so far as it allows us to do business with others, but this misses the richness of language and its relationship to culture. Claire Kramsch (1998) reminds us that language

expresses, embodies, and symbolizes cultural reality. More than a tool, language creates our reality. Learning a different language allows us to see and experience the world differently and is central to building relationships in which we do not assert dominance, but become partners. Some of our students grow to understand this. In response to an assignment about why they study language, German Studies major Maureen Stewart wrote: “Learning a second language forces you to see life from a different perspective. The world we live in is continually getting smaller and we find ourselves surrounded by people with different backgrounds, different cultures, different values.” Only those with power and privilege can afford to be monolingual, and yet being monolingual puts us at a disadvantage. We are poorer for it both economically and relationally.

As we enter the first review of UMD’s liberal education program, we must refine our understanding of global competencies, and locate the spaces in our curriculum that truly foster these competencies. We must think about our values and how we communicate them to our students through the structures that we create. As we think not only about what our students want, but also what they need, we must consider ways to create not only the opportunity, but also the imagination and desire for global engagement. And as UMD faces continuous budget pressures, we must ask ourselves what fields of study or ways of knowing we privilege on our campus and whether this aligns with our values and our mission.

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Our Stories: What We Do and How We Do It

Liberal Arts Matter Now More Than Ever

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The greatest question . . . one that we have dealt with
mainly by indifference, is the question of what are people *for*?
—Wendell Berry

The pattern which connects. Why do schools
teach almost nothing of the pattern which connects?
—Gregory Bateson

Our flesh has never been a boundary for the human being.
We only reach out from there to occupy the space around us.
Even more significantly, it occupies us.
—Linda Hogan

How the Liberal Arts Saved My Life

The Liberal Arts thinking saved my life.

I'm not exaggerating to say that I was supposed to end up as a cutter in a meat packing plant—what my immigrant grandmother did. On the south side of Omaha, Nebraska, our mascot was “the [meat] Packers.” We could see cattle chutes from the windows of the school. Or, I might have ended up as a truck driver—what my father did all his life. These kinds of labor, full of hard work and little control over the conditions of employment, created a difficult path for my ancestors.

My family has no tradition of education as significant. My father was a “hillbilly” from the Texas Hill Country: second grade and he was done with book learning. If he couldn't punch a problem to solve it, he was at a loss. My mother finished high school, indifferent to the education she received. They lived in financially struggling conditions—literally bankrupt, and emotionally spent by poverty. Decades ago I separated my life from them and moved in with an aunt and uncle, but I know I am shaped by the effort it took to distance myself from my parents at age 15.

The gender inequality of the 1970s gave me smart, emotionally wise, mostly female teachers who saw public elementary education as one of few viable careers they could pursue while making their own families in a small town. I'm grateful that they taught me the basics of thinking. Excellent high school teachers in history, literature, journalism, mathematics, and creative writing helped me to understand that my mind was something to celebrate and cultivate.

This support from teachers to enjoy and embrace thinking led me to undergraduate study at a liberal arts college in Iowa (Cornell College). My mind got blown by literature, history, philosophy, religion, classics, geology, and more. The idea that thinking matters, even for a poor kid who discovered he wanted to learn, transformed my life.

After I graduated, in my professional life, and in the following order, I: worked as an editorial assistant for a medical journal; waited tables; served coffee and made art; facilitated a regional heritage tourism effort; worked on ranches and farms; managed an apple picking team; completed an anthropology doctoral degree; worked as a technical editor/writer; taught

journalism and public relations; organized regional offices for two environmental organizations; and ultimately found myself relishing teaching and researching at the University of Minnesota Duluth. In each of these turns of career making, liberal arts thinking guided me to meaningful contributions to my communities as well as to mastering the tasks of varied workplaces. Liberal arts thinking also turned me into an idealist who embraces the mission of a public university. We can and should teach all students, not just a privileged few, of the value and means of thinking, creating, and challenging what it is to be human beings in our messy, multiple, and marvelous selves.

Our Moment of Turning: Why the Liberal Arts Matter Now

As a society, we need liberal arts thinking to save our lives. Education, while providing useful skills for working, can and should be a means of cultivating care-ful-ness, fullness of care, for all beings.

As a global society we have the potential to create well-being for more humans than ever before in our history. Yet millions of people suffer. We have the potential to create a just world that carefully considers how our individual and collective lives affect the world we live in. Yet we face ecological and humanitarian crises at scales never before seen.

The role of the university appears to be at a generational crossroads. Choices about what people are for lie before us. Many pundits and politicians act as if the decision has been made, as if people are merely good for working, preferably in business and applied technology, and then consuming the products of industry. This approach assumes that the university should serve as a technical training ground for work skills. According to this vision, a poor kid from a rural place ought to have been satisfied with whatever labor life presented—truck driver or factory worker. But this is only a single vision—there are many ways to be human.

In my work as an anthropologist I am reminded always that lives are determined both by the structural privileges of the times in which we are embedded and shaped by the specificities of our experiences. Liberal arts thinking taught me to work hard, think hard and creatively, and find my way to many kinds of labor—writing, growing food, teaching, striving to find patterns that connect one thing to another. I learned that education can teach skills and comportments towards learning that make a living, while also making the world a safer, more just place for people and the other beings with whom our lives are interwoven. Liberal Arts taught me skills of lateral thinking to answer important questions, certainly for my own individual benefit, but also to see my life in larger contexts of culture, society, ecology and more. The Liberal Arts taught me to understand that I am not contained within the boundary of my skin alone—my body is only one small location from which I reach out to occupy the space around me, and to be occupied with and by the lives of others.

In an era when we must rethink our approaches to living to address complex problems, no single discipline has wisdom enough to make thinking as rich and whole as it must become. Collectively we might generate sufficient imagination to create the worlds that I hope will exist for my children, and your children, and the children of all those known and unknown communities that exist together on this planet. I know that sufficient imagination must be nurtured by liberal artists who see patterns, think critically, have the ability to imagine a project, communicate it to others, and see it through to completion.

We need the Liberal Arts to live together well as we create a world based on compassion and careful stewardship of the relationships between people that are foundational to the success

of our human species. I'm eager for conversation about what education in a university can be; that conversation suggests the possibility of more wellness and justice in a difficult moment of turning.

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Trying Many Paths

Rich Maclin

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As an undergraduate, I started out thinking I would be an electrical engineering major, but because of other factors, I found myself taking a psychology course and a history course my first semester, which was not a normal engineering path. But, an odd thing happened, I found both of these courses not only got me thinking about things in a different way, but they also made me think about other aspects of science and about the world. I ended up getting a degree in psychology and computer science, a combination that seemed quite strange to people at the time. I had many job interviews for programming positions, but I kept hearing some variation of the same quip: “What are you going to do? Psychoanalyze computers?” So, I took a research job building a computer tutoring system that not only took advantage of my computer skills but also valued my understanding of how humans (and other animals) learned. You see, my psychology focus had been on learning, both in primates and in humans. So, my “cross-training” had helped.

Perhaps this seems to be a specific case. However, an educator in computer science, I observe that a lot of the interesting work that is done in my field can only tangentially be labeled computer science. Such work does often involve creating software objects to solve a particular problem, but the problem comes from other areas. In my work, I have done many things. For instance, I have tried to predict protein secondary structure. I developed algorithms for machines to learn to play video games with human help. I tried to identify volcanoes from synthetic aperture radar images of the surface of Venus. I built a model to generate simulated rock spectra to train simulated Mars rovers. I developed techniques for unmanned aerial vehicles not only to accomplish tasks but also to learn how to multitask. In order to build software to solve these problems, I had to tap in to knowledge from philosophy classes on logic and science classes. I also had to be willing to acquire new knowledge to understand spectra and proteins, among other topics. In my research and development, I have to be willing to dive in and learn new things.

Human knowledge is expanding and interconnecting. The problems we are facing nowadays do not have simple answers. We have to look at multiple areas to solve them. And, there are problems at the intersection of almost every set of fields. I get asked often what minor or second major I would recommend to one of my students, and my answer is always the same: “You are going to be out there working a long time. Don’t just choose a field because it might make you a slightly better candidate for a job. Choose something that interests you, fascinates you, something you want to bring your other interests to.”

Now, admittedly, some students believe there is not anything that is taught at UMD that excites them. And to them, I would suggest trying new things. You never know what you might find exciting. This is the essence of Liberal Education to me. That we open ourselves up to other fields, to other ways of thinking about things, and, along the way, we will inevitably find things that excite us. Though it is perhaps optimistic, I think that studying and learning should excite us all. That is really why we enroll in college.

Physics vs. Music

Rik Gran

Department of Physics and Astronomy

As an undergraduate, possibly as early as high school, I was a physics major and a music major.

Twice attended a Stephen Hawking lecture, once in high school and once in graduate school.

Both fields emphasize pattern recognition and analysis. Patterns found in nature are interesting but those created by humans are more so.

The leader of my sub-field, and current Director General of CERN, Fabiola Gionotti has remarked, “The rigor, the precision and the creativity that I learned from my music studies are as important as my physics studies in what I do today as a scientist.”

As a music major, the professor-composer for a course on the analysis of twentieth century music said my analysis of scores was differently rigorous and detailed.

Twice, an alternative to academic physics work was almost the audio recording industry. Once as an intern at a regionally famous recording studio, once at a company that designs sound mixing boards.

It seems physics emphasizes how topics are interconnected, build on each other, without a (need for) a history sequence. Music has an explicit history sequence that emphasized how new forms are transmutations of, or reactions against old forms.

My undergraduate roommate fell just short of these two majors, and three (of twenty) in my first-year physics PhD cohort completed both majors.

Sometimes I wonder if the music major and its activities were the reason prestigious physics graduate programs were out of reach.

Physics celebrates genius: Einstein calls it 99% perspiration, Curie died of cancer. Music celebrates genius, teaches how individual composers and performers work, inside and outside the box.

At the time, 25 years ago, computer programming was an increasingly important skill that served students and professionals in both majors.

Professional physics requires near-constant writing and presentations.

There are musicians that have significant PhD experience in physics. Vijay Iyer and Brian May are the most famous.

In physics we assign problem sets. The folks in music more correctly call these practice and repetition, and combine it with coaching.

In 2013, I flew from Barcelona to Amsterdam for the sole purpose of attending a performance of the Philip Glass, Robert Wilson, and Lucinda Childs opera “Einstein on the Beach.”

The previous observations are thrown from a quantum I-Ching, but should also contain patterns.

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A Call to Action

Jennifer Brady & Kristen Hylenski

Our sincere hope is that this collection of think pieces inspire conversations on UMD's campus—and between the University of Minnesota campuses—about the need to continue advocating for liberal learning. This academic year, UMD is undergoing deep cuts to our academic programs. We are losing faculty members to these budget cuts, which affects our ability to meet UMD's mission: “The University of Minnesota Duluth integrates liberal education, research, creative activity, and public engagement and prepares students to thrive as lifelong learners and globally engaged citizens” (“Mission and Values”). It cannot be stressed enough how central the arts and humanities at UMD are to our mission. University administrators and faculty have the responsibility to protect and cherish opportunities for liberal learning for our students.

Precarious times like these may make us feel hopeless—they may make us feel like we are fighting a battle that cannot be won—but we urge you to keep at the endeavor to save liberal learning at UMD. Talk to your students. Talk to your colleagues. Talk to UMD leadership. Below you will find a list of recommended reading from the editors and contributors of this collection that might inspire innovative ways to defend liberal learning. In the upcoming weeks and months, UMD Faculty Senate will be hosting forums on UMD's campus. These opportunities to be together in collectivity will permit us space to connect, share ideas, and strategize about how to move forward. We invite you to participate and to collaborate. We are stronger together.

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