On the necessity of the humanities: How a foundational education in the humanities can help us to address the pressing issues facing our world today

Blake Trinske

Follow this and additional works at: https://commons.emich.edu/honors

Part of the Philosophy Commons

Recommended Citation
Trinske, Blake, 'On the necessity of the humanities: How a foundational education in the humanities can help us to address the pressing issues facing our world today' (2019). Senior Honors Theses. 625.
https://commons.emich.edu/honors/625

This Open Access Senior Honors Thesis is brought to you for free and open access by the Honors College at DigitalCommons@EMU. It has been accepted for inclusion in Senior Honors Theses by an authorized administrator of DigitalCommons@EMU. For more information, please contact lib@emich.edu.
On the necessity of the humanities: How a foundational education in the humanities can help us to address the pressing issues facing our world today

**Degree Type**
Open Access Senior Honors Thesis

**Department**
History and Philosophy

**First Advisor**
Dr. J. Michael Scoville

**Second Advisor**
Dr. Jill Dieterle

**Third Advisor**
Dr. James Egge

**Keywords**
Philosophy, values, climate change, STEM

**Subject Categories**
Philosophy

This open access senior honors thesis is available at DigitalCommons@EMU: https://commons.emich.edu/honors/625
ON THE NECESSITY OF THE HUMANITIES

By
Blake Trinske

A Senior Thesis Submitted to the
Eastern Michigan University
Honors College
in Partial Fulfillment of the Requirements for Graduation
with Honors in Philosophy

Approved at Ypsilanti, Michigan, on April 1, 2019

Supervising Instructor

Dr. J. Michael Scoville, Philosophy

Department Head

Dr. James Egge

Associate Honors Director

Dr. Ramona Caponegro
On the Necessity of the Humanities

How a Foundational Education in the Humanities can Help Us to Address the Pressing Issues Facing Our World Today

The Honors College
at
Eastern Michigan University

Blake Trinske
Winter 2019
# Table of Contents

1. Introduction [3 - 6]

2. The State of the Humanities and STEM Education [6 - 16]

3. The Limits of the Narrow Framing of “Usefulness” [16 - 23]

4. Why The Humanities Are Necessary [24 - 33]

5. Addressing Dangerous Problems: The Inescapability of Normative Questions and the Essentiality of Value Judgments [34 - 48]

6. Conclusion: Beyond Instrumental Value [49 - 51]

Acknowledgments [52]

Bibliography [53 - 56]
1. Introduction

The importance of technological advancement in helping societies progress towards greater economic prosperity cannot be understated. In a world in which economic growth consequentially leads to growth in power and stature on a global stage, having a technologically advanced society is crucial for those who wish to compete in this market based struggle for superiority. Furthermore, it is believed that through such advancements, impoverished nations and the poor citizens therein can rise up out of destitution and raise their quality of life to a level similar to that which is enjoyed by fully industrialized and developed nations. It is therefore no surprise that the nations of the world consider it of the utmost importance to build the foundations from which these technological advancements are spawned and then extended further towards new territories. This is the case not only for Third World and developing nations, but developed countries who strive to maintain a certain standard of living and continue to produce the means which allow them to continue their tradition of global leadership.

Establishing such a foundation starts by building an education system that allows the youth of a nation to cultivate the skills that are necessary for contributing to the economic growth and technological progress of their society. The global emphasis which is placed on growth and development of nations financially and technologically is reflected in which fields of education are prioritized and held in the highest regard within a given education system. The disciplines related to science, technology, engineering and math (which are commonly referred to using the acronym STEM) are of particular importance to this effort. The growth of these fields will be both necessary to and a side effect of an increased dependency upon technology across the globe. This growth will depend on steady increases in funding going towards institutions specializing in
STEM education as well as research projects which use these disciplines as the basis for new
discoveries that will benefit humankind and help project us into a better future.

As the relevance and importance of STEM becomes increasingly evident in heavily-industrialized
and technologically-based societies, disciplines outside of this realm have been
subject to increasing scrutiny by universities and governments alike. The substantial benefits to
societies and economies that are associated with STEM careers and education are the standard
against which all other disciplines are measured. In an ever growing and ever industrializing
world, few other fields of study have quite the productive power as do those involving the
sciences, technology, engineering and mathematics. As a result of this, preferential treatment is
often given to STEM disciplines while other disciplines with less concrete and less obvious
benefits to society are subject to marginalization. Nowhere is this marginalization more evident
or more drastic than in the disciplines of the humanities.

The humanities can be described as “the study of how people process and document the
human experience. Since humans have been able, we have used philosophy, literature, religion,
art, music, history and language to understand and record our world.”1 These disciplines and the
humanities as a whole have been pushed to a point of crisis as their usefulness has been weighed
against that of STEM disciplines and their justifiability and necessity scrutinized and called into
serious question. This scrutiny is often to the detriment of the humanities, so much so that some
have gone as far as to claim that the humanities are of no use whatsoever to society and their


4
funding is ultimately unjustifiable.² Is this really the case? Can we cast aside the humanities as a relic of a bygone era as we progress towards an age of increasing automation of human labor and technological mediation of our daily lives, or is there something about the humanities and the disciplines which fall under its name that make them necessary to our lives and our societies no matter what forms they take?

In this paper I will be advocating for the latter and for the de-marginalization of the humanities disciplines. In order to make my case I will be highlighting some of the deficiencies of STEM disciplines in addition to explaining why the humanities, and philosophy in particular, are essential to humanity and to the world in which we exist. In part two I will analyze the current statuses of STEM and the humanities in our world today — with a focus on trends within the United States higher education system — and elaborate on what has led them to occupy the states they are in. Following from this explanation, it will be clear that there is a strong emphasis being placed upon the advancement of STEM education in lieu of the humanities in the U.S. which reflects a larger trend that is prevalent across the globe. In section three, I will explain how the humanities have been marginalized in part because of their incompatibility with a specific way in which policy makers and critics of the humanities have framed what is “useful”. I will then explain that the humanities are useful for reasons outside of this narrow framework which must be considered if we want to comprehensively understand what is useful and instrumental in bringing about positive effects in the world. In section four, I will expand upon the reasons as to why the humanities are useful by explaining how we rely on and benefit from some of its individual disciplines. I will emphasize the usefulness and instrumentality of

philosophy in particular when it comes to shaping the way we examine our world and determine how to make it a better place. In section five, I will show how both the humanities and STEM disciplines must necessarily work together to adequately and effectively address problems which could potentially have massive (and mostly negative) effects on a global scale. In particular, I want to focus on problems pertaining to climate change and how we go about mitigating and adapting to its dangerous consequences. Through the tackling of this problem using a philosophically critical lens, I hope to make apparent the necessity of the humanities and philosophy by showing their usefulness in helping us to formulate our value judgments that help us to determine just and fair solutions to titanic global issues. It is impossible for either one of these fields to comprehensively address complex issues of this kind on their own, which is why I believe both STEM and humanities disciplines, and the interdisciplinary interactions between the two, must be fostered, sustained, and perceived as equally important if we hope to solve the critical impending problems which are soon to confront our species and our planet.

2. The State of the Humanities and STEM Education

The humanities are in the midst of a fight for their own survival in educational institutions across the globe, in large part due to “globalization increasing economic competition… leading to economization and rationalization in the world of academe, relegating the humanities often… to the end of the funding chain.” Funding is absolutely essential in order to sustain and maintain any higher learning institution and the subjects of study therein. In the United States, these institutions rely heavily upon aid from the government, both on a national

and state level. STEM education and humanities education alike are reliant upon federal funding in particular. However, the humanities receive only a meager portion of these funds as compared to their STEM counterparts, as will be shown by the data I provide shortly. Looking at the funding patterns of federal and local governments, we can see clearly that the humanities have been marginalized and underfunded while STEM disciplines have been afforded reasonable sums which dwarf those received by the humanities. Through an examination of some samples of data regarding government funding for education, it will become clear that the characterization of the humanities as being in a state of crisis⁴ is no exaggeration.

To get an accurate first impression of the state of the humanities in the United States today, we need not look any further than the budget proposals created by the Trump administration for the fiscal year 2018 (FYI8). In FY18, the the administration requested a budget of $42.3 million for the National Endowment for the Humanities (the largest source of federal funding for humanities activities).⁵ This amount was far below previous levels of funding for the NEH, despite the fact that it had been experiencing decline. The reason for this minuscule amount was because these funds weren’t to be used for standard operating costs of the agency, but rather, were to be used towards “the orderly closure of the agency... [including] funds to meet matching grant offers in effect as of October 1, 2017, as well as funds to cover administrative expenses and salaries associated with the closure.”⁶ The proposal made for FY18

is the culmination of decades of funding decreases for the humanities starting after 1979, when funding for the NEH reached its peak at $425.4 million (adjusted for inflation). This figure was reduced 33 percent by 1983 and from the early 1980s to 1996 the appropriations to the agency were cut by an additional 37 percent, shrinking down from $286 million to $168 million. This pattern of decline has continued into the twenty-first century, with funding falling 22 percent from 2010 to 2013, settling at an appropriation of $152 million.

In contrast to the downward trend in the humanities, STEM disciplines and their corresponding agencies have generally enjoyed increases in federal funding, especially in the twenty-first century. The state of STEM is one of much greater comfort than the state of crisis which the humanities finds themselves in. In FY18, the National Science Foundation (NSF) Education Directorate received $902 million in federal appropriations. The Supporting Effective Instruction State Grants program, which is “used to support educator professional development programs in STEM,” received funding of $2.1 billion dollars. Student Support and Academic Enrichment Grants (SSAEG), which goes towards improving STEM courses throughout the country and establishing STEM-focused specialty schools, received $1.1 billion (a $700 million increase from FY17). While the Trump administration also proposed some cuts in funding to STEM related programs, most if not all were rejected by Congress. Furthermore, even with the proposed cuts to these programs taken into account, none of them were under serious threats that would have amounted to anything like a full-scale closure. The 14 percent decrease in funding for the NSF requested by the Trump administration would have meant that the foundation would

---

7 “National Endowment for the Humanities (NEH) Funding Levels.”

have received an appropriation of $775.72 million, which is still eighteen times the requested budget for the NEH.

The 2018 budget request for funds to allow for the closure of the NEH was denied when it was brought before a congressional body, who instead opted to keep the NEH alive by providing $152.8 million in appropriations for the fiscal year in 2018. However, despite the administration's failure to shut down the NEH, the security of federal funding towards the humanities will remain under threat until some critical questions involving the reasoning for their vulnerability are addressed: why has this administration considered the NEH unworthy of government funding, and what does this imply about our nation's perception of these disciplines and their use-value? In answering these questions, we will simultaneously discover the reasons for why STEM disciplines are the beneficiaries of substantial federal funding as well as a glimmering public perception which further encourages its overall growth.

There are three general factors which I have found to be the primary forces behind the growing disparity in funding and perception that exists between STEM and the humanities. These are the profitability factor, the accessibility factor, and the usefulness factor. Whether or not these factors provide legitimate concerns for either discipline is a question I will address further on in this paper. For now, it is enough to know that these factors are instrumental in shaping the perception of STEM and the humanities as well as for providing justification for federal funding. The profitability factor has to do with how much profit these disciplines render for their institutions and nations. The accessibility factor takes into account whether or not disciplines provide enough payoff to make them worth pursuing. In some instances, the average

---

9 “National Endowment for the Humanities (NEH): Funding Levels.”
wages earned from these degrees by new graduates are too low to allow for comfortable living, unless one has the financial means to sustain themselves coming from other sources beyond their career. This factor makes these careers appear out of reach, especially for those supporting multiple family members while living in a metropolitan area. The usefulness factor analyzes how useful these disciplines are when it comes to effecting change on a societal level and how efficiently they accomplish their goals directed towards the betterment of society.

Competition is a natural consequence of nearly all market based economic systems within a society. In a competitive marketplace, businesses that produce positive fiscal results are destined to survive as long as they maintain consistent growth. Those that cannot produce such results are destined for the chopping block, whether that means cutting loose ends or cutting off the head of the beast and going belly-up. The academic institution has become a business, which functions in a comparable way to any other, and therefore, it is subjected to the same competition which breeds either their success or demise. As a result of this competition, the profitability of these institutions has become almost as important as the quality of education they provide. This has led universities and colleges to pour resources into their most financially productive majors and cut ties with or reduce those disciplines that do not pay back sufficient dividends. Henry A. Giroux explains that “In the age of money and profit, academic subjects gain stature almost exclusively through their exchange value on the market.” Furthermore, he highlights a shift in the types of students that attend and graduate from the university system when he says: “As market ideals take precedence... the university is increasingly being transformed into a training

---

Profitability is not only a chief concern for the university, but also for the student body. Rather than getting an education for the sake of learning and growing personally, students often pursue higher education not for the purpose of flourishing as human beings, but rather strictly so that they can train for their careers after graduation in order to increase their potential personal earnings as part of the "corporate workforce."

Which of these are better equipped to produce profit for institutions of higher learning and the individual students which inhabit them; STEM or the humanities? At the face, the obvious answer seems to be STEM-related disciplines. Peter Uwe Hahendahl highlights a primary reasons for this answer, which is that there has been an increased emphasis in research universities placed on science and technology. This emphasis has been "encouraged by the university's need to seek outside funding, a need that favored the sciences." As stated above, universities rely heavily on the profitability of the fields of study they offer, in part because their profitability makes them more attractive to outsiders who provide crucial funding for the institution. Disciplines which provide a high return on investment are enticing to both the federal government and private investors, and STEM disciplines offer a safe bet for potential investors because of their ability to contribute large amounts of skilled workers to competitive areas of the economy, in addition to products of research like pharmaceutical drugs that can be patented and sold for enormous profits. On the contrary, research in the humanities most often results in published essays and books which "do not significantly contribute to the financial well

---

11 ibid, 15.

being of the university,” and therefore are unable to pull the same kind of outside funding. Humanities disciplines contribute more towards the wealth of human ideas and experiential knowledge rather than the creation of concrete products of monetary value.

The disparity between STEM and humanities disciplines is widened as a result of their disproportionate levels of profitability. This gap only increases when we factor in their respective accessibility. In regards to which disciplines are more accessible, STEM appears to be the winner once again. This is in large part because of the previous profitability factor.

Graduates with degrees from STEM disciplines earn higher wages on average than those with degrees in the humanities. Engineering majors are projected to earn an average annual salary of $69,188 in 2019. For computer science graduates, this number is $67,539, and for math and sciences graduates it is $62,177. The humanities are projected to produce average salaries of $56,651. When we factor in the high cost of living in metropolitan areas, lower wages become even harder to cope with, especially for those who must support multiple people. In even the most inexpensive metropolitan area in the United States (Morristown, Tennessee), “researchers estimate that a two-parent, two-child family in the town of roughly 30,000 would require gross income of $49,114 simply to cover rent, taxes, food, transportation, child care and other basics.” When we also factor in the fact that the average student loan debt per person was

---

13 ibid, 13.


roughly $37,172 in 2017,\textsuperscript{16} it begins to look like the advantages of financial stability which accompany STEM degrees make them an option that is more feasible to a larger number of people. The humanities may be a viable option for those approaching their education with financial stability already in place, or those who have only themselves to provide for. However, for those who find themselves in less privileged positions in which they do not have the financial resources to be able to afford missing out on the roughly $10,000 annual increase in salary between humanities degrees and those related to STEM, it is far less likely that a degree in the humanities will be a viable option for them. This apparent inaccessibility has led the humanities to be characterized as superfluous and as “luxury studies,”\textsuperscript{17} a perception which hasn’t done the humanities any favors in securing funding and encouraging enrollment in its disciplines.

This brings us to the usefulness factor. Those who argue against the funding of humanities disciplines often cite their relative uselessness to society as compared to the obvious applications and uses of knowledge and products stemming from STEM disciplines. We see clearly the ways in which science, engineering, technology and mathematics shape our world on a daily basis. Consider the medicines we take for our health, the smart phones we use to communicate, the roads we travel upon to move from one place to another. These are all products which were conceived of by STEM-educated people who put their knowledge to work in order to provide the world with beneficial technological advancements which are now essential parts of most of our lives. There are often clear goals for research in these disciplines along with an established set of means to reach those goals, though the way to reach such goals


\textsuperscript{17} D’Haen, “Why Universities Better Invest in the Humanities.” 398
may be circuitous. We know what STEM does, for we see evidence of its usefulness all around us constantly.

The humanities draw criticism because it is not so clear how they are useful. Furthermore, although the humanities maintain that they help students reach certain goals that will lead to the betterment of the individual and society, opponents have pointed out that it is not clear that the humanities actually help one reach such goals. W. David Maxwell explains that the plight of the humanities derives in no small part from this lack of goal orientation. The humanities claim to be useful for the purpose of achieving certain ends, which Maxwell describes as “[furthering] our understanding ‘of such enduring values as justice, freedom, virtue, beauty, and truth,’ to provide us understanding of cultures other than our own... to encourage creativity and concern for man’s ultimate destiny, to provide better men, ‘to give us a sense of man’s innate worth and of his infinite capacities’.”18 The problem with the humanities, according to Maxwell, is that it is not clear how the study of its disciplines allow us to reach these goals. He goes on to explain that:

The fact of the matter is we know very little about why studying Chaucer makes us wiser, or why it makes us wiser than studying some subject entirely outside the humanities... There is thus a methodological hiatus between the humanities and the goals of the humanities... Because of this methodological gap, research in the humanities often lacks purpose and direction... there is no defined set of such interpretations, no objective criteria for determining which interpretation or interpretations add most to knowledge or which contribute most to the goals of the humanities.19

---


19 ibid, 82:83.
The lack of clarity for how the humanities, understood as a group, achieves its goals has been a major problem in the eyes of its critics. There are some who have taken these problematic claims a step further to suggest that these goals are not attainable through the study of the humanities in the first place. Most notably, Stanley Fish has claimed that the humanities do not achieve any of the goals they set out to, and that these goals are misguided in regards to what the humanities are actually capable of achieving. Keeping in mind the fact that the humanities face a time of crisis when it comes to the funding which they receive, Fish seeks to find an answer to the question of how one justifies funding the arts and humanities. He notes that often the answer is similar to one given by Maxwell, that the humanities are worthy of funding because they help cultivate “well rounded citizens” of high moral character through the study of subjects like literature and philosophy. However, he finds that this justification misses the point, and does not represent accurately what the humanities actually do. “Teachers and students of literature and philosophy” he explains, “don’t learn how to be good and wise; they learn how to analyze literary effects and to distinguish between different accounts of the foundations of knowledge” and that those who study texts “concerned with the meaning of life... come away not with a life newly made meaningful, but with a disciplinary knowledge newly enlarged.”

Rather than helping students grow into better human beings who then are better equipped and more capable of contributing positively to society, Fish believes the humanities instead only are useful for scholarly growth within academic institutions and do not extend to effect the world at large. When addressing the question of what exactly the humanities do then, he says “They don’t do anything, if by ‘do’ is meant bring about effects in the world. And if they don’t bring

20 Fish, “Will the Humanities Save Us?”
about effects in the world they cannot be justified except in relation to the pleasure they give to
those who enjoy them.” In regards to the question of what use are the humanities, Fish replies
“The only honest answer is none whatsoever.” This damning account of the humanities leads
him to conclude that “An activity [like the humanities] that cannot be justified is an activity that
refuses to regard itself as instrumental to some larger good.”

It appears that when compared side by side, STEM disciplines thrive in terms of their
profitability, accessibility, and usefulness while the humanities take a hit in each of these
categories. This explains why the humanities have been perceived as unjustifiable, useless, and
non-instrumental to any larger good outside of the narrow realm of its disciplinary boundaries.
This explanation could easily lead one to conclude that the humanities are unnecessary, aren’t
worthy of funding, and that the world at large could continue on unaffected if the humanities
were to be cast away and made into a relic of the past. In section 3, I will hopefully lighten the
hearts of those sympathetic to the humanities by explaining that this perceived uselessness is not
an inherent flaw of the humanities themselves. Rather, it is a perception derived from a narrow
way of framing what is useful that excludes the humanities and thus fails to accurately
encompass the scope of what it means for something to be useful.

3. The Limits of the Narrow Framing of “Usefulness”

So far, I’ve highlighted the disparity in funding and in public perception between the
humanities and STEM and given a list of three factors which have helped to drive the humanities
towards a state of crisis that has nearly led to the closure of their most important federally funded

\[ \text{ibid.} \]
agency, the NEH. The state of the humanities looks bleak when we consider their perceived uselessness in the eyes of critics in the government and in academia. This negative perception of the humanities is based upon a commonly accepted framework which measures the value of something by its instrumental usefulness. This is a way of framing value which I will call instrumental value. For something to have instrumental value means that it acts as, or somehow provides, a useful means to some ends. Often, the ends which we seek are progressive ones. Progressive here is meant to express positive forward progress towards a betterment of our world. There are a few reasons why such a framing of instrumental value, as it is currently structured, doesn’t favor the humanities. I will explain these reasons throughout this section.

Before I explore these reasons in depth, I must touch on another point briefly that will be reintroduced near the end of the paper. It is important that we understand that this type of value based on instrumentality is merely one way of framing what is valuable. There are other ways of framing value which have no basis in instrumentality and may even seem quite useless in comparison. Value is not always measured by how good something is at bringing about positive effects in the world. There are also activities that are intrinsically valuable. Value of this kind isn’t based upon an activity’s instrumentality towards some larger good. A thing or activity has intrinsic value because it is a good in itself, not just as a result of its connection to bringing about good in the world (though this does not mean that it can’t still bring about positive consequences). To use the words of T.M. Scanlon, the “order of explanation” of reasons as to why we should engage in, support, and study certain fields of inquiry mustn’t always involve first identifying “some class of ways it would be better for the world to be, and then explaining these reasons by considering how the activities they count in favor of help to make the world be
Something or some pursuit that is intrinsically valuable is worth pursuing for its own sake, and might not make the world a better place in general. These things are valuable in their own right, and in addition to this, they can also be considered valuable because they enrich our lives and our experiences in the world. What is of value is not merely that which produces certain effects and outcomes in the world. It is important that we keep in mind the notion that things of value are not exclusively instrumentally valuable or intrinsically valuable. Things and activities can often be regarded as valuable in both of these ways.

The reason why I have chosen to focus on instrumental value for the time being is because it is evidently the framework which is used by policy makers to measure what is valuable and worthy of funding. It is from this framework that policy decisions and federal funding budgets are made regarding the fate and survival of the humanities. Therefore, it is the most relevant when it comes to this discussion because it is the framework which dominates the thought processes of those who are driving the disparity between the humanities and STEM.

Within the framework of instrumental value, there is a yet another layer of framing that further delineates what it means for something to be useful. Value is measured by instrumentality, and instrumentality is determined by how useful a thing is as a means of effecting the world in a progressive way. Based on the funding patterns and critical remarks which I have described above, what is evidently accepted as useful means to these ends are concrete, tangible things. Thus, a field of study is instrumentally valuable because it produces useful things that benefit the world, and what is considered a useful thing is that which is tangible and objective. STEM disciplines have substantial instrumental value in this regard, and

---

are thus the more favorable compared to the humanities. The ideal outcome of an education in STEM is to produce a concrete object which serves to benefit human beings or our world in some way. This often takes the shape of things that alleviate suffering or mediate our lives. Examples of such concrete objects that are products of STEM are medicines, energy, smart phones, and motorized vehicles, among many others. All of these serve as means to progress, means which make our lives better or easier or allow us to be more efficient.

Profit is yet another means towards progress and the betterment of the world (that is, when it is derived from non-destructive practices and is used honestly for the greater good and not for personal gain at the expense of others). Profitability is used to measure the value and usefulness of something because it is a means by which economies are able grow. Economic growth is in turn an essential part of progress. STEM, and the sciences in particular, produce patents which produce goods which then can be sold to produce profit which can in turn benefit the people within an economic system. Donald Drakeman highlights just how profitable the sciences and the patents it produces have proved to be. He explains:

The kinds of numbers that stimulate policy-makers to be enthusiastic about the direct link between scientific research and economic prosperity can be seen in the effects of university patent licensing on the US economy between 1996 and 2007: a $187 billion impact on the US gross domestic product; a $457 billion impact on the US gross industrial output; and 279,000 new jobs created in the US from university inventions... technology transfer from universities to companies in the life sciences has 'yielded a dramatic return to the taxpayer through the discovery of new technologies that extend life and improve the quality of life through the development of products that might not [otherwise] be available'23

STEM related patents lead to the production of new and innovative goods which not only benefit individuals who are able to use these products, but also bring in massive amounts of profits to the economies which produce them. When an economy thrives, this usually raises the standard of living for those within that economic system. Jobs are created in order to produce the goods which result from STEM related patents, those goods create more profit which grow the economy and can be put towards further innovations which can create more jobs, and thus the cycle continues in this fashion. Because STEM disciplines are able to spur this economic growth by inventing new useful objects, they are invaluable in terms of making peoples lives better because of the fact that they help grow economies.

The humanities are unable to produce objects of use like STEM can. This is obvious when we consider what it takes to create such an object. What does it take to create medicine? An understanding of science, in particular chemistry, biology, and neuroscience. What does it take to create energy? Again, science plays a major role. Understanding how elements react with each other is essential, as is having the technology that allows us to transform those reactions into energy and infrastructural engineering that lets us transport that energy to millions of people. Smart phones and cars are dependent upon technological advancements, as are many technological advancements themselves. They are also accurately characterized as incredible feats of engineering, engineering which utilizes knowledge gained from physics and relies upon precise mathematical calculations in order to make the object functional. When determining the question of what is needed to create the objects which are the fundamental means for progress, STEM disciplines are essential, whereas the humanities are not. It is this lack of instrumentality,
This lack of capability to produce concrete objects of use that benefit our world, that drives the marginalization of the humanities.

It is its inability to produce useful objects that lead critics to characterize the humanities as useless and of no instrumental value. However, determining usefulness based on the useful objects something can produce is far too narrow of a framework for characterizing something as useful. Though STEM disciplines are essential when it comes to determining what will be used to create the objects that will benefit us and bring about positive effects in the world in some way, merely knowing what to use to achieve progress is not enough to progress. We must also determine why we desire such progress and ask of ourselves questions regarding what direction we should progress in and how should we use the profits acquired from useful objects, to whom are the benefits from progress rewarded and who suffers their potential consequences, and are the benefits of progress worth the harms. Keep in mind that this is nowhere near an exhaustive list of the questions we must ask ourselves regarding our goals and ends. We must constantly consider these and other questions and make judgments about how best to address them. These judgments are heavily influenced by our values, especially those values which shape our moral and ethical codes of conduct. The humanities, and philosophy in particular, are inextricably involved in determining what it is we value and what our moral attitudes are.

STEM disciplines alone don’t give us the tools to answer such questions. However, discussing and coming up with solutions to questions such as these is absolutely crucial if we hope to direct the means produced by STEM fields towards any meaningful ends. This would suggest that what is useful is not only the concrete and tangible means to our ends. What is equally as useful and necessary is the foundation from which we can conceive of ideas and
potential answers to these questions. These ideas are what can guide our progress and help to
determine what ends we will seek. This foundation is constructed by an education in the
humanities. Seeing as the humanities can direct our means and determine our ends, it is crucial
that we widen our framing of what is useful to include abstract ideas and accounts that benefit us
and positively effect the world by acting as the directors for the objective and concrete means
which are produced by STEM.

As I’ve explained, for something to be instrumentally valuable, it must provide useful
means to progressive ends. What constitutes useful means is not just that which is concrete and
objective. This narrow framing of usefulness excludes an essential component. Our notion of
what constitutes useful means must also include the ideas which direct the objective means. The
realm of ideas includes abstract and concrete ideas, principles, laws, theorems, normative
defenses of our ends, policies, value systems, and other similar productions of thought processes.
It is both humanities and STEM, ideas and things, interacting and working together that
constitute a comprehensive framework for what is useful for producing positive effects on the
world. Both are at the very least instrumentally valuable. To illustrate this point, let us consider
as an example the relationship between a car and a driver.

A car without a driver sits in an idle position and cannot move, let alone conceive of how
it might wish to move. A driver without a car may have an idea that they want to drive from
Detroit to Scottsdale, but without the means to realize this idea and turn it into an action, they
are, just like the car, stuck sitting idly. It is only when car and driver come together that the idea
for which direction the driver wants to go can become more than just an idea. The car is given a
purpose, a use, a goal toward which it may travel when it becomes activated by the driver who
instills those purposes into it. Ideas often rely upon objects to become actualized and made useful in terms of instrumental value. Without ideas, objects would be void of any instrumental value. A stick is just a stick and an idea of a pattern is just an idea until someone picks up the stick and starts drawing patterns in the sand with it. Ideas and objects have a relationship of mutual activation, and are made useful only when they are used together.

The way in which we frame usefulness must account for the ways in which both ideas as well as objects and things are useful. We need ideas first and foremost to determine if and why we need objects and things. When I refer to ideas, I am referring to not only abstract concepts, but also to ideas which are more concrete in nature; laws, policies, principles, treaties, etc. It should be pointed out that STEM disciplines, physics and mathematics in particular, also deal in the realm of abstract ideas. Mathematical theorems and laws of physics are useful for helping us to answer empirical questions about the world. They're not so useful when it comes to providing us with reasons to make normative value judgements regarding why we ought to pursue certain things or act in a particular way. Without an idea — that is, an idea in the more philosophical sense of the word — there is no reason behind why we would need something like a smart phone or energy or a car or medicine. We must first have an idea of what it means for a person to be considered sick before we go about creating a means of making them better. We must first have a reason to go places and a sense of where we want to go before we have reason to create a mode of transportation. In section 4, I will explain how different areas of the humanities help us in determining our direction so that we may understand how best to bring about positive effects in the world. In particular, I will explain the ways in which philosophical criticism and the ideas which arise from deep philosophical thought, which are shaped by moralistic value judgments,
shape the policies and actions of people in societies and in doing so, are instrumental in bringing about positive effects in the world.

4. Why the Humanities Are Necessary

What is perceived to be valuable in the eyes of policy makers and those who designate funding to universities is that which has instrumental value. Based on this way of framing value, what is useful is thus determined to be that which brings about positive effects in the world. Just as there is a certain way of framing value which funding is based upon, so too is there a particular framing of what is useful, i.e. that which is instrumental in bringing about positive effects in the world. What is determined to be instrumentally valuable, as is evident from the funding distribution patterns described above, are those disciplines which create useful and profitable concrete goods. This is where STEM excels, for its disciplines are essential for the production of useful goods from energy to medicine to smart phones. However, just as important in a comprehensive framework of usefulness are the ideas which direct why we produce and how we use such goods. These questions of why and how require a foundational knowledge of humanities disciplines in order for us to properly judge how to address them. Through a study of humanities disciplines, “students inquire about what is good and what ought to be beyond what ‘factually’ exists. Without them, the fields of economics and STEM run the risk of being stripped of ethical criticism and judgement, and are cut off from the reality of human experience.”24 In this section, I will explain what particular disciplines within the humanities do

to help us in determining what ends we should aim for and how we should progress to those ends.

Albert William Levi provides an explanation that aptly summarizes why particular disciplines within the jurisdiction of the humanities are necessary:

Far from being outmoded, [the humanities] are eternally relevant precisely because they are the arts of communication, the arts of continuity, and the arts of criticism. Language remains the indispensable medium within which we move and breathe. History provides that group memory which makes the communal bond possible. Philosophic criticism is the only activity through which man's self-reflection modifies the conditions of his existence.²⁵

The humanities consists of a far wider range of subjects — including gender studies, Africology, art, music, literature and many others — and is often a blanket term used to refer to any non-STEM disciplines. However, for the purposes of this paper, I will focus on three of the most essential of these disciplines which Levi describes. It is language, history, and philosophy in particular that form the foundational soil from which these other, more specified disciplines can grow. Life as we know it is shaped by these three core disciplines in essential ways that are often overlooked. We often forget the importance of language simply because it is the foundation of our conscious thought process, and therefore, it is taken to be a given. However, we can scarcely imagine what our lives would be without language, without this foundation from which thought is constructed. Thoughts are built from an understanding of a familiar language. These thoughts can then be verbalized or written down in order to convey our ideas to people other than ourselves. These external manifestations of thought can then be translated into the familiar tongue of other groups of people to allow these ideas to be conveyed to anyone in the

world. Languages are thus essential for forming our own ideas and communicating to one another.

It is through the advanced study of our own language and the languages of others at the university level that we are able to preserve the means by which we communicate with one another in an ever more connected global society. The university has become the home of studies of Latin and other dead languages that allow us to preserve the ideas of past cultures exactly as they were recorded. Through the study of foreign literary works, we are able to get a sense of what a particular culture is like and are thus familiarized with that culture and made sympathetic to our differences as well as our similarities. When we are able to understand each other and communicate with one another, we can then have fruitful discussions about how we ought to live our lives that produce ideas that extend beyond cultural boundaries. We can share ideas regarding how we should best organize people in a society, and we can discuss and facilitate trade between our neighbors and partners across the globe. We can debate about how we should solve problems amongst our species and in the world in general. For these and many other reasons, language is indispensable. The study of language that ensures its preservation is equally indispensable, and this study takes place most substantially within language departments at the university level. In order to determine what we want to do, why we want to do it, and what it is we ought to produce using STEM to reach those ends, we need language. Thus, language and communication are instrumentally invaluable to the betterment of our species and our world.

Language is an obvious necessity of the humanities and our lives in general, but can we say the same about history? The short answer is yes. History acts as our connection to the past and allows us to observe the continuity of thought and behavior from an objective distance.
Having this connection allows there to be continuity of ideas, innovations, traditions, and knowledge from the people of previous generations that extends into our own generation, and from our generation into the future. Without the preservation of historical records which we can study and refer to, we would essentially have to re-learn much of what we already had come to know. The wheel would need to be re-invented if not for the fact that its discovery and the forms it has taken has been carried over from generation to generation.

Perhaps most importantly of all, the study of history allows us to critically examine the contingency of the things we think, the things we do, as well as the way societies organize and people interact. Through the intensive study of past human activity, we can observe a contingent chain of events that led us precisely to where we are today as a society and as a species. Historians are able to view these events from all written perspectives and are therefore able to discern that the world we occupy now could be completely different if not for certain events that took place. The social institutions which seem natural to us now — such as our law codes, our forms of government, our notions of justice, our cultural norms — could have been vastly different if it weren't for certain historical events taking place in the order that they did. History helps us to deconstruct the contingent nature of social institutions and tells us that the world as we know it could be otherwise if not for mere luck, power struggles, or a plethora of other factors.

History allows us to stand upon the shoulders of giants so that each generation starts off by being a bit taller, and having the capability to reach a bit farther, than the generations prior. By studying history we are given the means that enable us to discern the best way to direct our progress in the present and the future. In addition, the study of history makes us aware of the
contingency of or world and the social institutions therein. This awareness makes us more
critical of the way things are and of those who would tell us that this is the way things are always
going to be. The realization of this contingency can instill us with the belief that our collective
actions have the power to alter the course of the world and humanity, for better or for worse.
When we have access to the past, we can avoid making the same mistakes as those who came
before us, and thus, avoid catastrophes that might otherwise have inhibited our growth as a
species if we hadn’t access to the warning signs. History is instrumentally valuable because it
allows us to build off of the positive effects of previous generations, avoid their destructive
mistakes, deconstruct the contingent nature of the way things are now, and empower us with the
knowledge that our actions today can shape the world of the future.

History and language, and the disciplines that stem from them, are crucially important to
the betterment of our world. For the duration of this paper, I would like to shift the focus
towards philosophy and the arts of criticism. In order to begin to understand the importance of
philosophy, let us examine further the claim made by Levi that “Philosophic criticism is the only
activity through which man’s self-reflection modifies the conditions of his existence.”

Philosophical criticism involves scrupulously examining ourselves, or world, and our very
existence in an attempt to better understand these phenomena and to orient ourselves somewhere
meaningful within this vast universe we inhabit. This examination and self-reflection challenges
us to think deeply about our situation and confront questions regarding why we exist and how we
ought to live our lives. It is through the latter question that we come to theorize ways in which
we can modify the conditions of our existence. We think of ourselves and others and the world

---

26 ibid. 193.
we live in and consider what we want from all of this, and what kinds of things we want to see happen that will hopefully be to the benefit of all. It is through these reflections that each of us determines what we think should be modified. Once we have determined these questions, it is then up to us as individuals and as a human collective to go about trying to implement these modifications and actually create the changes we want to see take place. It is through this process that we determine what our goals are and what ends we are seeking. After this is established, then we go about determining what means are necessary so that we can reach those ends.

Reflecting upon ourselves and critically examining the world keeps us from becoming complacent and settling upon a way of living that is only a shadow of what it potentially could be. Things can always be better, and if we don't look around ourselves to determine what is wrong in the first place, we may fail to realize this and may fall into comfortability with the state of the world as is. The instrumentally valuable use of philosophy is this: to critically examine the world around us, think deeply about how we can make it better, and determine what actions should be taken to reach our progressive ends. It helps us to identify what elements of our lives and our world that are problematic, evaluate what needs changing or improving, and gives us the critical framework which we base our answers to these problems upon.

There is perhaps no better exemplar to illustrate this mission of philosophy than the founder of its Western tradition: Socrates. His stance regarding the necessity of philosophical criticism and inquiry is found throughout the dialogues of Plato and are gathered together and summarized neatly within the *Apology*. At the core of his belief system regarding the importance
of philosophy is this sentiment: "the unexamined life is not worth living." In essence, this means that a life lived without reflection and deep thought regarding oneself, one's world, and existence in general is shallow, void of any meaning, and really is just no way to live life at all. It is through philosophically critical practices of examination and reflection that our lives are given a sense of meaning and direction, thus bringing about positive progressive change in the world by creating better lives for individuals and societies. We are able to improve upon ourselves and make our world better only after we have first examined this existence, reflected upon it, and determined which direction we ought to proceed in.

Most thought, and certainly all theorizing, requires us to make assumptions. Philosophy helps us to identify and understand assumptions, and how they are figuring in thought and theorizing. In helping us to identify and understand assumptions, philosophy also helps us to question problematic assumptions. There is always room for us to question everything we think we know and to constantly reevaluate our situation so that we can determine whether or not we are heading in the right direction. We do this so we can know whether or not we are resting on outdated ways of existing that are either holding us back or forcing us to sit still. Through a study of philosophy, we are given the frame of mind which helps us to “challenge assumptions, norms, and traditions; open citizens to the world; and provide an ethical dimension to [our] thoughts and actions.” Socrates represented the physical embodiment of philosophy in this regard, and throughout his life, he proved the usefulness of the discipline and its ability to alter the world and the human experience of it. Through his practice of constantly challenging

---

28 Maremo, The Case for the Humanities, 2.
assumptions, norms, traditions, and the entire body of the supposed knowledge of humankind, Socrates was able to play a significant role in shaping the way human beings live by shaping the ways in which we think critically.

Within the *Apology*, Socrates gives us an explanation of his reasoning for being critical and constantly challenging his fellow Athenians to think deeper and examine more closely their lives and the world. The dialogue consists mostly of Socrates defending himself while on trial for charges of corrupting the youth of Athens, brought against him by powerful compatriots who had become fed up with his dissenting ways and his critical attitude towards them and the state. This charge was brought against Socrates because he was notorious for practicing philosophy to the discomfort of the citizens of Athens. However, far from being a malicious act, Socrates’ constant questioning and pestering was done for the purpose of snapping the city and its people out of a rut. Socrates had noticed that the values and ideas that had made Athens great were in danger of being forgotten or replaced with far shallower values and points of interest. He explained that his mission was to challenge people to take a hard look at themselves and what kinds of things they valued, saying:

I shall not cease to practice philosophy, to exhort you and in my usual way to point out to any one of you whom I happened to meet: ‘Good Sir, you are an Athenian, a citizen of the greatest city with the greatest reputation for both wisdom and power; are you not ashamed of your eagerness to possess as much wealth, reputation and honors as possible, while you do not care for nor give thought to wisdom or truth, or the best possible state of your soul?’

He thus compares himself to a gadfly, and Athens to great and noble horse who has grown sluggish and lazy. Socrates believed his purpose was to buzz around the lazy horse and

pester it constantly with challenging philosophical inquiries, "never [ceasing] to rouse each and every one of you, to persuade and reproach you all day long and everywhere I find myself in your company." He did this so that the people might realize that they had erred in directing the majority of their lives to the attainment of shallow ends rather than the pursuits of richer and more constructive goals.

Socrates exemplifies some of the most powerful instrumental capabilities of philosophy and philosophical criticism. Throughout his life, he challenged those around him to examine their world and think deeply about their goals and their values. He never allowed his fellow countrymen to rest on what they had already accomplished as a state, but rather, he pushed them to continue to pursue illusive questions regarding truth and how one ought to live one's best life. He inspired those who succeeded him to play the role of Socrates for themselves (i.e. the role of the inquirer, the examiner, and the self-reflective person) for the betterment of their own lives and the betterment of the world. Martha Nussbaum explains how his influence has persisted to affect the world even now in the twenty first century:

Today [Socrates'] example is central to the theory and practice of liberal education in the Western tradition... One of the reasons people have insisted on giving all undergraduates a set of courses in philosophy and other subjects in the humanities is that they believe such courses, through both content and pedagogy, will stimulate students to think and argue for themselves, rather than defer to tradition and authority.

It is from Socrates (or at least Plato's representation of Socrates) that we have inherited the process of questioning everything for the purpose of weeding out the destructive and

---

30 ibid, 28.

regressive elements of our societies. This way of thinking critically about the world remains instrumental and invaluable to helping us make the world a better place. This is a significant reason as to why philosophy and the humanities matter and need to be protected and promoted. In section 5, I will show that examining the world and our lives meticulously, as Socrates did, makes us sensitive to elements of our experience we might not have recognized otherwise. This sensitivity helps us to identify socially problematic parts of our world that need our attention. This is especially relevant when it comes identifying problems pertaining to climate change. We must necessarily lean on this kind of reflective critical thinking for the purpose of addressing whatever the most pressing problems are, and in a way that is sufficient, fair, and aligns with our common values. Philosophy can be an instrumentally valuable tool for directing our policies and actions towards solutions to climate related problems that aim away from global catastrophe and towards ends which are positive and progressive for the world in general.

5. Addressing Dangerous Problems: The Inescapability of Normative Questions and the Essentiality of Value Judgments

So far I have highlighted a growing disparity in funding between STEM and humanities disciplines, which has largely been the result of a certain way in which usefulness is framed. What is considered instrumentally valuable (and thus, worthy of federal funding) is that which is useful in the sense that it produces concrete objects that have beneficial effects on the world and the people in it. However, this does not fully encapsulate what it means for something to be useful. What is just as necessary and useful are the ideas — such as norms, principles, values,
ideals, and evaluative frameworks — which direct how and why these objects should be used, and determine what ends they should be helping us to achieve. Therefore, I’ve suggested that we expand our framing of usefulness to include both useful ideas and useful objects. This would also reshape our framing of what is instrumentally valuable in bringing about positive effects in the world in order to include the humanities. It is the humanities that are particularly useful when it comes to directing our actions, shaping our values, and discerning what our ideal ends should be, all of which are a necessary precursors to affecting the world in positive ways.

If what it means to be valuable is that something be useful in regards to bringing about favorable effects in the world, then both the humanities and STEM would prove themselves to be worthy of funding and promotion as they are necessary in allowing us to achieve these ends. As part of achieving these ends, these disciplines ought to be able to help solve pressing issues facing our world, especially those that have global impacts, climate change perhaps being the most pressing amongst these global issues. There are obvious scientific dimensions that are absolutely necessary when it comes to addressing climate change. Science and STEM provide us with empirical observations about what is happening on our planet. Using these disciplines, we are able to understand what global warming is, why it happens, and what its effects may be if climate change continues to escalate into the future. STEM is invaluable for, among many other reasons, the data and information it can provide us that allows us to understand the world in which we live, which must essentially be the point from which our concerns about a changing climate begin. However, these disciplines are not capable of taking us beyond observations towards solutions if they do not form a working partnership with the disciplines of the humanities. It is only through a combination of both these areas of study that we can meet the
objective of the United Nations Framework Convention on Climate Change (UNFCCC), which is "to achieve, in accordance with the relevant provisions of the convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate change system."\textsuperscript{32}

When we disregard the usefulness of the humanities, and of philosophy in particular when it comes to identifying and solving climate change issues, all we are left with are STEM disciplines to address them. As I've already explained above, these disciplines on their own are insufficient when it comes to comprehensively addressing climate change related issues. In order to exemplify the limitations of STEM and bolster my justification for why the humanities are necessary in helping us solve important and pressing global problems, it is worth taking a detailed look at what STEM is capable of and how far STEM alone can take us when it comes to achieving the objectives of the UNFCCC as described above.

To even begin to comprehend what climate change is and does, we must have the scientific knowledge to be able to understand the properties and effects that certain gases have. This allows us to determine what greenhouse gasses (GHGs) are the ones responsible for accelerating global warming within the atmosphere. These have been determined to be primarily carbon dioxide (CO2) and methane (CH4). In addition, we must also have the right instruments in order for us to test these gasses as well as to measure their concentration in the atmosphere. Physics, mathematics, and engineering help in the development of technological advancements, and all of these disciplinary elements play a role in the construction of instruments that allow us to understand the science behind GHGs and climate change. Such instruments allow us to make

measurements and observations which are necessary to our understanding of what global warming is and what effects it is having on our planet.

STEM allows us to identify GHG emissions contributed by each nation as well as per capita. It also allows us to measure total concentration of GHGs in the atmosphere and to determine how long they will stay there. It affords us the ability to estimate with high accuracy pre-industrial levels of GHGs in the atmosphere as well as pre-industrial global temperatures so that we can compare these numbers to our current concentrations and temperatures in order to get a sense of how much the drastic increase of human-related output of CO2 and other GHGs has affected these statistics. Furthermore, it can allow us to predict our trajectory of where the global temperature and GHG concentration levels will end up if we continue at our current rate of GHG outputs.

STEM also acts as a means by which we can predict effects of these global temperatures and greenhouse gasses on the planet and on people. Scientifically focused works, such as the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, have found that:

A temperature rise, by 2080, in the range of 2.0°C to 2.4°C would put stress on water resources used by 1.2 billion people. Rising sea levels would expose, each year, an additional 16 million people to coastal flooding. If temperatures rise as much as 3.3°C over the same period, the stress on water resources would effect 2.5 to 3.2 billion people, and would each year expose an additional 29 million to coastal flooding.\(^\text{33}\)

We can also determine what specific levels of atmospheric concentrations of GHGs (in parts per million, or ppm) would lead to which kind of conditions on Earth. From empirical observations and data, we can determine that the regions of the world that will be most effected by climate

change are often those which are inhabited by the world's poorest people, such as parts of Africa along the equator and islands in the Pacific Ocean. James Hansen, and his colleagues at the U.S. National Aeronautics and Space administration, found through scientific research and experimentation that "to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted," we need to reduce carbon dioxide to "at most 350 ppm". Data collected from further scientific research tells us that, as of 2018, the global atmospheric concentration of CO₂ was 408.52 ppm, and that the rise in mean global temperature was 0.8°C.

This data is essential information for us to have if we want to begin to understand what climate change is and what it is doing to our planet. However, nothing about this data tells us there is a problem. The numbers themselves don't tell us how a rise in mean global temperature above a threshold of 2.0°C would have catastrophic consequences. They merely tell us that temperatures will rise and that certain climatic effects will transpire as a result. Darrel Moellendorf explains that we "assess the dangers of climate change... by discussing the risks and uncertainties associated with different warming scenarios" and that "the judgment that an action or policy is too risky involves more than just an empirical estimation of the risks involved."

34 Singer, Practical Ethics, p. 217. Singer discusses the impacts of climate change on impoverished and vulnerable regions stating that, "Some small Pacific nations like the Maldives, Kiribati and Tuvalu... are in... danger; within a few decades, these nations may be submerged beneath the waves" and in reference to African states along the equator he explains that, "many models of the changes that global warming is likely to bring show that precipitation will decrease nearer the equator" and that "the rainfall on which hundreds of millions rely to grow their food will become less reliable."

35 ibid, 219.


The judgement rests necessarily on considerations of value.\textsuperscript{38} We determine if something is dangerous, risky, catastrophic or otherwise problematic, based on value judgments. Empirical data can give us a point of reference to base these determinations on, but it cannot make these determinations for us. This is where STEM falls short and the humanities prove to be essential and invaluable in terms of instrumentality.

The central focus of moral philosophy is upon investigations of what is right and wrong, and what is good and bad. Investigations into these questions help us to determine what kinds of things we value and how these value categories determine the reasons we have for acting in one way or another. Philosophy is therefore an irreplaceable cog in the machine which drives any kind of climate change policy and solution, for it directs us towards actions that preserve things we value. We must take into consideration these values when determining answers to question such as who should be responsible for mitigating and adapting to climate change. Answering these question requires us to make difficult value judgments that often prove to be controversial. What is not controversial however is the fact that our answers are derived inextricably from value judgments. Let us now take a look at some examples of normative arguments for different positions on the aforementioned climate change issue to get an idea of how heavily they depend upon moral value judgements. We will see that there are some elements of the issue that are generally agreed upon and those which are continuously contested in the debate.

What is relatively uncontested regarding the issue of climate change is that it is a global issue, and its mitigation and adaptation is therefore a responsibility shared by all. This doesn’t necessarily entail that each person or each state shares equal responsibility for mitigating the

\textsuperscript{38} Moellendorf, \textit{The Moral Challenge}, 10

38
effects of climate change, as I will explain in detail later on by referencing some arguments pertaining to who holds what share of this responsibility. The fact that climate change is a global issue merely means that everyone will have to play a role in mitigating and adapting to its effects, no matter how big or small their role may be.

Another conclusion which is generally shared by most people taking part in the climate debate is that the best way to instill a sense of global responsibility and assign burdens for mitigation and adaptation is for individual states to meet and negotiate with one another as one conventional body.9 This group would then be tasked with coming up with a universally recognized treaty or a number of treatise that would outline policies and stipulations that the members of the conventional body would be obligated to abide by. Anything less than such measures would be ineffective because there would be too much room for individual states to set their own policies which may only be self-serving to the detriment of the rest of the nations of the world. A convention of international parties requires cooperation between all of the states involved, recognizes collective responsibility for the mitigation of climate change, and establishes commitments and obligations between all parties to themselves and to one another.

We have already made value judgments regarding who is responsible for addressing climate change related issues by forming conventions and drafting treaties. This reflects our shared values and our shared ideas of what is good, i.e. global participation in addressing global

---

9 A conventional body helps to ensure that addressing climate change issues will be a responsibility of all nations. This prevents the responsibility from being put disproportionately upon individuals. Climate change is a problem most effectively addressed at an international level by the states who are responsible for policies which allow GHGs to be output at such a high rate. Despite this, Singer believes that individuals "are each responsible for a share of the total harms we collectively cause" and that "we can and should act on our own to limit our contribution to climate change" [Practical Ethics, 231-234]. However, this does not mean that individual action can be an effective replacement for collective international action on a global scale.
problems as well as a framework that establishes collective responsibility to insure that these global problems are not skirted by some parties. However, when it comes to drafting the content of a treaty regarding climate change mitigation and adaptation, there will inevitably be less universal notions of what a good course of action is. Our values do not always align with one another, for they are shaped in different ways based on differing ideas of what is regarded as good by different cultures and societies. Moral philosophy, because of its role in articulating reasons we can share (despite our cultural and other differences), is the essential foundation upon which our treaty must be drafted and our collective commitments established. Despite the capabilities of moral philosophy, coming to a shared set of values on difficult issues remains a monumentally difficult task. The purpose of this paper is not to try to take up this task and give a definitive answer to contested questions regarding who is responsible for climate change mitigation and adaptation. Rather, it is to give some examples of arguments and principles that have been put forth in the debate in order to exemplify how they universally rely on value judgments in order to take their shape.

Henry Shue gives two examples for how we can assign responsibility for mitigation and adaptation to climate change. Either we assign responsibility based on historical contribution to the problem (a fault-based principle) or we assign them based on an ability to pay (a no-fault principle). The former is often referred to as the “historical” or “causal” principle, and the latter as the “ability to pay” principle. Peter Singer explains that, “the historical principle is one that says: to understand whether a given distribution of goods [or in this case, of burdens] is just

---


or unjust, we must ask how the distribution came about; we must know its history.”42 According to this principle, we ought to determine who will solve climate change issues based on the historical evidence showing who has contributed most to climate change over time. An argument for responsibility of mitigation that was based upon this principle might take the simple form of “you broke it, you fix it” or “the polluter pays.”43 Those who have, over a period of time since the industrial revolution, contributed a disproportionate amount of pollution into the atmosphere are therefore at fault for escalating the negative effects of climate change and “breaking” the Earth’s regular climate fluctuation patterns. What is a morally good course of action in this instance is that those who caused disproportionate harm to the climate make reparations that are proportionate and fair to the amount of damage they caused. This is a value judgment that takes into account an imbalance of justice and fairness over time.

According to a no-fault principle, such as the ability to pay principle, “alleged fault, putative guilt, and past misbehavior in general are all completely irrelevant to the assignment of responsibility to pay.”44 The ability to pay principle differs from the historical principle because it “does not call for an inquiry into the origins of the problem”45 when determining who is responsible for mitigation. The ability to pay principle focuses instead on the conditions of the present rather than on how the conditions came about. The no-fault principle makes a value judgment based upon the conditions of people and states in the present, determining what distribution of burdens would be fair and just based on the positions people and states are in now.

42 Singer, *Practical Ethics*, 220.
43 ibid, 220.
45 ibid, 52.
Based off of this judgment, a just course of action would be that those who have the ability to pay for mitigation and adaptation efforts take responsibility for paying the necessary costs.

When it comes to assigning responsibility for mitigation and adaptation, Moellendorf favors an ability to pay principle rather than a historical principle. If we wish to understand why he values this particular principle, we should examine what he calls his “antipoverty principle”. This principle provides us with evidence regarding what kinds of core values and morals Moellendorf holds that would make him sympathetic to an ability to pay principle. The antipoverty principle states that “Policies and institutions should not impose any costs of climate change or climate change policy (such as mitigation and adaptation) on the global poor, of the present or future generations, when those costs make the prospects for poverty eradication worse than they would be absent them, if there are alternative policies that would prevent the poor from assuming those costs.” The antipoverty principle is derived from Moellendorf’s examination of the state of the poor as it relates to the state of the world’s climate. The poor are in a particularly vulnerable position because they are endangered by the effects of dangerous climate change, but are also potentially in danger of further harm as the result of inconsiderate mitigation policies. According to Moellendorf, this warrants restrictions on treaties so that those in poverty are not exposed to further suffering from either mitigation and adaptation policies or a lack thereof.

In regards to how the they will be affected by dangerous climate change, Moellendorf points out that much of the risks of climate change going forward fall upon the poor people of the future due to two factors. The first of these factors is that “large climatic impacts are

---

expected to be experienced in tropical regions where there are a great many poor people.\textsuperscript{47} The second factor is that “the poor will have fewer resources to cope with droughts, inundation by oceans, rivers flooding, tropical storms, and disease.”\textsuperscript{48} Since those effected, in virtue of their poverty, are also the least capable of coping with the effects of climate change, it would be an almost impossible task for them to recover if their lands — their means of survival — were to suffer the negative effects of climate change. To add to their suffering as a result of complacency in the face of avoidable consequences of climate change would be an immoral action according to Moellendorf. Therefore, since we have good moral reason to reduce human suffering, we have “good moral reason to eradicate poverty, [and]... good moral reason to avoid or at least reduce these risks”\textsuperscript{49} associated with a changing climate. Moellendorf believes it is good to eradicate poverty, reduce risks of climate changes all to minimize human suffering. These notions of good form an essential part of the foundation from which his value judgments are made.

Seeing as the global poor are the most vulnerable to the negative effects of climate change and are also the least capable of coping with these effects, Moellendorf believes that it is of the utmost importance that any plan to mitigate dangerous climate change must be weary of potential damage to impoverished regions of the world. However, climate change mitigation can work to the detriment of these impoverished people if the proper stipulations aren’t outlined prior to policy decisions. Therefore, we also have good moral reason to make sure that those in

\textsuperscript{17} ibid, 17

\textsuperscript{18} ibid, 17.

\textsuperscript{19} ibid, 17.
poverty do not suffer needlessly as a result of an inconsiderate mitigation policy. According to Moellendorf, “the only policy lever available for mitigating climate change is the maintenance of a schedule of CO2 emissions reductions.”\(^{50}\) Emissions reductions necessarily entail the scaling back of large scale energy producers like fossil fuels which contribute vast amounts of CO2 to the atmosphere. This move away from fossil fuels must also be coupled with a switch to renewable green sources of energy. What makes this a problematic situation for the global poor in pre-developing and developing countries is that much of their ability to develop and lift themselves out of impoverished conditions is derived from the burning of cheap sources of energy like fossil fuels.

Renewable energy is for the moment too expensive to be an option for these states if they want to maintain the current pace of their development that they achieve using fossil fuels. Forcing already impoverished nations to make the switch to green energy sources would severely limit their access to energy, which in turn would limit the capabilities of these countries to develop. If we value the well-being of all people, Moellendorf would argue that this entails us not placing extra burdens on the poor that cause them more suffering for the betterment of the rest of the world. We must not limit their energy consumption but purposefully make room for it in our policies, for we know based on findings from the Energy Development Index (EDI) that “As energy expands, a country’s human development improves.”\(^{51}\) Greater access to energy allows for increased energy consumption which acts as “the means by which agriculture is

\(^{50}\) *ibid*, 132.

modernized, exports for international trade are manufactured, and roads to hospitals and schools are built.⁵²

Attainment of these ends has a direct and positive effect on the factors which contribute to human well-being as laid out by the United Nations Development Program (UNDP). The UNDP measures human well-being based upon three factors; 1) average life expectancy; 2) average education attainments (understood as a weighted combination of adult literacy rate and the percentage of the school-aged population enrolled in school); and 3) per capita income.⁵³ Increased trade exports benefit average per capita income, better access to hospitals benefits average life expectancy, and the building of more schools increases the likelihood that students will be able to attend them. Policy makers must be cognizant of these factors and the dependency of developing countries on cheap and accessible energy when making decisions regarding the implementation and enforcement of sweeping mitigation measures that might inhibit these progressive gains from being made.

From Moellendorf’s point of view, it would be unjust and immoral for a convention to draft mitigation measures that would further disenfranchise the poor if there still existed any other course of action for mitigation. Moellendorf derives this view from a set of value judgments that say it is a good to limit the suffering of human beings and promote their well-being. These value judgments closely inform his beliefs when it comes to the question of who is responsible for mitigating and adapting to climate change. Moellendorf’s answer to the question of who is responsible aligns with these beliefs. If asked who is primarily responsible for the

⁵² ibid, 72.
⁵³ Moellendorf, The Moral Challenge, 129.
costs of mitigating and adapting to climate change, he would respond definitively: not those that are already in poverty. Additionally, this conclusion is based upon value judgments regarding what kinds of things and actions are just and fair. According to Moellendorf, it is only fair that those who are in poverty be allowed the opportunities to relieve their poverty and improve their well-being through human development. Furthermore, it would be unjust if these people who occupy regions of the Earth that are particularly vulnerable to climate change were allowed to suffer additional hardships due to the inaction of conventions which are able to effect policies that might avert such conditions.

Based on his antipoverty principle, Moellendorf concludes that it should not be the poor who are assigned responsibility for mitigation and adaptation. Therefore, Moellendorf explains that we should assign responsibility “to states based on ability to pay, where such ability is understood broadly in terms of the state’s level of human development.” In this case, there is no blame assigned by Moellendorf towards any particular party when it comes to the question of who is responsible for the majority of the effects of climate change. His argument for who should mitigate the effects of climate change focuses instead on who has the ability to pay and who doesn’t. The poor and developing nations do not have the means to do this, so the responsibility and lions share of the burden of mitigation is assigned to states who have the ability to pay.

Though there are elements of the climate change debate which we can for the most part agree upon — such as need for global involvement in a conventional body that can draft obligatory policies within an international treaty — there remains much debate over questions

54 Ibid, 180.
regarding who is responsible for mitigation and adaptation. Moellendorf believes that responsibility should be assigned based on the ability to pay principle, which would protect the global poor from taking responsibility for a burden they cannot afford to bear. Others might subscribe to a principle that is fault-based and assigns responsibility based on a state's historical contributions to the total atmospheric concentration of GHGs. Different people subscribe to different principles that are shaped by different kinds of moral value judgments about what is fair and just. These value judgments are based upon a moral and philosophically critical framework. Philosophy is important in part because it allows us to form our own ideas and consequentially leads to debate and disagreement, as well as clarification and agreement, regarding what is valuable and what is a morally right course of action to take. As an international convention, different answers can be brought to the table from different parties so that these answers may be debated and somewhat boiled down into a common set of values which serve to progress humankind towards a set of mutually desired goals.

We can see from this section just a few of the ways in which the humanities and STEM are both instrumentally useful in bringing about positive effects in the world. However, neither of these disciplines are effective in isolation from the other when it comes to solving problems pertaining to climate change. The data which STEM can provide is essential for allowing us to understand what climate change is, what has caused it, and what its effects are. STEM answers important empirical questions about the world that we must necessarily understand in order to then ascribe meaning to these answers. Using a philosophically critical framework, we can read this data and interpret it based upon our moral valuations of what is good and what we wish to promote. Science provides us with a prediction of the effects climate change will have on people.
and on the planet, and our value judgments can then direct us in answering inescapably normative questions, such as whether and why these effects are dangerous; whether these effects are worthy of concerted preventative, adaptive, and/or mitigative actions; and if so, how we should decide who ought to take the majority of the responsibility for making these actions happen. Without these empirical answers provided to us by STEM, we would not be able to understand the conditions of our world and would therefore be unable to determine the dangers we face and the actions we must take to avert them. Without normative evaluation, all our data collection and empirical observations would be no more than numbers and words and would tell us nothing meaningful about how to resolve and address what are inherently normative issues.

6. Conclusion: Beyond Instrumental Value

Throughout this paper, I have tried to build a case for the necessity of the humanities by exemplifying the ways in which its disciplines are instrumentally valuable and useful for the purpose of helping to bring about positive effects in the world. This way of framing value — in terms of instrumentality — is the same that has been used by policymakers to justify federal funding for STEM disciplines over humanities disciplines. It is because of a negative perception of the humanities in relation to instrumental usefulness that discipline like history, philosophy, language, literature, and the arts have been marginalized, underfunded, and deemed unnecessary to society and its aims. This perceived uselessness of the humanities is far from the truth, which we come to realize when we expand our framing of what is useful beyond the production of concrete useful objects. There is more to bringing about positive effects in the world than just having the tools to do so, be those technical instruments, profits, medicines, or other means that
mediate our daily lives and help alleviate our suffering. What is equally as important and necessary are ideas, policies, principles, and theories which determine what objects are useful and why, how those objects ought to be used, and that also direct us towards progressive ends that are established based on our normative judgments of what is morally good and of value. These directive ideas are essential for determining what constitutes a positive effect in the world as well as what objects we ought to use to bring about those desired effects. Therefore, in terms of instrumentality, the humanities play an essential role in bringing about positive effects in the world, and are thus worthy of being thought of as an equal part of what makes something useful. It is a cooperative interaction between useful objects and useful ideas that is necessary for positive effects to be brought about in the world, for these two work to mutually activate their instrumental value and cannot have the same effects independently of the other.

Despite my arguments throughout the paper being focused on a framing of value based on instrumentality, this is only one way of framing value and by no means does this account for all the reasons why we might value certain things and deem them worthy of our funding, our time, and our life long devotion. To bring about positive effects in the world is a great reason to study both STEM and the humanities, but we might also study these things for reasons that aren’t necessarily related to the usefulness of their effects. As I briefly alluded to in section three, we also have reason to deem things as intrinsically valuable. Beyond being instrumentally valuable, things and activities may be valuable for their own sake or in their own right. This type of valuation is based not on things or activities that are good and should be promoted in order to better the state of the universe. They are not good as a result of being means to an end, but rather
they are good in their own right, independently of their ability to bring about or contribute to some greater good in the world (e.g., as instrumental value was understood above).

This way of framing value enriches our understanding of what is good about both STEM disciplines and humanities disciplines. T.M Scanlon, a contemporary moral philosopher, suggests that science has value beyond its instrumentality. He write:

If we want to understand why scientific inquiry is worth engaging and its results worth studying, we do better to consider why the questions it addresses are important and why it offers an appropriate way of trying to answer them than to focus on any particular results that scientific investigation or the study of science might produce... If we begin with the reasonableness and appropriateness of curiosity about the world, and with the merits of science as a way of responding to this curiosity, this leads next to the various more specific ways in which responses to this curiosity can be incorporated into our lives.\textsuperscript{55}

Curiosity about our world and our existence is something that is valuable in itself, and is something that does not necessarily derive its worth from the positive effects such a curiosity can bring about in the world. Scientific inquiry is good and valuable in virtue of its existence and its practice independently of what ends it can help us to achieve. The same can be said about the study of the humanities. Studying philosophy, history, language, and other such disciplines, is a good in its own right. As a bonus, these pursuits can be used to give us greater personal fulfillment and improve our quality of life, but they are not valuable only depending on their ability to bring about such effects. There is much more to say about intrinsic value and its importance to a comprehensive assessment of what it means for an activity or a thing to be valuable, but for the time being, it is enough for us to understand that there is more to value than just instrumentality and a thing's ability to bring about positive effects in the world.

\textsuperscript{55} Scanlon, 94.
When we frame value and usefulness too narrowly, we run the risk of overlooking the importance of disciplines like those found in the humanities that might not be as obviously useful when observed at a surface level. We need a comprehensive understanding of what it means for something or some pursuit to be useful in order to appreciate the necessity of the humanities in shaping our lives, directing us towards our goals, and helping us to address problems that threaten our very existence. Philosophy, and moral philosophy in particular, is essential in regards to formulating our value judgments. These judgments, in turn, are the foundation from which we determine what our goals are or should be; what kinds of things are dangerous and problematic, and why; and what it means to live a good life.

The reasons I have presented throughout this paper are merely a few reasons why the humanities are necessary to our world and to the betterment of it. The humanities should be promoted, protected, and funded appropriately in light of their role in helping us solve our most pressing problems and to live good lives. The marginalization of the humanities is the result of an incorrect assumption that the humanities aren’t all that useful in bringing about positive effects in the world. However, to mischaracterize them as merely frivolous accoutrements which only add richness to our lives but have no real effects outside of our personal enjoyment and academic growth is to sell the humanities well short of their actual value and usefulness. They are just as essential as STEM when it comes to our achievement of positive and progressive ends, whether those ends be overall human well-being, a sustainable climate and healthy planet, or any other thing we determine to be good and worth pursuing. It is for these reasons and many others that the humanities are a necessity to our existence in the world and therefore, should be de-marginalized and promoted as long as human life occurs.
Acknowledgments

I take this opportunity to express my sincerest gratitude to my faculty mentor, Dr. J. Michael Scoville, for his support and guidance throughout this project. His wisdom and expertise played an essential role in allowing me to put forth my best work. I also thank my parents for their continued support. I am eternally grateful to them for affording me the privilege to follow my passions wholeheartedly. I would also like all the faculty members of the Eastern Michigan University Philosophy Department for igniting my passion for philosophy, and for challenging and inspiring me to actualize my potential and flourish as a human being.
Bibliography


