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Un Début dans la Vie Humaine (A Start in Life): Liberal Education and the Modern University

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Boston University

Un Début dans la Vie Humaine*:

Liberal Education and the Modern University

“No star is ever lost we once have seen,

We always may be what we might have been.” – Adelaide Anne Procter

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Abstract: As students increasingly make the choice to attend university for their higher education, their lives are forever shaped by their experiences inside and outside of the classroom. My paper aims to determine the state of liberal education in the context of the rise of STEM fields, online learning, and economic pressures in political society. With an analysis of works by Aristotle, John Dewey, Michael Oakeshott and Leo Strauss, this paper develops a dialogue around the basis and tensions of liberal education. Robert M. Hutchins, Hubert Dreyfus and Sean Dorrance Kelly bring forth the importance of the Great Books to that conversation. A public interview with President of Wesleyan University, Michael S. Roth, extends the discussion to today’s university.

My paper concludes with an investigation into Boston University. Using multivariate regression, this study finds peculiarities about the influence of several goals of liberal education on feelings about future jobs. Additional content analysis reveals student understandings of liberal education, motivations for attending school as well as impactful courses and books. My ultimate hope is for administrators and faculty to preserve the vision of liberal education by demonstrating its ability to prepare students to graduate as moral citizens and professionals, as human beings moving towards their full potentials.

*A start in Life (as in the all encompassing life—the universal and not particular)

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Introduction

The target of higher education within the institution of the university has shifted, and students are missing its original mark. In order to understand how Athena works her magic, we must understand the story of liberal education, one that is not over until Odysseus shoots his arrow: “He plucked the string, and it sang beautifully/Under his touch, with a note like a swallows...the bronze-tipped arrow/Passed clean through the holes of all twelve axe heads/From first to last” (Homer 21.436-7, 448-50).

The Current State of Affairs

The documentary, *Ivory Tower* (2014), seeks to investigate the costs and value of higher education in the United States. In it, Andrew DelBanco, Professor of Humanities at Columbia University describes college as “a way of trying to preserve cultural memory. It is a way to cheat death. So it’s a kind of struggle against death and mortality.”

The documentary examines several universities and their financing. For example, the cost of the MIT STATA Center was \$300 million dollars. Deep Springs College in California’s Death Valley, promotes self-governance, academics and labor, while curriculum is decided as a community. The Cooper Union, in New York, once in support of free public education, used money from loans to invest in hedge funds that collapsed during the financial crisis.

While the Higher Education Act of 1965 provided the Federal student loan program and Pell Grant scholarships, the documentary notes that the 1970s were a time for a shift from the public good to the private good. Then Governor Ronald Reagan of California ran for office, aiming to disband the Department of Education, saying, “We

need to keep government on the sidelines. Let the people develop their own skills, solve their own problems.”

The documentary also claims that student loan debt is getting larger than credit-card debt and that there is an influx of venture capital funded startups. In response, Jerry Brown, the now Governor of California asks, “this huge cost structure is part of the marketization of so many things in our society, but where does it get out of hand?”

DelBlanco believes, “there are other choices that could be made, I mean what kind of society do we want to be? We should tap into the idealism of young people and provoke students to think for themselves, to think critically about the way society has been put together.”

In a commencement speech at Sarah Lawrence, Fareed Zakaria encapsulates the spirit of liberal education, but he believes its value is fading. He points to the Governors of Texas, Florida, and North Carolina who want to stop using taxpayer dollars on the liberal arts. Florida Governor Rick Scott asks, “Is it a vital interest of the state to have more anthropologists? I don’t think so.”

Zakaria responds, “I could point out that a degree in art history or anthropology often requires the serious study of several languages and cultures, an ability to work in foreign countries, an eye for aesthetics, and a commitment to hard work—all of which might be useful in any number of professions in today’s globalized age.” After outlining the merits of liberal education in professional life, he concludes, “You need not just a good job but also a good life.”

Politics and the Problem of Education

The fourth century BC philosopher Aristotle was among the first to attribute a good life to education. Through his ideas of happiness, he carefully sews an argument for education as indispensable to a successful society. Since according to him a regime would best govern if it made the city “happy most of all”, attending to what happiness is must be fundamental (*Pol VII: 13: 209*).

No one would argue, according to Aristotle, about the importance of education for a legislator, and for a regime. In order for the acquisition of virtue that Aristotle believes is indispensable for the best city, its individual members need education. On account of a citizen’s being part of a city, and the city’s striving toward the “single” end of happiness, its citizens must all be educated in the same way with a view toward that end. Moreover, Aristotle says that its citizens should receive a public education (*Pol VIII: 1: 223*). But how should they be educated? What, in fact, is education? Aristotle asks whether it is with “a view to the mind or with a view to the character of the soul” (*Pol VIII: 2: 224*).

Aristotle first explores “if there is an end for all that we do.” He defines this end as “the good achievable by action.” “The chief good,” happiness, he believes is something “final” and “self-sufficient,” in that it is always desired for its own sake. To clarify his interpretation of happiness, he investigates the function of human beings. If the function of man is, as Aristotle claims, “an activity of soul which follows or implies a rational principle,” and if the “function of a good man” is to act nobly, then the “human good” must involve such a rational, noble activity (*NE I: 7: 10-12*).

Because of the permanency of virtues amid a life of chance, the “happy man,” he says, is “engaged” in a contemplative life. Therefore, “the man who is truly good and

wise...always makes the best of circumstances” (*NE I: 10: 17*). In order to see the “nature of happiness” then, Aristotle believes we must see the “nature of virtue” (*NE I: 13: 19*).

Since virtue is an activity of the soul, a student of politics, Aristotle says, must “study the soul.” He must know “facts” about the soul. Virtue is of two kinds: intellectual, including “philosophic wisdom and understanding and practical wisdom,” and moral, such as “liberality and temperance” (*NE I: 13: 20-22*).

Later, in his *Politics*, Aristotle also points out that “the task for political thought and study” is to consider what is the best regime (*Pol VII: 2: 189-90*). Aristotle reminds us that such an investigation demands that we ask what is “the most choiceworthy way of life for all?” Whether the answer is “the same or different...for men in common and separately as individuals,” he proposes that we must reach an agreement (*Pol VII: 1: 187*).

Aristotle makes a distinction between three categories of “good” things, namely, “those that are external,” “those of the body,” and “those of the soul.” This distinction is important for his conclusion about the best way of life for all. If the answer is happiness, then what does it entail? “Living happily,” according to Aristotle, “is available to those who have to excess the adornments of character and mind but behave moderately in respect to the external acquisition of good things.” Accordingly, he believes there is a “limit” to external things, i.e. to “wealth, goods, power, reputation,” for an excess of them “must necessarily be either harmful or not beneficial” (*Pol VII: 1: 187-88*).

For him, what is useful necessarily follows from having an excess of “good things connected with the soul,” that is, living virtuously. Accordingly, he believes it is “for the

sake of the soul” that the good things for the body, wealth and reputation are “naturally choice-worthy” (*Pol VII: 1: 188*).

Extending this argument about individuals to the city, Aristotle thus examines the original issue of which is the best city. It is one that “is happy and acts finely,” and acting finely is inseparable from virtue. He notes its parallel effect between an individual and a city: “The courage, justice, and prudence of a city have the same power and form as those things human beings share in individually who are called just, prudent, and sound” (*Pol VII: 1: 189*).

However, the most choiceworthy way of life has been disputed, according to Aristotle, between “a political and active way of life” and a “philosophic way of life” (*Pol VII: 2: 190*). To say that a philosophic way of life is inactive is a false assumption, according to his logic, for if it results in superiority of virtue, it moves one to just acts. It is the pursuit of “studies and thoughts” for their own sake that induces one to act well. Again, the best way of life for an individual “must necessarily be the best” for the city as well (*Pol VII: 3: 193-4*). If a city could engage in philosophic life, then it would thus tend towards justice.

Aristotle notes that all cities require certain features that entail certain occupations. Cities need sustenance, arts, arms, funds, religion [“priestcraft”], but most importantly “decision concerning things advantageous and just in relation to one another” (*Pol VII: 8: 201*). This is consistent with Aristotle’s claim that a city’s success depends on its justness. In so far as Aristotle’s work aims to prescribe that we recognize our limitations, as well as our possibilities, our regime ought to aim towards “the actualization of virtue and a certain complete practice of it” (*Pol VII: 8: 200*).

So, he says, a city's excellence does not lie in its fortune, but in its "knowledge" and intention. Moreover, an excellent citizenry reveals a city's excellence. A man, he says, becomes excellent through "nature, habit, and reason." Nature belongs to the work of the fortune, the others to that of education, "for men learn some things by being habituated, others by listening" (*Pol VII: 13: 210*).

Still, should we be educated in things that are useful, e.g. productive, or rather in things that make us virtuous? The custom, Aristotle says, is to be educated in "letters, gymnastics, music...some in drawing...letters and drawing being useful for life and having many uses, gymnastics as contributing to courage." The inclusion of music, he explains, originated from the idea that "nature itself seeks...to be capable of being at leisure in noble fashion...for this is the beginning point of everything" (*Pol VIII: 3: 225*).

He elaborates what "letters" and "drawing" entail: "Letters are with a view to money-making, management of the household, learning, and many political activities (and drawing too is held to be useful with a view to judging more finely the works of artisans)" (*Pol VIII: 3: 226*).

Accordingly, he makes a statement for an education that is not "useful or necessary" but "liberal and noble." He does not discount the learning of useful things, but believes we ought to not only learn them for their utility, "but also because many other sorts of learning become possible through them." For example, he believes one ought to be "educated in drawing...because it makes [one] expert at studying the beauty connected with bodies." Additionally, just as education for habits is a prerequisite for education for reason, education for the body is one for the mind (*Pol VIII: 3: 226*).

If the soul constitutes an individual's happiness—that which contributes to the best regime—and the legislator's job is to provide an education that allows for its cultivation, then wherein lies the work of music? Music not only involves “a natural pleasure,” but the practice of it “contributes to the character and the soul.” Since ancient times, “the tunes of Olympus” were what made the soul “inspired.” And what is inspiration? Inspiration is, for Aristotle, “a passion of the character connected with the soul” (*Pol VIII: 5: 230-31*).

Illuminating our very nature, music education embodies liberal education's original intent, to cultivate virtuous citizens. Music, for Aristotle, expresses the true intimations of our nature. For him, our soul is altered. Thus, “habituation to feel pain and enjoyment in similar things is close to being in the same condition relative to the truth.” If music can affect the “character of the soul,” the youth must accordingly be educated in this. This is not to say that music is the end of all studies, or that that everyone should become a musician (*Pol VIII: 6: 231-34*). Nevertheless, it is from this that one learns how to judge, which is necessary for determining what is good and just in political societies. According to translator of Aristotle's *Politics*, Carnes Lord, “in the Horatian formula, it ‘mixes the ‘sweet’ with the ‘useful’ (Lord 85). This blend is no longer the recipe for liberal education in the work of John Dewey, for while he reveals human aims, his proposed methods favor the useful. Like Aristotle, he attempted to offer his philosophy of education to achieve the best political society.

An influential figure in shaping formal education in America, Dewey, in his 1916 *Democracy and Education*, proposes a way to realize the ideal of democracy, through an assessment and subsequent reconstruction of education as understood by those before

him. In his preface, he outlines his goals: “the development of the experimental method in the sciences, evolutionary ideas in the biological sciences, and the industrial reorganization” (v). He proposes to transform subjects and teaching methods in order to realize democracy’s ideal, which for him consists in “free interchange” and “social continuity” (344).

Dewey presents education as necessary to human life. As a living being, an individual must use “light, air, moisture and the material of the soil” for “means of its [his or her] own conservation” (1). We have a choice in how energy can be used. “Life,” he says, “is a self-renewing process through action upon the environment” (2). This illustration extends beyond one’s own civilization. The existence of society, analogous to biological processes, consists in “communication of habits of doing, thinking, and feeling from the older to the younger” (3).

Communication, in this sense, must share “emotional and intellectual dispositions” for the purposes of a “common understanding” (5). What a community requires, Dewey says, are both cognizance and orientation of human activities towards the “common end” (5). Inherent in communication is its “educative” quality (6). Formal education is required “to transmit all the resources and achievements of a complex society” (9). Securing the ability of the youth “to share in a common life” is thus education’s aim (8).

However, Dewey recognizes that as societies become more multifaceted, an important split arises between social interactions and what is learned in school. He accordingly emphasizes the integration between both “technical intellectual skill” and

“social disposition,” particularly in a time of high growth rates still distinctive of present day (10).

As a social environment, school allows for controlled education, which can in turn help orient the new members of society towards democracy’s goals. A school’s “duty,” Dewey believes, is to foster an environment that acts in the direction of “a better future society” (24). Furthermore, it allows for a place to leave the home, as one would upon entering a diverse society (24). On that note, the school allows the various views arising from various student backgrounds to be situated in a “steading and integrating” fashion (26). The goal of this integration, as identified by Dewey, is a “common intent in behavior” (37).

Dewey believes social control builds this intent—essential for communities. Social control, for him, is the development of a certain “mental disposition,” allowing for participation in society (38). However, its formation does not merely consist in imitating others, but rather “that each should adapt his action in view of what the other person has done and is to do” (36-7).

Collective experience, Dewey believes, elicits “educative conditions of daily life,” inevitably shaping the direction of one’s mind and morals (39). From this condition of human societal life, Dewey presents the necessity of “intentional education” (40). While this intentional education can aim to develop “technical specialized ability” in various fields, Dewey stresses it should not be without direction towards what is “useful.” What is useful involves “joint activity” and “common understanding” acquired purposively through the work of education (41). The objective of this understanding is what Dewey calls a “*social sense*” of one’s own capabilities (42).

How does one arrive at this mental character? Dewey's response is growth, which presupposes "*plasticity*," the "ability to learn from experience" and face future difficulties (46). In order to sustain plasticity beyond childhood, it needs the space of universities for youth to form habits necessary for the success of societies. Habits, according to Dewey, "use natural conditions as means to ends" (48). He acknowledges plasticity decreases with age; however, he asserts that the formation of habits can provide a countering force. Thus, habits need an environment to secure "full use of intelligence" (51). Accordingly, education ought to tap into the potentials of its students, inspire them to take initiatives, and instill a "desire for continued growth" (52, 55).

Education, as defined by Dewey, rearranges experience, giving it meaning and direction for future experiences (78). Through the perception of connections, a student can "*intend* consequences" (79). Education can be either a "process of accommodating the future to the past," or more powerfully, use "the past for a resource in a developing future" (81). Rather than reproduce the current way of life, Dewey suggests that we seek to improve it.

Democracy, in so far as it encourages participation and allows "readjustment of its institutions" through "associated life," requires education. Education, then, must foster "personal interest in social relationships" as well as "habits of mind," to bring about social change effectively (101). Education must assume the responsibility for fulfilling such aims.

Dewey offers a strong case for the sciences within his framework for education. This is because he believes the tendency of sciences to "weed out what is erroneous, to add to their accuracy," is precisely what allows us to change our environment (256). He

calls science “the perfecting of knowing” (256). Science has led to what he calls “increased culture” where more desires elicit more action. So “progress” he claims arises from the “search for new means of execution” (261). He believes we ought to use science as an “experience in becoming rational” (263). Science, in so far as it is able “to free an experience from all which is purely personal,” it may be saved for “*further* use.” Hence, science is indispensable for “social progress” (264). Science, for him, is a human study that liberates “human intelligence and sympathy” (269). This confidence in the scientific method reveals the heart of Dewey’s belief in its possibilities for democracy.

However, Dewey contrasts “intellectual subjection” with “intellectual freedom” to demonstrate which is properly suited for democracy (306-7). Intellectual freedom is a “mental attitude” that comes into being through “exploration, experimentation, application, etc.” The alternative, a society of intellectual subjection, limits the diverse interests and talents of its members through conformity. A democratic society then must tend towards education that allows individuals to become intellectually free (307).

This type of education brings vocational aims onto the stage, which for Dewey ought not to be the sole purpose of education. An occupation is the balance between an individual’s abilities and his “social service” (310). He also refers to it as “a continuous activity having a purpose” calling “instincts and habits into play” (311). The problem, however, with education limited to vocational preparation, is that it will “perpetuate divisions and weaknesses” of existing regimes, what Dewey calls “social predestination.” His solution rests in an education that “acknowledges the full intellectual and social meaning of a vocation” (320). From history and science to economics and politics,

Dewey believes the education required for democracy understands the past and can respond to the future (320-1).

His philosophy of education establishes a connection between theory and practice, implicating democracy in practice. Accordingly, he characterizes his proposition “to maintain the continuity of knowing with an activity which purposely modifies the environment” as “pragmatic” (400). In their advancements, “physiology, biology, and the logic of the experimental sciences” have provided the means to direct behaviors towards the fulfillment of democracy’s principles; namely, “free interchange” and “social continuity” (401).

Dewey also gave special attention to education’s role in shaping morals. For according to him, “virtue means to be full and adequately what one is capable of becoming through association with others in all offices of life” (415). This conception of virtue is consistent with his aim of education wherein “the administration, curriculum, and methods of instruction” are “animated by a social spirit” (415). Furthermore, Dewey argues, if education can develop “power to share effectively in social life,” then it is “moral” (417). Morality as such, culminates in his view of the “continuous readjustment” of social life necessary for growth, particularly within democracies (417).

Does liberal education offer this kind of growth in democracies? Are the sciences the only answer for progress? Michael Oakeshott and his views on teaching and learning can bring Dewey’s pragmatic approach deeper, generating more meaningful consequences for political society.

Reclaiming the Case for Liberal Education

When approaching Oakeshott's works, the question we are first faced with is, what makes a human being free? Some posit the immortality of the soul; others, free will, and many more believe biochemistry wholly explains us. For Oakeshott, a human being is inherently free in so far as he is able to express both his understanding of himself and of the world (19).

Oakeshott's essays on liberal education discuss the relationship between teaching and learning. The essays, arranged by Timothy Fuller, proceed by their subject matter as a conversation, eliciting clarity to Oakeshott's work "as a whole" (2). Ranging from the freedom of man to his culture, Oakeshott's 1975 essay "A Place of Learning" reveals the connection between liberal learning and self-understanding. "Learning and Teaching" (1965) involves a teacher who communicates human achievements to a student, who then becomes capable of "choice and self direction" (43). "Education: The Engagement and Its Frustration" (1972) illuminates the moment when the student meets the "inheritance" of human intelligence and the challenges he may face for the moments to come (71).

In "The Idea of A University" (1950), Oakeshott investigates the nature of curricula, undergraduates, and what liberal learning can offer the university so as to address the plight of the world. Against the background of whether or not universities should reflect the world, in "The Universities" (1949) he calls for a revisiting of the "basis of the university" (115). As politics and knowledge are inextricably related, his 1951 essay "Political Education" considers how we ought to approach political learning.

From his conception of freedom, Oakeshott develops an idea of learning. Humans come to a "condition of self-understanding," he claims, through self-consciousness (19).

Because our thoughts and feelings have meaning, we thus have a burden of responsibility; we cannot escape our condition. The price we pay for the “intelligent activity which constitutes being human,” according to Oakeshott, “is learning” (20).

So what are the consequences of this learning for man? Each man, he says, is “what he learns to become,” “his own self-enacted ‘history’.” The “expression of ‘human nature’” comes from our common experience in this activity (21). Learning, for Oakeshott, concerns “self-conscious engagement,” a “self-imposed task inspired by the intimations of what there is to learn (that is, by awareness of our own ignorance) and by a wish to understand” (22). Learning is not a potential with an end, but rather a condition of humans. So, to confront the world we live in, to respond to it, is then the chief task of a human being over the entire course of his or her life.

Liberal education provides an initiation into this kind of learning. Liberal learning can be called “liberal” in the sense that we can learn without the demands of “satisfying contingent wants” (28). In so far as liberal education has to do with the human condition, Oakeshott interprets the Greek aphorism, “Know Thyself” as in fact learning “to know thyself” (28). The tragedy of university as it stands today, exists among students, for whom no opportunity is given for a reincarnation.

It is with genuine self-understanding that Oakeshott introduces the idea of culture. For a human being to gain self-knowledge, Oakeshott believes, he or she must learn “to participate in what is called a ‘culture’ (28). A man’s culture is “a contingent flow of intellectual and emotional adventures, a mixture of old and new” (29). Liberal learning involves “learning to respond to invitations” of these adventures (32). As a result, “a man is his culture, and what he is he has had to learn to become” (29).

Nonetheless, “instrumental art” has prevailed. This art has given rise to training for medical schools, law schools, language schools, journalism schools, and the like. However, the real threat to liberal learning emerges not from the training for various “often-prematurely chosen” professions, but rather from the fact that students in modern universities are taught the role in society’s play, a “surrender of learning...to socialization.” The cast consists of roles that promote the “uniformity” that characterizes the current way of life (31). Liberal learning can liberate the student from this role by allowing him or her to learn the single most important task of a human being—“to think for oneself” (32).

Rather than conforming to today’s culture of socialization and professionalization that Oakeshott anticipated, he calls for a renewed unity of knowledge. As this unity dissolved, bit-by-bit, liberal education has fundamentally changed. Liberal education’s tone, once set by the humanities, has since deviated into dissonance. The humanities allowed for “investments in thought,” opening the way for understanding by analogy (33). However, the redefinition of other courses of study moved away from the liberal learning crucial to a unity of understanding.

A departure from the humanities, the social sciences indicated another change. The problem with the social sciences (“sociology, anthropology, psychology, economics, perhaps jurisprudence and something called ‘politics’”) is that in their effort to create a “natural science of human conduct,” they have corrupted liberal learning, working from conclusions rather than in “philosophical enquiry.” Social sciences have placed all investigations on the same plane, valued only “in terms of the use that may be made of the conclusions of their enquiries” (35-36). Additionally, psychology, by calling itself a

natural science, is at risk for reduction into “genetic and chemical processes” (36). This is a failure in light of the substance of learning, its essential humanness.

An extension of the aforementioned instrumental art, “human art” involves understanding how to choose our desires and what “conditions” are involved in their satisfaction (26). This art “is never fixed and finished; it has to be used and it is continuously modified in use” (26). Liberal learning shares this quality, as it faces the difficulty of an “always imperfect” character (39). Because of this tendency, universities largely resist what such learning has the potential to offer. Rather than remaining within the familiar, liberal learning enables an individual to take some time to entirely “disentangle himself” from the pressures of the practical world, and to “listen to the conversation in which human beings forever seek to understand themselves” (41).

Furthermore, if one understands liberal learning as “an education in imagination, an initiation into the art of this conversation in which we learn to recognize the voices; to distinguish different modes of utterance, to acquire the intellectual and moral habits appropriate to this conversational relationship,” then we could have our first performance as authentic characters in the drama of modern life (39).

Oakeshott draws out the relationship between learning and teaching, an invitation to all of human achievement. This comes in the form of “inheritance”, to which “every man is born an heir” (45). To enter into it, to be a part of it, is the essence of being human (45). Teaching, then, lies in deliberate initiation of a student into that world (46). To recognize oneself in the mirror of this inheritance is, by Oakeshott’s standards, the only way for a person to make the most of him or herself (48). “The business of the teacher” is to allow a student to leave his or her current thoughts and feelings and go beyond them

(49). A teacher can thus do so for a student “by making available to him something which approximates more closely to the whole of his inheritance” (49). Learning goes beyond “how to judge, interpret and use information,” it is an acquisition of “the ability to feel and to think” (61). A student must first “learn to listen” for human attempts to feel, to think and to express, and also “to recognize” them in others (61).

A university, Oakeshott believes, is not “a passage of time hurried through on the way to more profitable engagements.” He believes it is rather a place of gratitude (70). He identifies the emergence of this misconception as time-bided alongside the growth of the natural sciences. The problem with the natural sciences is that they claim a distinct culture, one not part of the whole of human understanding. First thought of as “useful” knowledge concerning the natural ways of the world, natural sciences are now associated with vocations, promoted for “‘social’ considerations” (88).

It was when “socialization” took the name of education, that Oakeshott tied problems in society to problems in education. The university’s design exists for the betterment of “the nation,” which built a “service industry.” Since education’s success is determined by the amount of money it can attain, its end has been reduced to “costs and benefits” (90).

Oakeshott notes that the “Middle Ages called it *Studium*,” he says we may call it “the pursuit of learning” (96). However, the pursuit of learning has been altogether disregarded. In response, Oakeshott clarifies that “a university is not a machine for achieving a particular purpose or producing a particular result; it is a manner of human activity” (96). “To be alive,” he says, “is to be perpetually active” (95). The aim of a university education is not limited to skill proficiency for some external end.

The change in the purpose of the university is not without consequence. Oakeshott notes that it is considered “errant” to enter the world as an individual who does not solely contribute to his or her own benefit (103). Though abundant in wealth and good intentions, the world replaced “education with training for a profession,” and needs to attend to itself (101). A misplaced aim has consequently led to “a world of power and utility, of exploitation” (103). Oakeshott offers a means to return—a university, suspended in time, can be once again an undertaking to learn “in the company of kindred spirits” (101).

Oakeshott, making these observations from 40 to 75 years ago, perceived problems within today’s system of university education. An inability to tie human efforts together, for him, exposed a crisis of the university. More specifically, “most students go through our universities without ever having been forced to exercise their minds on the issues which are really fundamental” (107). Furthermore, undergraduates “receive no encouragement to achieve an integrated view of the world,” for Oakeshott this means, “the university has become a polytechnic” (107). The way to overcome this crisis rests in a “project of uncovering everything, of thinking out afresh the whole aim and basis of the university with a view to making a new start” (115). This start is one that remains necessary in confronting the predicaments facing our world of 2015.

The place of technical and professional training in the university nonetheless remains to be seen. Its integration should not face complications, as long as the fundamental aim of education remains “to enable a man to make his own thought clear and to attend to what passes before him” (133).

Modern life necessarily involves an individual's relationship with society, wherein arises the importance of political education. In order to understand political education, we must look at political activity, which is "at one level or another, a universal activity" (137). "Attending to arrangements of society," according to Oakeshott, "has to be learned" (137). Politics, therefore, involves knowledge (137). Because knowledge of this sort "is inherent in any understanding of political activity," we can improve our understanding (138). Rather than in general principles or certain ideals, the heart of politics exists in consequences of intimations (147).

Political education can be aligned with liberal learning. Up until September 11, 2001, political crises, Oakeshott points out "always appear *within* a tradition of political activity" (149). Political education aims not only to understand tradition, but also to learn "how to participate in a conversation," which "is at once initiation into an inheritance in which we have a life interest, and the exploration of its intimations" (151). While political education holds a "proper" place in the university, it ought to be approached from a historical perspective, one whose significance comes from "the history, not of political ideas, but of the manner of our political thinking" (153). Leo Strauss elucidates that manner of thinking to the graduates of the Basic Program of Liberal Education for Adults, speaking directly to democracy's relationship with liberal education.

In his 1959 address titled, "*What is Liberal Education?*" Strauss brought to life the essence of liberal education still relevant for our modern world. He begins with the subject of culture, which for Strauss is the end of liberal education. Culture, according to Strauss, takes its first meaning in agriculture, and today, still takes on its second: he refers to Cicero's transformed use of the word, "*cultura animi*" (V §13), "the cultivation of the

mind, the taking care and improving of the native faculties of the mind in accordance with the nature of the mind.” In so far as liberal education consists in studying “with the proper care” that which “the great minds have left behind,” liberal education, for Strauss, is an “education in culture or toward culture.”

However, if liberal education strictly endorses Western culture, its original aim is thus reversed. One is led to ask what is at stake when we lose “the liberalism, the generosity, the open-mindedness, of liberal education?” As time has passed and the meaning of culture has changed, Strauss argues, “We have lost our way.” To find our direction once again, he would say to us, just as he did to the graduates—we should seek to understand liberal education as it stands today.

We live in a modern democracy, and Strauss purports that if we notice how the conception of democracy has changed since its original formulations, we can find liberal education’s place within it. Democracy, as interpreted by Strauss, is a universal aristocracy that “stands or falls by virtue.” This virtuous democracy requires wisdom, wherein “all or most adults have developed their reason to a high degree.” Political science, according to Strauss, has debated and continues to debate the democracy of the ancients, what some would call its ideal, and present democracy, its reality.

Modern democracy, Strauss claims, “would be mass rule were it not for the fact that the mass cannot rule but is ruled by elites.” The democratic means of equal opportunity to rise to the top paradoxically generated an unconcern for the common good. This occurred through resignation on the electorate’s part to rule by elites, which Strauss calls, “electoral apathy.” Democracy accordingly devolved into “mass culture.” Mass

culture, in his reference to theorist Max Weber, breeds “specialists without spirit or vision” and hedonists “without heart.”

Liberal education’s point of interest exists precisely at the junction between mass culture’s need for democracy’s protection and democracy’s need for “qualities of dedication, of concentration, of breadth and of depth.” By offering an antidote to mass culture, liberal education allows us to re-ground ourselves in “democracy as originally meant.” As a result, liberal education, through its engagement with “human greatness,” has the potential to offer a way to transcend the apathy within modern democracy.

In his view, responding to original works requires our reading them. Books are everywhere, which motivates the idea of commitment to the “greatest books.” Moreover, it is “common sense,” as Strauss suggests, that mediates the relationship “between us and the greatest minds.”

If liberal education, as Strauss understands it, “consists in reminding oneself of human excellence,” then we ought to look to Plato, for he believed education in its most complete form is “philosophy.” Nonetheless, as Strauss reminds us, by virtue of our human condition, education in this sense is incomplete. If this is the case, then at least “we can love philosophy; we can try to philosophize.” One might ask how this is done, and to that Strauss responds, simply, by “studying great books.” Because it is in such a task that one can grasp the dialogue that goes on between eminent thinkers; the philosophizing occurs in the act of “listening.” Liberal education involves principally this act.

Liberal Education: The Books

As an editor of Encyclopedia Britannica's collection of *The Great Books of the Western World* (1952) and as the President of the University of Chicago at the time, Robert Maynard Hutchins attempted to capture the great thinkers in the history of the West. He wrote an essay appearing in its first volume, "The Great Conversation: The Substance of a Liberal Education." In it, he outlines the tradition, transformation, and aspirations for an education in the great books. He believes liberal education is the "best educational idea there is." The thrust of this education, the great books "show the origins of many of our most serious difficulties" (47).

Ranging from ancient times to the modern world, the great books are a collection of tremendous worth in terms of illuminating life in the present. The books, Hutchins says, are intended to be a conversation. Originally limited to the West, he believes the tradition ought to expand its scope to the East, for he says, "few things could do as much to advance the unity of mankind" (48).

As he contours the spirit of Western civilization, he reveals the power of the great conversation. Accordingly, he says, "the exchange of ideas is held to be the path to the realization of the potentialities of the race." The ideas that govern our thoughts and our behaviors are contained within this unparalleled tradition. Serving as guides for "fine and liberal arts," they inspire the tradition's continued success (49).

These books held a centrality in Western education, where men could learn to be human. Hutchins thus defines the aims of liberal education in the following ways: "human excellence, both private and public (for man is a political animal); excellence of man as man and man as citizen; regards man as an end; the education of free men." These

goals, evident as early as Aristotle's work, have now manifested themselves "in the recognition of basic problems, in knowledge of distinctions and interrelations in subject matter, and in the comprehension of ideas" (49).

Liberal education allows students to become individuals who can understand how various questions are related, and how to go about answering them. These questions could be for example, "the problem of the immortality of the soul" or "the problem of the best form of government" (49). Additionally, a student can recognize the difference in method between the fields of "poetry and history, science and philosophy, theoretical and practical science." Comprehension of ideas that clarify "human experience," are key for liberal education, including among others "soul, state, God, beauty" (50).

"The method of liberal education," Hutchins explains, "is the liberal arts." Of the belief that we can all be called liberal artists, Hutchins says, we ought to be "good liberal artists," understanding ourselves such that we can become "fully human." From the liberal arts and equal chance for growth through them, the "democratic ideal" arises. Nevertheless, Hutchins reminds us that a devotion to this ideal is insufficient, what we need to recognize is "human dignity," the result of this kind of education (50).

Exemplifying this dignity, Hubert Dreyfus and Sean Dorrance Kelly, in their work *All Things Shining: Reading the Western Classics to Find Meaning in a Secular Age*, bring books of literature and philosophy to life. The authors recognize the proliferation of choices that characterize our modern society, where a "sense of certainty is rare" (3). Certainty arises without hesitation and is synonymous with "Greatness," which "flows not *from* the agent but *through* him" (11). "Human possibility" is illuminated in those moments where there is no opportunity for "indecision" (12).

The authors believe “existential uncertainty” is a feature of our contemporary life. Dreyfus and Kelly look to history to help them track the transition from “the fixed certainty of Dante’s world” to the condition of present day (16-17). The important transition that took place was that a secular age emerged in the West, where regardless of faith, we regarded all answers about how to live in the same way. The transition was from “a single, unquestioned set of virtues—Judeo-Christian values” to “a series of responses to the death of God” (44). Dreyfus and Kelly reference a commencement speech by David Foster Wallace:

“[I]f you really learn how to pay attention, then you will know there are other options. It will actually be within your power to experience a crowded, hot, slow, consumer-hell type situation as not only meaningful, but sacred, on fire with the same force that made the stars: love, fellowship, the mystical oneness of all things deep down” (47).

The answer for the two authors rests in their chapter “Homer’s Polytheism.” The fundamental point in Homer exists in the ability of “moods” to identify situations not as “inner,” but rather as “public and shareable.” Moods “manifest what matters most in the moment and in doing so draw people to perform heroic and passionate deeds.” The object of our lives is to get in the best “sync” with what matters (61). The word “*arete*” captures the essence of Homer’s time—it means virtue. Virtue, in this sense, means excellence, and excellence “depends crucially on one’s sense of gratitude and wonder” (61). This gratitude and wonder is “the key to everything sacred in the world of the Greeks” (67). Highlighting this character of our existence, Dreyfus and Kelly offer a means to give

meaning to our lives. When activity seems to be drawn out from us, “these are shining moments” (81).

Pragmatic Liberal Education

Wesleyan University President Michael S. Roth, in his book just published in 2014, *Beyond the University: Why Liberal Education Matters*, argues for a pragmatic liberal education. This is against the backdrop of a fast-paced world where economic and technological innovations are the mark of progress. He analyzes views on education by a number of American thinkers. His historical perspective aims to preserve democratic values in the face of a citizenry who has lost sight of the idea of a common purpose and responsibility, while also moving us to act on the questions that animate us.

Roth identifies “targeted vocational undergraduate instruction” as a misstep, arguing instead for a blend of humanistic education and pragmatic education (2-3). The culmination of this combination is *pragmatic liberal education*, which he calls “a broad, conceptual, and contextual form of learning that develops habits of mind and actions that are recognized by yourself and by other people as valuable.” Liberal education, dating back to the Middle Ages, brought forth traditions amid the rise of the “modern research university.” The philosophical tradition he characterizes as “skeptical, focused on inquiry and critical thinking.” Also, the rhetorical tradition is “focused on bringing new members into the common culture.” The two together develop the “whole person,” a contemporary Chinese notion of “liberal learning” (4).

In attempts to capture the complexity of “practical demands” and “humanistic inquiry,” Roth aims to preserve liberal learning on account of its compatibility with the “pragmatic ethos” developed by American philosophers John Dewey and Richard Rorty.

Roth recognizes the “age of...instantaneous information dissemination” of the world, and believes we cannot revert to “quick, utilitarian results.” Rather, he claims that students ought to “shape change and not just be victims of it” (9-11). For example, his experience with massive online open courses (MOOCs) “revealed that there was a wide international interest in learning for its own sake” (17). While “practicality” runs deep in American history, it serves as a guise for “conformity,” which Roth fears “will only impoverish our economic, cultural, and personal lives,” if it continues (18).

If we notice the “particular economic and social conditions of our time,” their “urgency,” then Roth thinks what education needs is “optimism.” For this optimism allows us to face future problems. Liberal education came to the scene in America alongside its nascent democracy. It was Thomas Jefferson who believed in a healthy nation and that vital to its health were educated leaders who ought to educate its citizens (21). Roth refers to Gordon Lee’s “Learning and Liberty: The Jeffersonian Tradition:” “Man, Jefferson, believed, is most free when he is...completely self-sufficient, hence his education must be concerned with developing such inner resourcefulness” (24).

In a forum following my interview of President Roth on February 4th, 2015 for this project, Dr. Jean Morrison, the Provost and Chief Academic Officer of Boston University, commented, “One of the most important elements of an undergraduate liberal education, beyond becoming broadly educated in the humanities, social sciences and sciences, is to find something that you are passionate about. And that passionate interest does not necessarily have to be directly connected to your first job after college. But despite this, proponents of the value of a liberal education seem to be losing that battle,

because if we look at enrollments, there's a strong flight to professional undergraduate education.”

Roth responded, “I think that the bi-polar structure of the economy today, this radical inequality is putting even more pressure on colleges and universities, but I think that this is an occasion for people in the humanities and the interpretive social sciences, for them to make a better case for what we do,” he says, “I think it can be done.”

Additionally, when asked about the high tuition costs for university, Roth answered, “If we [in colleges and universities] can't show that to people, that the work you are doing overtime, shows that you're more capable, more thoughtful, more able to contribute according to the metrics that you've established. If we can't show that, then I think we should be in big trouble.”

While Jeffersonian education allowed individuals to develop their potentials, it was David Walker's 1829 *Appeal to the Coloured Citizens of the World* that expanded his conception to African Americans. In it he writes, “I would crawl on my hands and knees through mud and mire, to the feet of a learned man” (37; 41). A major contributor to Roth's views, Roth says, “for David Walker to say that in the context of rebelling against the racism of Jefferson's views, but also to underscore the importance of the Jeffersonian notion that education is the key element to establishing one's freedom...For him to defend freedom and education together seemed to me very compelling” (Interview).

Another influence for Roth was Emerson, a great writer of his day who advocates for the “active scholar” (51). Emerson emphasizes active readers in his works, “one who uses the past in order to focus their own powers” (50). Furthermore, his vision was for men to work in the fields, to labor, to *shape* their labor. As individuals, Emerson believes

we ought to pursue work on our own grounds. “Instantly we know,” he writes in his 1837 essay, “The American Scholar,” “whose words are loaded with life, and whose not” (52; 51). As Roth focuses on the concept of animation in Emerson’s works, Roth says in the interview, “animation in education should make you more alive, should make you more animate, will give you more vivacity and the world should be more alive to you because of your education.”

Additionally, by increasing specialization and professionalization, Roth believes in doing so, our vision narrows. Then, referring to Emerson, he says “Flee all that stuff so that when you go outside the world is more alive to you—there’s more music in the world, more poetry, there’s more mystery that you can feel in your life.” Roth believes Emerson’s thoughts in “Self-Reliance” counteract the forces of conformity. For, it is conformity that leads an individual to get “corrupted by the voices of society” (56).

Emerson writes, “A foolish consistency is the hobgoblin of little minds...with consistency a great soul has simply nothing to do” (136; 57). What education needs to preserve is the chance for individuals to find meaningful work. Accordingly, we ought to follow up on Emerson’s prescription: “Regret calamities, if you can thereby help the sufferer; if not, attend your own work, and already the evil begins to be repaired” (147; 59).

After Roth outlined traditions of liberal education, he added to his view a pragmatist flavor. He consulted Jane Addams, a remarkable nineteenth-century theorist and leader on local, national and international fronts, who made distinct contributions to the idea of liberal education. She advanced the concept of “affectionate interpretation” in a speech delivered following the 1894 Pullman strike. The strike that resulted in the

jailing of union leaders led Addams to see “the tragic failure of people from different groups to understand one another” (82-3). “The cultivated person,” she believes, is the one who...put [s himself] into the minds and experiences of other people” (101; 84). For Roth she combines “individual autonomy” with “social responsibility and civic engagement” (85).

Another pragmatic thinker, William James, according to Roth’s interpretation, believed learning was intended not for the pursuit of truth, but for the “active agency” of individuals. “The point of learning,” for James, “is to acquire better ways of coping with the world, better ways for the world as it is” (88). However, does shaping our world, mean abandoning the pursuit of truth? Roth says, yes. While we may not be seeking “logical perfection,” we might look for a coherence of conduct, which would not misalign with his aims for beyond the university (87).

Further developing the pragmatist aspect of his book, he emphasizes the views of Richard Rorty and Dewey. Roth says, “I would say Dewey is a hero in the book for me because of the ways in which Dewey takes Jane Addams and William James and turns their philosophy and activism into a theory of pedagogy.” It is important however, to note that Dewey, according to Roth, “rejected the traditional concentration on the Great Books,” claiming they were “antidemocratic” and “set artificial boundaries on inquiry” (165).

What was important for Deweyan schooling was the idea that our actions in the world and education “are part of the same process” (168). The idea was furthered by Dewey’s belief that philosophy ought to deal with “real problems of doing and of suffering” (172). While Dewey agrees that the past has the ability to inform our actions,

our future, in my view, does not need to forget our essential human qualities—what Dewey may not have recognized philosophy has done and can continue to do.

While Dewey's pragmatism may have been faded after he died, Rorty brought it back to life. Learning for Rorty involved giving up "on the idea of Truth as a mirror of nature." Education ought to be concerned with "instigation to inquiries that might help one get along in the world" rather than getting closer to our own natures (178). Here again, Roth seems to be at a point of tension, because as early theories of liberal education in America have argued, the latter can inform the former. One needs to go no further than Roth's introduction of Emerson to see the nature of man as relevant to liberal learning.

Roth discusses the importance of Rorty's view of self-transformation. Through "inquiry" and "research," individuals can "rework their self-image," and break from their conditioning (114-126; 181). Roth finds this important for countering the tendencies of over-critical thinking in the humanities; he says, "We should be wary of creating a class of self-satisfied debunkers." This skill of critical thinking, he fears "may diminish their capacity to find or create meaning and direction in the books they read and the world in which they live" (182-3).

Roth's recollection of his most memorable class as an undergraduate was a testament to the influence of liberal education on an individual's life. "I took a class with Victor Gourevitch, a political philosopher, on Hegel. We read the *Phenomenology*." He continues, "There were three of us in "Hegel", I never worked so hard in my life—my copy of the *Phenomenology* only has four lines that are not underlined. It really changed

everything.” He concludes, “I loved my classes, I loved my teachers at Wesleyan- they were gifts.”

In my interview, Roth elaborated on his recent MOOCs, one of which is a Great Books humanities course. His experience has epitomized the goals of liberal education. “I was amazed,” he says, “by the reactions of students who found the courses transformative, who found connections between the political theory we were doing in my class and things they were doing in their jobs.” MOOCs serve to bring liberal learning to the foreground amid a nation that prizes STEM fields. Roth explains his role on the brink of digital learning, “What I want as a teacher, and as an administrator, I want to be part of the experiment, so that we can evolve in such a way that we don’t lose liberal education in the process.”

On Digital Learning

From November 19 to 21, 2014, Boston University hosted an Edx global online forum, *On Digital Learning*, which according to the event description, is “for educators, thought leaders, instructional technologists, researchers, visionaries and innovators to share experiences on pedagogical research, blended learning and to explore emerging trends in online education.” On the brink of digital education, can our democratic society still preserve the aims of liberal education?

Ted Mitchell, the Under Secretary at the U.S. Department of Education, gave the opening keynote. He spoke of the demand for digital learning as arising from desires for global adaptability and for satisfaction of individual learning capacities by alternative education. The supply includes content and skills. He mentions problem solving, creativity, collaboration, and reflection, or habits of mind we need to cultivate. Digital

learning allows for increased diversity, by allowing a richer range of educational experiences while also meeting global industry standards.

At the same time, Mitchell warns against technical training that is narrowly focused on a particular set of manipulations of the world. Instead, he believes education transcends that, by teaching not only how to do, but also how to think about doing something—what its value is in the world. “To stand on the skills you’ve been trained to do and see a little bit farther.”

Do the humanities and arts fit into the vision? For Mitchell, they are more important now than at anytime in our history. It is our understanding and appreciation for humanity in history that informs our work life and civic life, our family life. If education separates from these disciplines, it is Mitchell’s conviction that we would have a poorer society, one that is less informed, less energetic, with a less creative work life.

What education in these disciplines could diminish are racial prejudices and rigid class structures, for if all is moving and mobile, there are more and different kinds of choices. Furthermore, preparation for our career and lives, he believes, would result in a more economically self-sustaining and successful community, one that is, in paraphrasing Dewey, worthy, harmonious, and whole. A look into Boston University (BU) may reveal how closely it embodies these ideals. More specifically, it may reveal something about the state of liberal education within the university.

Inside Boston University

It is important to understand the institutional arrangements of BU and the organization of its schools and colleges, in order to understand how it is able to preserve liberal education as a modern-research university. A university-wide plan, started in 2006

by President of BU Robert A. Brown aimed at institutional reform. It began as a request for various deans, according to Brown, to “think about the needs of the University *as a whole*.”¹ The plan, intended for completion by 2016, is called “Forging Our Future by Choosing to be Great.”²

In the section on Undergraduate Education, in *One BU: A Connected University Framework of a Strategic Plan*, there are five recommendations for the undergraduate curriculum and experience.³ One recommendation was to “Define and refine the first two years of undergraduate education so that the liberal arts and sciences in the College of Arts and Sciences (CAS) and the College of General Studies (CGS) are at the core, with strong reciprocal connections between CAS/CGS and the professional Schools.”

With a strong need for integration and coherence, BU’s commitment to liberal education amid the demands of research and professionalization of today’s world can serve as an example for other universities facing the same concerns. “One BU” is the university’s mission, “a culture and philosophy.” A Task Force works towards annual proposals and assessments to work towards the goals of the strategic plan.

In a brief interview on March 31st in her office, Elizabeth Loizeaux, BU’s Associate Provost for Undergraduate Affairs, also on the Task Force, believes a general education at BU can form a core set of knowledge, skills, and habits of mind of a liberal education so BU graduates can thrive on personal, civic, and professional levels. Her conviction is to have “a common educational space for all BU students—what all BU students are known for.” She recognizes constraints on some professional schools, such as in Engineering—your bridge cannot fall down.

¹ <http://www.bu.edu/strategicreport/letter/>

² <http://www.bu.edu/president/strategic-plan/foreword.shtml>

³ <http://www.bu.edu/strategicreport/report/pdf/bu-strategic-report.pdf>

Nevertheless, she mentioned the traditional model, based on ideas about student development, in which students have some experimental years and then make a choice about what to study. She claims that this worked in higher education since the 19th century. However, she points out that what business leaders want most is adaptability and flexibility, not simply a specialized person. She believes that you actually understand better your own intellectual interest, if you begin to study it from the start, with a breadth of other courses strung through the four years. This offers a means of countering the forces of specialization throughout the entire college experience. For her, this is a time of immense change—a challenging and exciting time.

Inside BU, there are eight principal schools and colleges for undergraduates, as well as the “two-year liberal arts core curriculum,” CGS.⁴ Students from this particular college of 1,100 freshman and sophomores finish their education at one of the eight remaining schools. CGS claims to “provide you with skills that transcend any industry: critical thinking, effective communication, problem-solving, and collaboration.”

There are also two distinct schools within the CAS: Kilachand Honors College (KHC), allowing undergraduates to further their liberal education in the various schools and colleges through seminars and independent projects as well as the Frederick S. Pardee School of Global Studies.

The 24-department College of Arts and Sciences (CAS) with an undergraduate enrollment of 6,850 students, is the largest school. Its goals, in Virginia Sapiro’s “Message from Dean” on the CAS website, are the following: “Building vibrant,

⁴ <http://www.bu.edu/academics/schools-colleges/>

supportive, and productive learning communities; devoting ourselves to the values and practices of the liberal arts and a liberal education; and seeking to be valuable citizens.”⁵

The College of Communication (COM), with 2,269 students, provides professional training in film and television, journalism, mass communication, advertising, public relations, and emerging media. “Nothing more defines the human experience than communication,” says Dean Fiedler in his “Message from Dean”, “the ability that each of us has—in fact, the need that each of us has—to convey our thoughts to others and to receive theirs.” He goes on to say, “The BU graduate knows that it is the quality of the content that matters, not the method of delivery. It’s the kind of quality that comes only from having had a world-class education in the liberal arts at a world-class university.”⁶

The College of Engineering (ENG) of 1,488 students is, according to Dean Kenneth Lutchen in his “Dean’s Welcome”, “a great place to study engineering and prepare for a career in the global marketplace.”⁷

The College of Fine Arts (CFA), a conservatory-style college with Schools of Music, Theatre, and Visual Arts. Its approach, according to the CFA website, is to foster an environment where “art is neither created nor experienced in isolation. Art is informed by the world in which we live.”⁸

The College of Health and Rehabilitation Sciences: Sargent College (SAR), with 1212 full-time students, has four departments of Health Sciences; Occupational Therapy; Physical Therapy and Athletic Training; and Speech, Language, and Hearing Sciences.

⁵ <http://www.bu.edu/cas/about/message-from-the-dean/>

⁶ <http://www.bu.edu/com/about-com/deans-message/>

⁷ <http://www.bu.edu/eng/about-us/dean/>

⁸ <http://www.bu.edu/cfa/aboutcfa/our-approach/>

Their mission is “to create an environment that fosters critical and innovative thinking to best serve the health care needs of society.”⁹

The School of Education (SED) is a 1,000-student school for professional educators. It is, according to Dean Hardin L. K. Coleman in his “Dean’s Welcome”, dedicated to “teaching, scholarship, and outreach.” Aiming to narrow “achievement gaps among socioeconomic groups,” SED focuses on “early childhood education, higher education, counseling, and policy.”¹⁰

The School of Hospitality Administration (SHA), a dynamic combination of distribution courses and professional training in the industries of “travel, hotels, food service, and entertainment.” Its curriculum offers students a chance for “honing your abilities for critical thinking, clear expression, and problem-solving.”¹¹

The Questrom School of Business (QSOB) focuses on the areas of “digital technologies, health and life sciences, and energy and the environment.”¹² For Kenneth W. Freeman, in his “Dean’s Welcome”, “the role of builders and leaders is to create value—generating an appropriate financial return on investment at the same time, we seek to improve the lives of others.”¹³

Within this professional setting, BU demonstrates how placing value on CAS and CGS, liberal education can allow for cohesion between students of the university, and later between members of society. In a special program within CAS, called The Core

⁹ <http://www.bu.edu/sargent/about-us/fast-facts/>

¹⁰ <http://www.bu.edu/sed/about-us/deans-welcome/>

¹¹ <http://www.bu.edu/hospitality/academics/courses/>

¹² <http://www.bu.edu/academics/schools-colleges/>

¹³ <http://www.bu.edu/questrom/about-the-school/dean/>

Curriculum (The Core), “students place high value on liberal education, intellectual engagement, and friendship.”¹⁴

In an interview on January 30th with Professor Nelson, Assistant Dean of CAS and Director of The Core, she explains her experience with the influence of The Core on students. With a large Great Books focus, The Core involves an analysis of texts and ideas. The Core consists in courses in the Humanities ranging from the history of Mesopotamia, to T.S. Elliot and Modernism, as well as courses in political thought, which include Durkheim, Weber, Hobbes, Locke, and Rousseau. Additionally, The Core aims to bring these areas together with the Natural Sciences.

In Professor Nelson’s view, the modern university created divisions that are not useful. In The Core, with each subject learned building on the previous, she mentions that some of the greatest ideas came from students jumping across very different areas, building from 1st semester core, which covers Humanities and Natural Sciences of the ancient world, to 4th semester core, covering those of modern world.

When asked about life after The Core, she says, “unless there is one thing that made a difference to you, once you have had that happen, it does not just go away...once a person has seen for themselves what is valuable and what matters, that is there forever and it will affect the people they are talking to.”

Boston University: From the Students

Literature Review

In this section, I assess relevant studies for the design of my Qualtrics survey on student perspectives regarding liberal education and their experiences at BU. In the 2004

¹⁴ <http://www.bu.edu/core/learnmore/what-is-the-core/faqs/>

study, *College and Character: Insights from the National Survey on Student Engagement*, George D. Kuh and Paul D. Umbach define good character as demonstrated by people who “work towards the public good, with integrity and personal responsibility that reflect their examined understanding of their ethical responsibility to self and the larger community” (37). Kuh and Umbach believe colleges have become more secular, resulting in a decline in character development.

The independent variables of their research design include various measures of student engagement and the dependent variables are contingent on the question: “To what extent has your university experience at this institution contributed to your knowledge, skills, and personal development in the following areas?” The areas were four dimensions of character development—knowledge of self; ethical development and problem solving; civic responsibility; and general knowledge.

Through the use of descriptive statistical analysis, their results reported “greater gains in character development” at baccalaureate liberal arts colleges “than students at other types of colleges.” Nevertheless, they believe institutional averages did not reveal a complete story about character development. Accordingly, they also conducted multivariate analysis to evaluate institutional and student differences in character development gains (44). The multivariate design and the dimensions of character development inspired the research-design for this paper.

More specifically, Kuh and Umbach’s dimensions have twelve sub-categories similar to the twelve goals of liberal education in my survey. The multivariate regression in my study is distinctive, since its focus is not on the relationship between student

genders, age and majors with the fulfillment of liberal education's goals, but rather on the relationship between student feelings about jobs and fulfillment of those goals.

The Liberal Arts College, a 1997 study by the President of Hobart and William Smith Colleges Richard H. Hersh, reveals that "the training requirements for potential business leaders in the country...could only be found in liberal arts colleges" (26). He recognizes that most college students "do not enroll in pure liberal arts programs, but rather in degree programs whose chief purpose is to land them their first job—pre-professional degree programs such as journalism, business management, or computer programming" (26).

He conducted a nation-wide survey of 1,000 college-bound students, their parents, CEOs and HR managers, and recent graduates, hoping to bridge the gap between college intent and public perception. The crucial point from his survey is that, while most students and parents believe the most important reason for college is for money and a career, less than 40% of business executives in his study said the same. He also assessed positive and negative impressions of liberal arts colleges, of which recent graduates and business leaders showed high positive impressions. Similarly, my study aims to investigate the reason for attending college for present undergraduates and to understand further the dynamic between job preparation and liberal education at BU.

Research Design

My research design consisted of two parts: data analysis with the use of the open-source computer program R and content analysis, both using the 267 responses to the Qualtrics survey I created. This sample size includes males and females from eight principal schools for undergraduate education (varied based on the population of each

school) at BU plus transferring students from the College of General Studies with various majors, minors and concentrations and graduation years from 2015 to 2018. The sample size was used as a representative guide for BU's undergraduate population—18,165 students at a confidence level of 90%.

For my data analysis, I hypothesized that the extent of disagreement with all twelve of liberal education's goals would result in a decrease in favorable feelings towards jobs across six sectors. The six job sectors include STEM, business or management, education or literature, government or law, the arts, and vocational jobs.

Rather than all twelve goals, I found that disagreement with a specific goal led to a significant decrease in favorable feelings towards each sector. Depending on the sector, the specific goal varied, apart from an overlap in political consciousness, influencing feelings towards jobs in Education or Literature and Government or Law. The influence of student disagreement on student feelings towards jobs in the Arts was not statistically significant.

The independent variables are twelve goals of liberal education. This ordinal-level measurement was on a scale from "Strongly Agree," coded as (1.00), to "Strongly Disagree," coded as (4.00). Respondents were asked to select the extent of agreement they believed their experience thus far at Boston University has fulfilled the goals.

The goals, based on the theoretical portions of my paper, are the following: an understanding of how what you know is related; a desire to learn for its own sake after college; an ability to reason analytically; an ability to make ethical decisions; an improved self-understanding; leadership skills; preparation for future service in society;

political consciousness; openness to change; awareness of and appreciation for human achievements; an ability to communicate effectively; and empathy towards others.

The dependent variables were feelings about jobs across six sectors (STEM, business or management, education or literature, government or law, the arts, and vocational jobs), which were measured by feeling thermometers. My survey asked how strongly they felt about getting a job in a given sector for each sector with the thermometer I provided (See Coding Appendix). The question asked was “How much do you want a job in (given sector)?” The interval-level measurement included the following: 50-100, which signified feeling strongly towards the job, and 0-50, which signified feeling strongly against the job.

I did not include the values that were coded -99 because these were blank responses by the respondents in the survey. In my view, these would not be helpful in revealing student perceptions on the fulfillment of liberal education’s goals nor about their feelings regarding jobs. Inclusion of those values may skew my results, so I accordingly recoded the independent and dependent variables to operate with omission of these values (see Coding Appendix).

My content analysis was based on the following open-ended questions: How would you define liberal education in one sentence or less; what do you consider to be the most important single reason for attending university in one sentence or less; what do you consider to be the most important book you have read while in college? (Give title, author, or both); and what course do you consider to be the most important one you have taken so far? (Give title or department, e.g. Music Theory, History, Spanish).

For the first two questions I made note of important words or phrases mentioned in each answer, then I tallied them, and put them into categories based on similar themes. Finally, I examined them to identify meaningful patterns. For the latter two questions, I created tables to show whether students read the book for a course, categorizing them according to genre and number of mentions, and to show how many courses perceived as significant fell into the category of liberal arts. Since these open-ended questions do not fit neatly into categories, in this respect my study is limited.

My research aims to assess the impact of student perceptions of their experience with liberal education on job perception. In addition, it seeks to reveal patterns in their understandings of and interactions with liberal education.

Data Analysis & Results

My empirical analysis examines my Qualtrics survey data using multivariate regressions to determine the influence of perceived fulfillment of liberal education's goals on feelings about future jobs. The extent of student agreement that college has offered them a liberal education across twelve goals explains 4.14% of overall feelings about jobs in STEM, 5.77% about jobs in business or management, 6.22% about jobs in education or literature, 9.04% about jobs in government or law, 1.24% about jobs in the arts, and 2.12% about vocational jobs (Tables 2-8). This analysis indicates that in fact variables outside of these goals contributed to the explanatory power of feelings about jobs across these sectors.

Nevertheless, descriptive statistics reveal that on average, students agreed that college has satisfied the twelve goals for them. This appeared most strongly for an ability to reason analytically, an improved self-understanding, and an ability to communicate

effectively (Table 2). According to the averages of respondent data, students felt most favorably about jobs in business or management, the arts, and STEM (Table 1).

A striking result was that a one-unit increase in the extent of student disagreement with the statement “college has given them an ability to reason analytically” results in an 11.715-degree decrease in favorable feelings towards a job in STEM with a standard deviation of 4.817. On account of the magnitudes of the t-statistic, 2.432, and P-value, 0.016, the null hypothesis could be rejected with 95% confidence. Analytic reasoning thus played a significant role in how students felt about STEM jobs.

The extent of student disagreement with the statement “college has given them an ability to communicate effectively” also played a significant role in how students felt about STEM jobs. A one-unit increase in extent of disagreement led to a 13.071-degree decrease in favorable feelings with a standard deviation of 4.667, a t-statistic of 2.800, and a P-value of 0.006. For students who feel strong positive feelings about pursuing STEM fields, effective communication was not given a priority to their undergraduate experience.

Another noticeable result is that a one-unit increase in the extent of student disagreement with the statement “college has given them leadership skills” results in a 10.485-degree decrease in favorable feelings towards a job in business or management with a standard deviation of 3.544. With a t-statistic of -2.959 and a P-value of 0.003, the null hypothesis represents an unlikely occurrence and may be rejected with 95% confidence. Leadership skills were key for favorable feelings towards business or management.

At the same time, a one-unit increase in the extent of student disagreement with the statement “college has given them empathy towards others,” led to an 11.971-degree increase in favorable feelings towards a job in business or management with a standard deviation of 3.709 and a significant t-statistic 3.228 and P-value of 0.001 at a 95% confidence level. Even with liberal arts elective requirements at QSOB¹⁵, students who felt strongly about jobs in business believed that they lacked cultivation in empathy.

As for jobs in education or literature, a one unit increase in the extent of student disagreement with the statement “college has given them political consciousness” results in a -7.533 degree decrease in favorable feelings with a standard deviation of 2.787 and a significant t-statistic of -2.703 and P-value of 0.007. Clearly, political consciousness played an important role in how students felt about jobs in the fields of education and literature. Unlike students who had strong feelings about jobs in business, these students did not agree that college gave them leadership skills. This can be seen by a one-unit increase in disagreement that results in a 9.869-degree increase in favorable feelings towards a job in education or literature with a standard deviation of 3.373. The t-statistic of 2.923 and P-value of 0.004 allow for 95% confidence in the rejection of the null hypothesis.

Similar to students who felt strongly about jobs education or literature, a one-unit increase in the extent of student disagreement with the statement “college has given them political consciousness” results in a 13.017-degree decrease in favorable feelings towards a job in government or law with a standard deviation of 2.725. The null hypothesis can be rejected at a 95% confidence level, since it has a t-statistic of -4.776 and a P-value of

¹⁵ http://www.bu.edu/questrom/undergraduate-program/academics/curriculum/#curric_chart

3.14e-06. Comparable to students who felt strongly about business, these students did not feel college has given them empathy. A one-unit increase in the extent of student disagreement led to a 7.034-degree increase in favorable feelings with a standard deviation of 3.284, significant t-statistic of 2.142, and significant P-value of 0.033.

A one-unit increase in the extent of student disagreement with the statement “college has given them an improved self-understanding” results in a 9.304-degree decrease in favorable feelings towards a job in the arts with a standard deviation of 5.105. While this seems to be a probable case for those who would like to pursue art, because of the t-statistic, -1.823, and P-value, 0.070, the null hypothesis cannot be rejected at a 95% confidence level and this point is statistically insignificant.

Vocational jobs have the lowest favorable feelings (Table 1). Consequently, a one-unit increase in the extent of student disagreement with the statement “college has given them an understanding of how what you know is related” results in a 5.018-degree increase in favorable feelings with a standard deviation of 2.328. The t-statistic of 2.155 and P-value of 0.0321 allow the null hypothesis to be safely rejected with 95% confidence. The few students who favored vocational jobs felt they did not receive an understanding of how things are related. These students also felt they failed to gain leadership skills, since a one-unit increase in the extent of student disagreement, led to a 4.9269-degree increase in favorable feelings with a standard deviation of 1.826, and significant t-statistic of 2.699 and significant P-value of 0.007.

Content Analysis & Results

In my Qualtrics survey, students were first asked for their understanding of liberal education. The categories of understanding, as evaluated by the theoretical portions of

this paper, were as follows: accurately understood, first misunderstanding–freedom to choose what you want, second misunderstanding–limited, third misunderstanding–unpractical, fourth misunderstanding–research-oriented, no understanding, and additional descriptive comments mentioned in the responses (Table 9).

In the first category with 174 mentions, students adequately understand liberal education as applicable information and skills (i.e. reading comprehension, critical thinking) to their majors and other areas, also describing it as a multi-faceted, well-rounded core. (Please note, number of mentions were independent of number of responses.)

Students consider liberal education to be an organized, participatory learning environment that promotes open-mindedness and creative thinking. Students also appreciated liberal education's accessibility to multiple points of view and role as an education without bias or prejudice. Furthermore, students feel it gives those who partake in it an understanding and broader scope of how society and the world work, particularly in its use of history and Western humanities to bring to light contemporary life.

Students believe it was not strictly vocational, STEM field subjects, or a specific course of study, but rather interdisciplinary, allowing exploration through interaction between different disciplines. Among these areas of study, they included social sciences, humanities, law writing, literature, arts and natural sciences.

Through thoughtful investigations, students communicated that liberal education provides an opportunity for personal growth and development. By extending beyond the boundaries of science or commerce dominated fields, students think liberal education

encourages students to think as global citizens, and that it makes us human—not just facts and numbers.

When asked for the most important single reason for attending university, responses fell under the following six broad categories: career-oriented, a view to the future, learning, self-understanding, social, and impact on the world (Table 10).

The category with the most mentions—120—was learning. The responses ranged from broadening knowledge and furthering education to an understanding of the world in addition to various types of learning, such as honing a craft or thinking critically.

The next largest category with 96 mentions was an orientation towards a career, the cash-value of an undergraduate degree. Students believed money, return on investment, and marketability in addition to work experience and professional knowledge were major motivations for an institution of higher education.

A view to the future, self-understanding, and a social environment had roughly the same number of mentions, 34, 30, and 29, respectively. The future was a general and malleable category; it included opportunities, success and a better life. Self-understanding, for students, had to do with personal growth, discovery of strengths, dreams and passions. The responses mentioned finding, cultivating, knowing, challenging, learning about, expressing, and becoming the best version of oneself. Social was a fascinating category, since students not only wanted to meet and connect with more people, but also come into contact with points of view different from their own.

Impact on the world was a special category with only 10 mentions. It involved, for students, a contribution to the betterment of society. Cultivation of the self may be a

major provider of that goal and could explain the low number of mentions in this category.

When asked what the most important book the student respondent read in university, the students were also asked whether the book was for a course (Table 11). Of the 242 responses included in the results for this question, 65% of students claimed to have read their book for a course, 34% claimed to have read it outside a course, and one student did not specify. Thus, the majority of students believed that books they have read in their courses were useful.

Of the books listed, ninety-five were in the category of Novels, Poetry, Drama, and Short Stories. Top titles and authors, mentioned more than once, included *The Alchemist* by Paulo Coelho, *The Stranger* by Albert Camus, books by Toni Morrison, including *The Song of Solomon* and *Beloved*, *The Great Gatsby* by F. Scott Fitzgerald, Hemingway and his book *The Sun Also Arises*, *The Master and Margarita* by Mikhail Bulgakov, *The Color Purple* by Alice Walker, *Slaughterhouse-Five* by Kurt Vonnegut, *The Count of Monte Cristo* by Alexandre Dumas, *The Bell Jar* by Sylvia Plath, and J.K. Rowling's series, *Harry Potter*.

The next largest category, with 35 books, includes Memoirs, Biographies and First-Hand Accounts. Top names were *Mountains Beyond Mountains* by Tracy Kidder, *An Unquiet Mind* by Kat Redfield Jamison, *Lying* by Lauren Slater, *All Souls: A Family Story from Southie* by Michael Patrick MacDonald, *Son of the Revolution* by Liang Heng and Judith Shapiro, *Yes, Please* by Amy Poehler, *Coming of Age in Mississippi* by Anne Moody, and *Lying* by Lauren Slater.

In the category Society, Anthropology, Economics, Psychology, Public Health, and Environment, there are 28 books. Leading titles and authors are Richard Dawkins and his *The God Delusion*, *The Spirit Catches You and You Fall Down* by Anne Friedman, and Jeffrey Sachs, his *The End of Poverty*.

Philosophy and Religion includes 26 books. Nietzsche and the Bible were mentioned twice, while Kierkegaard was mentioned three times: *The Essential Kierkegaard* and *Fear and Trembling*. It is worth noting that a title used in this paper was mentioned as well, namely Aristotle's *Nicomachean Ethics*.

In Business and Leadership, Sheryl Sandberg's *Lean In* was mentioned three times. And the categories Law, Politics and International Relations; STEM; History; Writing, Composition, and Design; Music and Theatre; Self-Improvement; Teaching and Education; Military; and Other included 10, 10, 8, 6, 5, 4, 3, 3, and 1 book(s), respectively.

In the survey, students were asked which course they found most important thus far in their college years. The responses were assigned into the following categories according to their subject matter: STEM (Science, Technology, Engineering and Math); Social Science; Ethics, Humanities, History, Writing and Philosophy; Art, Music and Language; Professional Education (Table 12).

Of the 260 courses listed, 63 were in Ethics, Humanities, History, Writing and Philosophy. More courses out of any other category fell into this one—central to the essence of liberal education. Some courses in this category included Russian literature, Epistemology, Islamic Law, Business Ethics, and Art History.

In close second, 61 were in STEM and 61 were in Professional Education—students felt courses in these categories were important for them. STEM courses ranged from Math and Computer Science to Neuroscience and Aircraft Performance and Design. Professional Education courses involved either professional school-specific subject matter, for example Finance in the Questrom School of Management, or professional preparation courses within another school such as Product Management in the School of Engineering.

Forty-six courses were in Social Science, including Personality Psychology, Sociology of Race and Ethnicity, Macroeconomics, Africa in International Relations, and Medical Anthropology among others. Twenty-nine courses were in Art, Music, and Language; these included Private Lessons, German, French, Chinese, Piano, and Music Theory.

It is clear that the courses that dealt with society and what it means to be human were most impactful for students. Nonetheless, professional skills acquired in STEM education are increasingly in demand in careers following university, hence courses in these areas were also essential for students. This is not to discount the importance students felt in the disciplines of Social Science, Art, Music and Language; while in the minority, courses in these disciplines apparently had readings, assignments, or moments in the classroom that students carried with them post-course.

Overall, my survey revealed that in the majority students at Boston University have an adequate understanding of liberal education and motivations to attend university that are in line with its goals. On average, students agreed that BU fulfilled these goals, such as an improved self-understanding and an understanding of how what they know is

related. Student extent of agreement of the fulfillment of liberal education's goals influenced how they felt about jobs across sectors ranging from STEM and business to education and the government, as specific goals revealed changes in their feelings. For the most part, disagreement led to a decrease in favorable feelings towards a given job.

For most students, courses in Ethics, Humanities, History, Writing and Philosophy persist as most important. Similarly books read in a course and books categorized as Novels, Poetry, Drama, and Short Stories have proven most significant for students my sample.

Conclusion

From the students' perspectives, the idea of liberal education maintains a strong presence within BU. Nonetheless, as motivations and courses in STEM and professional education increasingly come second in importance, BU is faced with the possibility of indifference to liberal education. I hope that administrators, students, their families, and faculty alike, can continue to recognize its value.

Whether political leaders place value on higher education within our societies, education, as outlined by Aristotle and Dewey, will continue to be at issue for politics. Grounding the success of a city in its citizens, Aristotle thinks education that is oriented towards the character of the soul cultivates a virtuous citizenry. Considering the social environment as fundamental to an excellent democratic society, Dewey believes that education should provide individuals with a mental disposition towards their communities. He called for the importance of the sciences to bring progress to society and has a strong practical focus in his work.

In terms of the idea of liberal education, Oakeshott's theories of teaching and learning emphasize the need for an intellectual inheritance to pass from teachers to students in order to counter forces of professionalization and specialization that still mark the modern world. Hutchins regards the great books of the Western world as central to liberal education, in their ability to teach individuals how to live human lives. Dreyfus and Kelly, in their book, illuminate several works to revive the gratitude and wonder of Homer's time they feel has been lost in today's society.

President Michael Roth's points concerning empathy and self-knowledge reflect a deep commitment to traditions of liberal education and its aims. While his idea of a pragmatic liberal education highlights the practical aspect of Dewey's and Rorty's works, this feature obscures what an investigation into our natures can offer, what philosophy can offer.

Philosophy, in its inherent intellectual offerings, allows us to signify our understanding. This "understanding of understanding," according to Strauss in his 1959 address, "by *noesis noesos*...is so high, so pure, so noble an experience that Aristotle could ascribe it to God." From this activity, we begin to notice "the dignity of the mind," and with it that of mankind, what Strauss calls "the home of man."

From instilling "modesty" to inspiring "boldness," liberal education can transform how we view and approach our world. Strauss calls liberal education, "liberation from vulgarity," or the Greek word *apeirokalia*, meaning, "lack of experience in things beautiful." This beauty is life's greatest gift of all.

Tables

Table 1. Summary Statistics for Student Feelings about Jobs Across 6 Sectors

Variables	Minimum	Median	Mean	Maximum
STEM	0.00	44.00	45.59	100.00
Business or Management	0.00	48.00	48.46	100.00
Education or Literature	0.00	35.00	44.09	100.00
Government or Law	0.00	36.50	37.37	100.00
Arts	0.00	50.00	46.86	100.00
Vocational	0.00	0.00	11.08	100.00

Table 2. Summary Statistics for Extent of Student Agreement With What College Has Given Them
[Strongly Agree- 1.00; Strongly Disagree- 4.00]

Variables	Minimum	Median	Mean	Maximum
An understanding of how what you know is related	1.00	2.00	1.639	3.00
A desire to learn for its own sake after college	1.00	1.00	1.620	4.00
An ability to reason analytically	1.00	1.00	1.492	4.00
An ability to make ethical decisions	1.00	2.00	1.884	4.00
An improved self-understanding	1.00	1.00	1.457	4.00
Leadership skills	1.00	2.00	1.625	4.00
Preparation for future service in society	1.00	2.00	1.603	4.00
Political consciousness	1.00	2.00	2.086	4.00
Openness to change	1.00	1.00	1.517	4.00
Awareness and appreciation for human achievements	1.00	1.00	1.566	4.00
An ability to communicate effectively	1.00	1.00	1.453	4.00
Empathy towards others	1.00	2.00	1.734	4.00

Table 3. Multivariate Regression Statistics: Student Feelings about a Job in STEM

	Est. Feeling	Std. Error	T-Statistics	P-Value	R-Squared
					0.04135
A	56.3039				
An understanding of how what you know is related	0.7790	5.0708	0.154	0.87804	
A desire to learn for its own sake after college	-2.8125	4.3032	-0.654	0.51398	
An ability to reason analytically	-11.7149	4.8165	-2.432	0.01572	
An ability to make ethical decisions	-0.8742	4.4156	-0.198	0.84323	
An improved self-understanding	3.3833	5.3531	0.632	0.52796	
Leadership skills	-1.1086	3.9532	-0.280	0.77939	
Preparation for future service in society	-6.5173	4.4344	-1.470	0.14291	
Political consciousness	4.2647	3.3049	1.290	0.19812	
Openness to change	1.6301	4.9864	0.327	0.74401	
Awareness and appreciation for human achievements	-5.6908	4.9790	-1.143	0.25416	
An ability to communicate effectively	13.0708	4.6686	2.800	0.00552	
Empathy towards others	-1.3207	4.0275	-0.328	0.74325	

Table 4. Multivariate Regression Statistics: Student Feelings about a Job in Business or Management

	Est. Feeling	Std. Error	T-Statistics	P-Value	R-Squared
					0.05768
A	48.780204				
An understanding of how what you know is related	3.341581	4.541006	0.736	0.46252	
A desire to learn for its own sake after college	1.585269	3.809402	0.416	0.67767	
An ability to reason analytically	1.794161	4.272953	0.420	0.67494	
An ability to make ethical decisions	-7.376502	4.015835	-1.837	0.06745	
An improved self-understanding	-0.008838	4.819635	-0.002	0.99854	
Leadership skills	-10.486411	3.544034	-2.959	0.00339	
Preparation for future service in society	0.540601	4.044486	0.134	0.89378	
Political consciousness	1.657566	2.954376	0.561	0.57528	
Openness to change	0.006877	4.483657	0.002	0.99878	
Awareness and appreciation for human achievements	0.648523	4.581580	0.142	0.88755	
An ability to communicate effectively	-4.195367	4.266883	-0.983	0.32647	
Empathy towards others	11.970806	3.708819	3.228	0.00142	

Table 5. Multivariate Regression Statistics: Student Feelings about a job in Education or Literature

	Est. Feeling	Std. Error	T-Statistics	P-Value	R-Squared
					0.06216
A	59.6413				
An understanding of how what you know is related	4.8708	4.3191	1.128	0.26055	
A desire to learn for its own sake after college	-0.6669	3.6701	-0.182	0.85597	
An ability to reason analytically	-2.7307	4.0853	-0.668	0.50450	
An ability to make ethical decisions	2.1521	3.7374	0.576	0.56526	
An improved self-understanding	-4.3515	4.4623	-0.975	0.33043	
Leadership skills	9.8590	3.3732	2.923	0.00380	
Preparation for future service in society	2.8517	3.8336	0.744	0.45768	
Political consciousness	-7.5333	2.7872	-2.703	0.00736	
Openness to change	-4.7193	4.2342	-1.115	0.26613	
Awareness and appreciation for human achievements	-0.9961	4.1887	-0.238	0.81223	
An ability to communicate effectively	-4.0002	3.9640	-1.009	0.31391	
Empathy towards others	-3.6584	3.3487	-1.092	0.27569	

Table 6. Multivariate Regression Statistics: Student Feelings about a job in Government or Law

	Est. Feeling	Std. Error	T-Statistics	P-Value	R-Squared
					0.09037
A	49.6498				
An understanding of how what you know is related	4.7328	4.2019	1.126	0.2612	
A desire to learn for its own sake after college	3.2519	3.5997	0.903	0.3672	
An ability to reason analytically	-3.9305	4.1013	-0.958	0.3389	
An ability to make ethical decisions	-2.4730	3.6602	-0.676	0.4999	
An improved self-understanding	-3.3819	4.4401	-0.762	0.4470	
Leadership skills	-3.2454	3.2839	-0.988	0.3240	
Preparation for future service in society	0.7748	3.7906	0.204	0.8382	
Political consciousness	-13.0167	2.7254	-4.776	3.14e-06	
Openness to change	1.7884	4.1886	0.427	0.6698	
Awareness and appreciation for human achievements	4.6954	4.1078	1.143	0.2542	
An ability to communicate effectively	-0.5869	3.9688	-0.148	0.8826	
Empathy towards others	7.0338	3.2841	2.142	0.0332	

Table 7. Multivariate Regression Statistics: Student Feelings about a job in the Arts

	Est. Feeling	Std. Error	T-Statistics	P-Value	R-Squared
					0.01242
A	43.1614				
An understanding of how what you know is related	4.2732	4.7826	0.893	0.3725	
A desire to learn for its own sake after college	1.8844	4.0433	0.466	0.6416	
An ability to reason analytically	5.5692	4.5121	1.234	0.2183	
An ability to make ethical decisions	4.3490	4.1983	1.036	0.3013	
An improved self-understanding	-9.3040	5.1047	-1.823	0.0696	
Leadership skills	3.6589	3.7714	0.970	0.3329	
Preparation for future service in society	0.4982	4.2526	0.117	0.9068	
Political consciousness	2.2424	3.1375	0.715	0.4755	
Openness to change	1.0038	4.7807	0.210	0.8339	
Awareness and appreciation for human achievements	-2.9112	4.7105	-0.618	0.5371	
An ability to communicate effectively	-5.1862	4.4202	-1.173	0.2418	
Empathy towards others	-6.0328	3.7356	-1.615	0.1076	

Table 8. Multivariate Regression Statistics: Student Feelings about a Vocational Job

	Est. Feeling	Std. Error	T-Statistics	P-Value	R-Squared
					0.02117
A	8.5273				
An understanding of how what you know is related	5.0180	2.3283	2.155	0.03212	
A desire to learn for its own sake after college	1.6716	1.9904	0.840	0.40182	
An ability to reason analytically	-2.9187	2.2105	-1.320	0.18794	
An ability to make ethical decisions	-1.3974	2.0436	-0.684	0.49474	
An improved self-understanding	-0.2143	2.4683	-0.087	0.93090	
Leadership skills	4.9269	1.8255	2.699	0.00744	
Preparation for future service in society	-3.9215	2.0761	-1.889	0.06009	
Political consciousness	1.0636	1.5149	0.702	0.48331	
Openness to change	1.8040	2.3121	0.780	0.43600	
Awareness and appreciation for human achievements	-3.2822	2.2581	-1.454	0.14735	
An ability to communicate effectively	-2.4264	2.1434	-1.132	0.25873	
Empathy towards others	0.5291	1.8336	0.289	0.77316	

Table 9. Student Understandings of Liberal Education

Category:	Example Words/Phrases:	Number of Mentions:
Liberal Education as Accurately Understood	<ul style="list-style-type: none"> • Applicable information and skills (i.e. reading comprehension, critical thinking) to your major and other areas, in many fields, well-rounded core, broad range of knowledge, equal and fair exposure to, understanding in multiple disciplines, multi-faceted, breadth of academia • Access to a wide variety of perspectives on social and personal issues, many different points of view, extremely eye-opening, provides a new perspective, cosmopolitan • Understanding of how the universe works, broadening one's scope of the world, education in all aspects of life, aims to expand the mind, general knowledge, touches on the most important building blocks of history and society, crossroads of Western humanities in context of contemporary social situations • Education in everything without bias or prejudice • Not constricted, less narrow and more worldly approach to knowledge, does not limit learning possibilities • Taking an array of classes, instead of strictly vocational, does not focus on one specific subject, is beyond your specific field of study or major, does not focus on STEM field subjects, lets you explore every subject, unspecialized knowledge • Interdisciplinary education, interactions between different disciplines, multi-purposeful for specific fields, holistic • Enhances knowledge of all areas (Social Sciences, Humanities, Law, Writing Literature, Arts and Natural Sciences), all-encompassing, learning the basics of learning in different topics • Extends beyond the boundaries of traditional science or commerce dominated fields, encourages students to think as global, involved citizens, makes us human, not just facts and numbers 	174

	<ul style="list-style-type: none"> • Opportunity to grow and acquire tools to be a contributing member of life, personal and intellectual development, educates all aspects of the individual • Western education that teaches about right, equality, democracy, etc., thinking morally • Useful for your future, career goals • Study, learn for the sake of learning • Thoughtful investigations, expanding thinking; Ability to study a broad range of a subject, full information about a topic and allows them to critically analyze the issue and come up with their own opinions and thoughts about it about it, think and express thoughts in an appropriate way • Participating in school, organized learning • A free learning environment, opportunity to learn, open space for free thinking without judgment, creative thinking, promoting open-mindedness and leaving a lot of room to be creative, induces creativity, freedom of expression, freedom to express yourself, allows students to define personal exploration 	
Liberal Education Misunderstanding 1: Freedom to choose what you want	<p>Academic freedom Freedom to choose your own path, concentration, to study whatever one chooses, to freely pick the classes you want Does not limit the desires of the student, freedom to choose curriculum, free to learn in your own way, freedom to learn whatever, whenever Allows you to choose your individual area of study, to choose what you actually want to learn, define your own means of learning, have multiple choices Prepares people in a field of study, allows study in a specific area of interest, one to two particular majors/minors, freedom to decide your own career path</p>	39
Liberal Education Misunderstanding 2: Limited	<p>One-dimensional Art Anything without numbers/math Doesn't lead to exposure of many things Doesn't cover everything you need in many cases, limited</p>	8
Liberal Education	Unrelated to your future	6

Misunderstanding 3: Unpractical	Not practical, “unpractical” Unnecessary Fluff	
Liberal Education Misunderstanding 4: Research-oriented	Emphasis on research and writing, research-based For someone pursuing a job in medicine/science or going to grad school	3
Liberal Education No Understanding	I don’t know what it is No idea Don’t really know what this means, not completely sure, unfamiliar with the term Different meanings	10
Additional Comments on Liberal Education	Good, Great Progressive Comprehensive Necessary Enlightening Interesting Liberal, very liberal Nice, fun and exciting Eclectic Boring Spontaneous, contents not in structure Very amazing Inspiring Freeing Priceless Important Groovy A lot of work Non-existent Passion-driven Taught by liberals Looking to instill liberal values and ideals Individual-based A farce, training students in pleasing authority and competition Free in terms of ideas	5 4 4 3 3 3 3 3 3 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Table 10. Student Reasons For Attending University

Category:	Example Words/Phrases:	Number of Mentions:
Learning	Broadening, breadth of knowledge General knowledge, knowledge of different subjects, applicable knowledge Access to knowledge in a field	120

	<p>Learning about important, different subjects/skills Understanding of the world, historical context, well-rounded perspective To further and hone a craft Explore Furthering education, coursework, academics Educational capital Learning how to think critically Learning how to risk and fail with a safety net</p>	
Career-Oriented	<p>Money Preparation for, to get, secure career/job, professional life, workplace, a means to an end Work experience, professional development Return on Investment Useful Degree Rank Independence Better oneself in a field Marketability Professional knowledge</p>	96
A View to the Future	<p>Opportunity Brighter future, create your future Succeed, future success, achieve goals Experience—classroom to real-world Better life Survive Preparedness Maintain high standards of society</p>	34
Self-Understanding	<p>Dreams Passion, passionate about pursuits, major Self-understanding and improvement Find oneself Cultivate oneself Know oneself, learn about oneself, discover strengths, become the best version of themselves Challenge oneself Personal growth, connecting students and teachers for purposes of growth Express oneself</p>	30
Social	<p>Meeting people, network, connections, social capital Cultural immersion, cultural capital, exposure to culture Different points of view, different opinions, challenging one's own view through conversation with people from all walks of life Collaboration Diversity Societal norm Social development</p>	29

	Open environment	
Impact on the World	Impact on the world Useful member of society Contribution to the betterment of society	10

Table 11. Most Important Book Read In University***Key:**

** = Repeat

Novels, Poetry, Drama, and Short Stories

Student's School	Book (Title, author or both)	For a course?
ENG	The Alchemist **	No
QSOB	The Alchemist **	No
CAS	The Alchemist; Paulo Coelho **	No
COM	The Stranger **	Yes
COM	The Stranger **	Yes
CAS	Albert Camus **	No
CAS	Song of Solomon	Yes
CAS/COM	Song of Solomon by Toni Morrison **	Yes
CAS	Beloved, Toni Morrison **	Yes
CAS	The Great Gatsby **	Yes
SAR	The Great Gatsby **	No
CFA	Great Gatsby **	No
QSOB	Hemingway **	Yes
COM	Sun also rises, Hemingway **	Yes
CAS	The Master and Margarita **	Yes
CFA	The Master and Margarita **	Yes
COM	The Color Purple **	Yes
CAS	The Color Purple **	Yes
ENG	Slaughter-house Five **	Yes
QSOB	Slaughterhouse-Five **	No
ENG	The Count of Monte Cristo **	No
ENG	The Count of Monte Cristo **	No
CAS	The Bell Jar—Plath **	Yes
COM	The Bell Jar **	No
CAS/SED	Harry Potter **	No

COM	Harry Potter **	No
CAS	Cane	Yes
CAS	Cloud Atlas	No
CAS	The Tale of Genji by Murasaki Shikibu	Yes
CAS	The Sorrow of Young Werther	Yes
SAR	Unaccustomed Earth by Jhumpa Lahiri	No
CAS	Life of Pi	No
CAS	Still Alice	No
CAS	The Book Thief	No
QSOB	A Tree Grows in Brooklyn	No
CAS	To Kill a Mockingbird Harper Lee	No
CFA	Going Postal by Terry Pratchett	No
CFA	The Poisonwood Bible	No
CFA	Paradise Lost-Milton	Yes
CFA	Atonement, Ian McEwan	No
ENG	Zen and the Art of Motorcycle Maintenance	No
SHA	There a Petal Silently Falls	Yes
CAS	"One Hundred Years of Solitude" Gabriel García Márquez	No
ENG	The Picture of Dorian Gray. Oscar Wilde	No
SED	Things Fall Apart	Yes
COM	Heart of Darkness; Conrad	Yes
CGS going to QSOB	Metamorphosis	Yes
SAR	Death of a Salesman	Yes
SAR	The Goldfinch	No
COM	Catcher in the Rye	No
COM	Girl With the Dragon Tattoo	No
COM	The Longest Ride - Nicholas Sparks	No
QSOB	Romeo and Juliet	Yes
COM	God's Little Acre	Yes
ENG	In a Bamboo Grove	Yes
COM	Jorge Borges	Yes
COM	1Q84 **	No
CAS	The Odyssey, Homer	Yes
QSOB	Les Misérables	No
CAS	Dharma Bums	Yes
COM	Invisible Man	Yes
CAS	East of Eden	No
QSOB	A Map of Betrayal	Yes
CGS	A Separate Peace	Yes
QSOB	Fahrenheit 451	Yes
CAS	A Brief Wondrous Life of Oscar Wao	Yes

CAS	Inferno by Dan Brown	No
CAS	Winesburg, Ohio	Yes
ENG	Waiting for Godot	No
CAS	Cat's Cradle	Yes
CAS/COM	Beautiful Ruins	No
CAS	A Raisin in the Sun	Yes
COM	Gone Girl	No
COM	Sputnik Sweetheart by Haruki Murakami **	No
COM	Naomi, Tanizaki	Yes
COM	Brave New World	No
ENG	Kane and Abel	No
COM	Wandering Falcon, Jameel Ahmed	Yes
CAS	Persepolis	Yes
CGS	Metamorphoses, Ovid	Yes
CAS	Game of Thrones	No
CAS	Strange Fruit	Yes
QSOB	Collection of Short Stories by F Scott Fitzgerald	Yes
QSOB	Siddhartha	No
QSOB	Frankenstein	Yes
CFA	Dead Man's Cell Phone	Yes
CAS	Gilgamesh	Yes
CAS	Antologia de los Poetas Del 27	No
CAS	Fault in Our Stars	No
CAS/KHC	The Kiss of the Spider Woman	Yes
CAS	The Foreigner	Yes
COM	Middlesex	Yes
ENG	One Chinese book Wukong Zhuan	No
ENG	A Tale of Two Cities	Yes
ENG	The Poisonwood Bible	No

Memoirs, Biographies and First-Hand Accounts

Student's School	Book (Title, author or both)	For a course?
CAS	An Unquiet Mind by Kay Redfield Jamison **	No
CAS	Unquiet Mind Kay Jamison **	No
SED	All Souls **	Yes
CAS	All Souls **	Yes
CGS '15, QSOB'17	Son of the Revolution **	Yes
CGS '15 QSOB '17	Son of the Revolution **	Yes
SAR	Mountains Beyond Mountains **	Yes

SAR	Mountains Beyond Mountains **	Yes
CAS	Mountains Beyond Mountains **	No
SAR	Mountains Beyond Mountains by Tracy Kidder **	Yes
SAR	Yes, Please by Amy Pohler **	No
CFA	Yes, Please by Amy Pohler **	No
CAS	Coming of Age in Mississippi **	Yes
SED	Coming of Age in Mississippi by Anne Moody **	Yes
COM and CFA	Lying by Lauren Slater **	Yes
CAS	A Beautiful Boy	No
ENG	Another Bullshit Night in Suck City by Nick Flynn	Yes
ENG	Lost in Translation	Yes
CAS	How to Be Black	Yes
CFA	Roll With It	Yes
CAS	Hard Choices, Hillary Clinton	No
CFA	The Man Who Mistook His Wife for a Hat	No
SAR	Three Cups of Tea	No
CAS	Lying by Lauren Slater	Yes
CAS	A Civil Action	Yes
QSOB	Invictus	No
QSOB	Color of Water	Yes
CGS to COM	Night Elie Wiesel	No
QSOB	The Road To Wigan Pier--George Orwell	Yes
QSOB	A Million Little Pieces, James Frey	No
SAR	Wild	Yes
CFA	Heavier than Heaven by Charles Cross	No
CAS	The Immortal Life Of Henrietta Lacks	Yes
QSOB	Walden by Henry Thoreau	Yes
CAS	Tina Fey's Bossypants	No

Society, Anthropology, Economics, Psychology, Public Health, and Environment

Student's School	Book (Title, author or both)	For a course?
SAR	Richard Dawkins **	Yes
SHA	The God Delusion by Richard Dawkins **	Yes
SAR	The Spirit Catches You and You Fall Down-Anne Friedman **	Yes
SAR	The Spirit Catches You and You Fall Down **	Yes
CAS	Jeffrey Sachs **	Yes
CAS	The End of Poverty **	Yes
CAS	The Tipping Point Malcom Gladwell	No
COM	Any articles from my anthropology course	Yes

CFA	Bettelheim	Yes
COM	Pornland by Gail Dines	Yes
CAS	Mind, modernity, madness by Liah Greenfeld	Yes
SED	Globalization	Yes
QSOB	Macroeconomics	Yes
SAR	Intro to Public Health	Yes
SAR	Global Environmental public health textbook	Yes
CAS	The Global Soul by Pico Iyer	Yes
CAS	Food Nations	Yes
CAS	Being Mortal	Yes
QSOB	Imagine	No
CAS	Bonk by Mary Roach	No
CFA	The Artist's Way	NA
CFA	The Chairs are Where the People Are	No
QSOB	Freakonomics Stephen Levitt	Yes
COM; CAS	Kerry Emanuel's Climate Change Book	Yes
CAS	Development as Freedom by Amartya Sen.	Yes
ENG	Racism Without Racists	Yes

Philosophy and Religion

Student's School	Book (Title, author or both)	For a course?
COM	On the Genealogy of Morals, by Nietzsche **	Yes
CGS	Nietzsche **	Yes
CAS	The Essential Kierkegaard **	Yes
CAS	Fear and Trembling **	Yes
COM	Fear and Trembling, Soren Kierkegaard **	Yes
QSOB, CAS	The Myth of Sisyphus Albert Camus **	No
COM, CFA	Bible **	No
CAS	Bible from Core **	Yes
QSOB	Arthur Danto	Yes
SAR/CFA	Daoism	Yes
CFA	Focault	Yes
CAS	Socrates	Yes
CAS	The Dhammapada	Yes
CAS	Sartre Being or Nothingness	Yes
QSOB	Tao te Chang, Lao Tzu	No
CAS	Philosophical Investigations by Wittgenstein	Yes
CAS	John Heil - Philosophy of Mind: An Anthology	Yes
CAS	Plato's Republic	Yes

CFA	Drawing Near by Joh Bevere	No
CAS transferring to SAR	Timeless Thoughts on Love	No
CGS/CAS	Quran (religious text)	No
CAS	Analects of Confucius	Yes
CFA	Drawing Near by Joh Bevere	No
CAS	Nicomachean Ethics	Yes
SAR	Medical Ethics	Yes

Business and Leadership

Student's School	Book (Title, author or both)	For a course?
QSOB	Lean In, Sheryl Sandberg **	No
QSOB	Lean in **	No
QSOB	Lean in, Sandberg **	No
QSOB	Statistics for Managers	Yes
CFA	Introduction to Management, one of the primary QSOB textbooks.	Yes
CFA	Leadership Challenge	Yes
COM	How to Win Friends and Influence People	Yes
CGS-QSOB	Margin of Safety	No
QSOB	Digital Media Strategy Professor Utter	Yes
QSOB	TiVo Case Study	Yes
QSOB	Business, Society, and Ethics	Yes
SHA	Strategic Marketing	Yes

Law, Politics, International Relations

Student's School	Book (Title, author or both)	For a course?
CAS	The UN Charter	Yes
QSOB	The Case Against the Supreme Court	No
SED	Rule of Experts by Timothy Mitchell	Yes
CAS	On War by Clausewitz	Yes
QSOB	Nuclear Proliferation Book by Kenneth Waltz	Yes
CAS	It Still Takes a Candidate	Yes
CAS	Marx	Yes
QSOB	Intro to Law textbook	Yes
COM	Cosmopolitanism Appiah	Yes

STEM

Student's School	Book (Title, author or both)	For a course?
ENG	Control Systems	Yes
ENG	Fundamentals of Thermodynamics	Yes
CAS	Modern Physics / A Brief History of Time	Yes
CAS	Genetics book	Yes
CAS	Biochemistry by Voet	Yes
CAS	Principles of Cell Biology	Yes
CGS transferring to SAR	Biodiversity of Life by Wilson	Yes
ENG	Electric circuit theory	Yes
CAS	A Course in Probability	Yes
ENG	Just some books in my major field	Yes

History

Student's School	Book (Title, author or both)	For a course?
SED	Modernization of the Western World	Yes
CAS	The Triangle Fire	Yes
COM	Triangle Fire	Yes
SED	Common Ground	Yes
SED	My Chinese Cultural Revolution class textbook	Yes
QSOB	Killing Lincoln	Yes
QSOB / COM	Book about: Atomic bomb World War 2	No
CAS	The Fate of Africa by Martin Meredith	Yes

Writing, Composition, and Design

Student's School	Book (Title, author or both)	For a course?
COM	Design for Non-designer	Yes
COM	Bird by Bird	Yes
CFA	Writing manual	Yes
COM	AP Style Book	Yes
COM	Mastering Story, Community and Influence, Jay Oatway	No
COM	COM 201 Book	Yes

Music and Theatre

Student's School	Book (Title, author or both)	For a course?
CFA	Burkhart Musical Analysis	Yes
CFA	The Vocal Pedagogy	Yes
CFA/CAS	Musicophilia, Sacks	No
CFA	Freeing the Natural Voice by Kristin Linklater **	Yes
CFA	Freeing the natural Voice by Kristen Linklater **	Yes

Self-Improvement

Student's School	Book (Title, author or both)	For a course?
CAS	The Four Agreements	No
CAS	The Power of Habit	No
CAS	The Pursuit of Happiness	Yes
CAS	Born to Run	No

Teaching and Education

Student's School	Book (Title, author or both)	For a course?
SED	Those Who Can Teach **	Yes
CAS	Those Who Can, Teach **	Yes
SED	The Pedagogy of the Oppressed	No

Military

Student's School	Book (Title, author or both)	For a course?
ENG	Naval Officer's Guide	Yes
ENG	Lone Survivor	No
PARDEE	Guerilla Warfare- Mao	Yes

Other

Student's School	Book (Title, author or both)	For a course?
QSOB	My notes	No

*Empty responses and "None" not included

Table 12. Most Important Course for Students

Key:
STEM
Social Science
Ethics, Humanities, History, Writing & Philosophy
Art, Music & Language
Professional

School	Major? Concentration? Minor?	What course do you consider to be the most important one you have / taken so far? (Give title or department)
QSOB	Business Management	QSOB FE101
SED	General Science Ed	CGS Social Sciences (World History to the present)
CAS	Neuroscience, Psychology	Personality Psychology
CAS	Major=Psychology, Minor=French	Introduction to Public Health or Neuropsychology
CAS	Psych, Bio	Directed Study in my lab
COM	Journalism - Photojournalism	America in an Age of Terrorism
CAS	Japanese	Russian Literature
CAS	Philosophy	European Intellectual History
COM and CFA	Film Production Major, Music Performance Minor	Memoir Writing, Lighting (film), Death and Immortality
SAR	Health Science	Introduction to Critical Inquiry, Health Science
CAS	Philosophy	Epistemology
CAS	Double Major in International Relations and Political Science	Introduction to International Law
CFA	Music Education	Music Education
CAS	Philosophy, Psychology	PS475 - Counseling
CAS	Major in Environmental Analysis and Policy, Minor in Economics	Sustainable Development
CAS	Economics	Kant Moral Philosophy
QSOB	BSBA - Finance and Marketing	Core- (Finance, Marketing, Operational Management, & Analytics)
CAS	Neuroscience	Neuroscience
CAS	Economics	CAS EC 203 Statistics
SED	Arabic Education	Economic and Social History of the Modern Middle East
CAS	Math	Math
CAS	History Major and International Relations Minor	International Relations
CAS	Classics and Spanish	Writing

CAS	Chemistry, Environmental Science Minor	Synthetic Chemistry
COM	Journalism, Economics	Creative Writing
QSOB	Accounting/Finance	Finance
QSOB	Double Concentration in Information Systems and Finance	Business Ethics
QSOB	Accounting and Finance	Finance
CAS	International Relations	Fundamentals of International Economics IR 292
CAS	English	English 582 (Literary Cultural Crossings between Asia and America)
CAS	Biology	French Language Course
SED	Elementary	Education
CAS	Neuroscience	Human Physiology
CAS	Economics, Math	History of Modern Europe
SHA	Hospitality Administration, Minor in QSOB, Business Administration	HF100
CAS	Environmental Science	Environmental Science
CAS	Neuroscience, Education, English	Introduction to Education
COM	Film and Television	History
COM	Mass Communication, Public Relations	Literature and Film, CAS EN 375
COM	Public Relations & Art History	COM 301
SED	History Education	ED100
CAS	History, Political Science, Statistics	History
CAS	International Relations; Linguistics; French	Sociology: International Development
QSOB	International Business, Spanish Minor	International Relations: Security Introduction
COM	Advertising	Communications 101
CFA	Vocal Performance and Composition	Music Theory
CFA	Painting and Printmaking, Minor in French	Introduction to Printmaking
CFA	Major - Voice Performance, Minor - French	Music History
CFA	Music Performance, Maybe Minor in English	Music Theory
CFA	Trombone Performance	Writing 100
CFA	Music Performance, Trombone	Philosophy
CFA	Music Performance (Voice) and Psychology	Music Theory
CFA	Music Performance	Arts Internship
CFA	Voice Performance	Applied Voice
CFA	Music	Applied Music
CFA	Vocal performance	Voice Lessons
CFA	Music Composition/Music Education	German
COM, CFA	Film, Violin performance	Music Lessons
COM	Major- Journalism Minor- Women's Studies	Sexism in the 21st Century

CGS	International Relations	International Relations
CAS	Major: Biochemistry and Molecular Biology. Minor: Psychology	Organic Chemistry
CAS	Neurobiology	Chemistry
CAS transferring to SAR	Biochemistry switching to Health Science, possible Minor in International Relations	Sociology
ENG	BME	Control Theory
ENG	Mechanical Engineering, Aerospace Engineering, Electrical Engineering	Aircraft Performance & Design
ENG	Aerospace Concentration	Mechanical Engineering Senior Design
ENG	Mechanical Engineering, Concentration in Aerospace Engineering, and Minor in Visual Arts	Aircraft Design
CFA	Music, Voice Performance	Song Literature (Music)
CAS	Psychology/Spanish/Pre-Law	Psychology
CAS	Sociology Major, Business Minor	QSOB OB460- The Leadership Challenge
QSOB	Accounting	Business Ethics
SED	Early Childhood Education, Minor in Psychology	Psychology 101
COM	Public Relations with a Concentration in Spanish	CM 473 PR Lab
COM	PR Major Political Science Minor	PR
SED	Social Studies Education	Education
COM	Public Relations	Corporate Communication
COM	Public Relations	Crisis Communications
SAR	Human Physiology	Islamic Law
CGS/CAS	Biochemistry	Philosophy
CAS	Behavioral Biology	CAS Core Humanities
ENG	Mechanical Engineering (Aerospace Concentration)	Engineering Mechanics I
SED	Social Studies Education	General Methods of Teaching Instruction
CGS	International Relations	International Relations
SED	Social Studies Education	Social and Civic Context for Education
CGS '15, QSOB'17	Major: Business w/ Concentration in Marketing; Minor: International Relations	History
CGS '15 QSOB '17	Marketing	Finance
COM	Film and TV	Modern Ethical Philosophy
CAS	Chinese major, Music Performance Minor	CFA MU 097 Orchestra
QSOB	Accounting Finance Law	QSOB OB 221
CAS	Psychology	Writing
QSOB	Trade	Macroeconomics
CAS	Classics, Pre-Dental	Ancient Greek Civilization
ENG	Mechanical: Aerospace Concentration	Thermodynamics & Energy

CAS	Neuroscience (Pre-Med)	Neuroscience 101
ENG	Biomedical Engineer	Bio molecular Architecture
CAS	Neuroscience with a Minor in QSOB	Neuroscience
CAS	Physics Education	Education
CAS	Chemistry	Sociology
CAS	Chemistry Education	Chemistry
CAS	Marine Biology	BI260
CAS	English Major Computer Science Minor	Major Authors
SHA	Hospitality	Korean Cinema
CAS	Undeclared	CCI01 and CCI02
CAS	Majors: Neuroscience and Philosophy Minors: Chemistry and Biology	Physics 211 and 242
ENG	Biomedical Engineering	Differential Equations
SED	Special Education	Introduction to Education
CAS	Political Science and Economics	Politics and Philosophy
COM	Mass Communications	Writing
CAS	Major in English, Minor in French	English
COM	Advertising	Wiring
SAR	Health and Behavior	Ethics
SAR	Physical Therapy	HP353 Organization and Development of the Healthcare System
CGS going to QSOB	Finance	Humanities
SAR	Behavior and Health	Health Sciences
SAR	Major: Behavior and Health, Minor: Special Education	Sociology 100
SAR	Health Science; IR Minor	Health & Disabilities (HP 252)
SAR	Health Science	Anatomy
COM	PR	Chinese
COM	Public Relations Major, Sociology Concentration	All my core PR courses
COM	PR, Psych	Abnormal Psychology
CAS	Economics and IR Minor English	EC 101
COM	Public Relations	French
QSOB	Finance	Information System
COM	Film/TV Screenwriting	Creative writing
QSOB, CAS	Finance, Double Major in Economics	Ethics
CAS	English Major	English, Contemporary American Fiction
SAR	Health Science with a Minor in Medical Anthropology	Cultural Anthropology
CAS	Neuroscience, Psychology Double Major	NE203
CAS	Neuroscience	NE203
CAS	Economics	Economics

CAS/COM	Undeclared/PR	Art History 393
CAS	Undecided	COM101
QSOB	Marketing, Management Information Systems	Math
CAS	Biology Major (Computer Science minor)	Computer Science
CAS	Undeclared	Writing
SARGENT	Human Physiology B.S.	HP151
CAS	SMED	Chemistry 112
SAR	Human Physiology	Sociology of Health Care
COM	Advertising, Minor QSOB, Concentration Psychology	Physiological Psychology
COM	PR	Corporate Communications
COM	Public Relations	Design and New Media
QSOB	Finance	Finance
CAS	Computer Science	Western Ethics
COM	Journalism Major and International Relations Minor	Foundations of Journalism
COM	Advertising/Film, Comparative Literature	Comparative Literature
COM	PR, IR	Archaeology
CAS	Biology	Medical Ethics
COM	Public Relations, Political Science	Humanities 202
ENG	Electrical Engineer with a concentration in Technology Innovation	Engineering Economy
COM	Journalism, International Relations and Psychology Minors	Computer Science
QSOB	Operations Management and Finance	Strategy and Policy
COM	Advertising	Business Management
QSOB	Finance	WS 340
QSOB	Business, Accounting	QSOB Core Semester
CGS to COM	Broadcast Journalism, Political Science, Film/TV	Social Science
COM	PR	Writing 150 The Memoir
QSOB	Marketing, Art History	Art History Introductory Courses
CAS	International Relations with a Pre-Law Concentration	Fundamentals of International Economics
CAS	Political Science Major, Visual Arts Minor	Psychology
SAR	Health science; public health/ business administration	HP353- Healthcare/ Delivery Across the US
SAR	Behavior and Health, Occupational Therapy	Introduction to Public Health
QSOB	MIS & Finance or operations; KHC student	Ethical Decision Making in the Real World - KHC Freshman Seminar
CGS-QSOB	Finance	Business Ethics
QSOB	Accounting	Sociology
QSOB	Business Administration; Finance Concentration	Business Law and Real Estate Finance

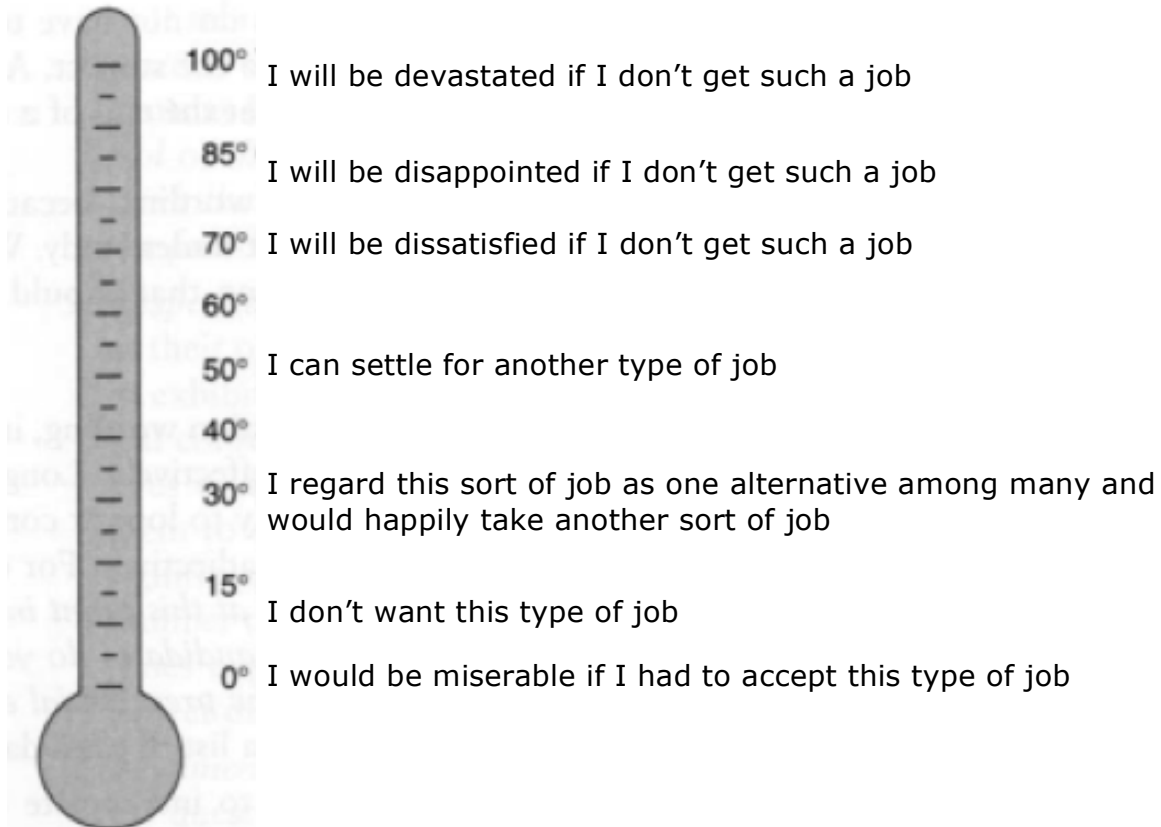
QSOB / COM	PR and Accounting	Strategy
QSOB	Undecided Concentration	Finance
QSOB	Minor in Spanish	QSOB courses
QSOB	BABS, Finance Concentration	Business Law and Ethics
QSOB	Finance and IR	SM 151
QSOB	Finance and Operations Management	Accounting
QSOB	Finance	Investments
QSOB	Marketing	International Marketing
QSOB	Marketing and Entrepreneurship	Consulting Strategy SI 422
QSOB	Business Management, Finance, Marketing, Entrepreneurship. Minor in Economics	Finance
QSOB	Marketing/OB/Minor in COM/Journalism	English 202
QSOB	Dual Degree COM (PR) and Concentration International Management	Business, Society, and Ethics
QSOB	International management	French
CAS	Neuroscience	Introduction to Ethics
CAS	Accelerated 7 Year Dental Program, Minor in Public Health	Death and Immortality - Religion
CAS	Biochemistry	Genetics, Physics
CAS	Biochemistry & Molecular Biology	Biochemistry
QSOB	Information Systems	Organizational Behavior
CAS	Biological Anthropology	Chemistry
QSOB	Finance	Finance
QSOB	Operational Management/Marketing	Fe101
SAR	Health Science	Global Environmental Public Health-SAR HS 345
COM	Photojournalism, Political Science	Journalism 250
CAS	Considering Majoring in Cell Biology, probably Minor in Journalism	BI 114 -- Communicable Human Diseases
SAR	Health Science Pre-med	CH101
CGS transferring to SAR	Behavior and Health Science with a Dual Degree in Psychology	Human Anatomy
CFA	Piano Performance and Music education	Piano
CFA/CAS	Composition/Music Theory and Mathematics	Composition Lessons
CFA	Theatre Arts	Theatre Ensemble
CFA	Concentrations: Acting, Playwriting	Theatre Ensemble
CFA	Theatre Arts	Theatre - Collaborative Theatre Ensemble/ Directors Project
CFA	Theatre Arts Major with Advertising and Graphic Design Concentration	Acting 1
CFA	Theatre	Acting
SAR/CFA	Human Physiology/ Visual Arts	Physiology
CAS	Biology, Economics	Monetary Banking
CFA	Theatre Arts	The Memoir WR 150

CFA	BFA Theatre Arts	STAMP
CFA	Music Performance - Viola	Private Lessons with my professor (viola)
CAS	Economics/International Relations Major Psychology Minor	Philosophy
CFA	Design and Production	Theatre Ensemble
CAS	Neuroscience Major w/ Public Health Minor	Principles of Neuroscience
CAS	Biology	Biology
CAS	Sociology, Political Science and Philosophy (combined Major)	State and Development
COM	ADVERTISING	Creative Development
QSOB	Accounting, Finance	Managerial Accounting
CAS	Biology CMG	Medical Anthropology
CAS	Neuroscience with French minor	LF350 with Professor Kline!
QSOB	Finance with Economics Minor	Bond Math - Finance
QSOB	Operations and Technology Management	Operations
SAR	Human Physiology	Human Physiology
CAS/SED	Biology and education	Systems Physiology
CAS/KHC	Psychology/Premed	KHC Spring Sophomore Seminar
CAS	Math. Statistics. Economics.	Math
CAS	Economics, Journalism, Art Leadership	Zen Buddhism
CGS	QSOB	HU 103
CAS	EAP minor in QSOB	Environmental Science
CAS	Economics	Development of Less Developed Regions
CAS	Biology	BI108
SED	Elementary Education	Introduction to Education
COM; CAS	Public Relations; Environmental Analysis and Policy	GE/IR 595
SED	Bilingual/TESOL Education, Minor in Linguistics	SED ED 100
CAS	Psychology and Public Health	Sociology of Healthcare
ENG	Mechanical Engineering	Engineering Mechanics I
ENG	Mechanical (Manufacturing Concentration)	CAS IR380 (American Foreign Policy)
SAR	Human Physiology	GMS MA 605
CAS	Environmental Science	Chemistry
COM	Journalism Major, IR Minor	Communication Writing
CAS	Economics	PH248
QSOB	Dual Concentration - Operations and Technology Management, Organizational Behavior, Minor - Philosophy	History of Ancient Philosophy
CAS	Economics, IR is my Minor	Economic History and Western Ethics I & II
SHA	Hospitality Administration	SHA Accounting and Marketing courses

CAS	Economics	Statistics
ENG	Biomedical Engineering	Math
ENG	Mechanical Engineering	Production System, ENG
ENG	Mechanical Engineering	Product Management
ENG	Electrical Engineering	EK127
ENG	Biomedical Engineering	Physics
ENG	Biomedical Engineering	WR 150
ENG	Computer Engineering	Programming (EK127)
ENG	Biomedical Engineering	Chemistry
ENG	Electrical Engineering	DSP
COM	PR Major, Spanish Minor	Introduction to PR
COM	Advertising, Psychology, Hospitality	Personality Psychology
CAS	Psychology Major Business minor	Personality Psychology
CAS	Psychology, Sociology	Sociology of Race and Ethnicity
CAS	Econ, Business Minor, Pre law	Business ethics
CAS	International Relations	International Relations
QSOB	International Management	Business, Society, and Ethics
CAS	International Relations	IR351 Africa in International Relations
PARDEE	International Relations/Asia and International Systems	Introduction to International Relations

*Empty responses and “None” not included

Coding Appendix



```
#Download and Summary of Qualtrics Data to R
```

```
library(foreign)
qualtrics<-read.csv("/Users/meeranayak/Documents/Boston University Study For R Attempt 1.csv")
summary(qualtrics)
```

```
#STEM Job Feeling Thermometer (Variable Rename and Missing Value Recode)
```

```
qualtrics$How.much.do.you.want.to.get.a.job.in.science..technology....engineering.and.math..Click.to.write.Choice.1
summary(qualtrics$How.much.do.you.want.to.get.a.job.in.science..technology....engineering.and.math..Click.to.write.Choice.1)
STEMjob<-
  qualtrics$How.much.do.you.want.to.get.a.job.in.science..technology....engineering.and.math..Click.to.write.Choice.1
STEMjob[STEMjob==99]<-NA
```

```
#STEM Job Feeling Thermometer Min, Median, Max, Mean
```

```
summary(STEMjob)
```

```
#Business Job Feeling Thermometer (Variable Rename and Missing Value Recode)
```

```
qualtrics$How.much.do.you.want.to.get.a.job.in.business.or.management..Click.to.write.Choice.1
summary(qualtrics$How.much.do.you.want.to.get.a.job.in.business.or.management..Click.to.write.Choice.1)
Businessjob<-
  qualtrics$How.much.do.you.want.to.get.a.job.in.business.or.management..Click.to.write.Choice.1
Businessjob[Businessjob==99]<-NA
```

```
#Business Job Feeling Thermometer Min, Median, Max, Mean
```

```
summary(Businessjob)
```

```
#Education or Literature Job Feeling Thermometer (Variable Rename and Missing Value Recode)
```

```
qualtrics$How.much.do.you.want.a.job.in.educational.or.literary.profession....teaching..journalism..publishin....Click.to.write.Choice.1
summary(qualtrics$How.much.do.you.want.a.job.in.educational.or.literary.profession....teaching..journalism..publishin....Click.to.write.Choice.1)
Educlitjob<-
  qualtrics$How.much.do.you.want.a.job.in.educational.or.literary.profession....teaching..journalism..publishin....Click.to.write.Choice.1
Educlitjob[Educlitjob==99]<-NA
```

```
#Education or Literature Job Feeling Thermometer Min, Median, Max, Mean
```

```
summary(Educlitjob)
```

```
#Government or Law Job Feeling Thermometer (Variable Rename and Missing Value Recode)
```

```
qualtrics$How.much.do.you.want.a.job.in.government.or.law..Click.to.write.Choice.1
summary(qualtrics$How.much.do.you.want.a.job.in.government.or.law..Click.to.write.Choice.1)
Govlawjob<-qualtrics$How.much.do.you.want.a.job.in.government.or.law..Click.to.write.Choice.1
Govlawjob[Govlawjob==99]<-NA
```

```
#Government or Law Job Feeling Thermometer Min, Median, Max, Mean
```

```
summary(Govlawjob)
```

```
#Arts Job Feeling Thermometer (Variable Rename and Missing Value Recode)
```

```
qualtrics$How.much.do.you.want.a.job.in.the.arts..music..acting..painting....fashion...Click.to.write.Choice.1
summary(qualtrics$How.much.do.you.want.a.job.in.the.arts..music..acting..painting....fashion...Click.to.wri
```



```

te.Choice.1)
Artjob<-
qualtrics$How.much.do.you.want.a.job.in.the.arts..music..acting..painting....fashion...Click.to.write.Choice.1
Artjob[Artjob==99]<-NA

#Arts Job Feeling Thermometer Min, Median, Max, Mean
summary(Artjob)

#Vocational Job Feeling Thermometer (Variable Rename and Missing Value Recode)
qualtrics$How.much.do.you.want.a.vocational.job..electrician..plumber..chef....mechanic..construction..vehicl....Click.to.write.Choice.1
summary(qualtrics$How.much.do.you.want.a.vocational.job..electrician..plumber..chef....mechanic..construction..vehicl....Click.to.write.Choice.1)
Vocjob<-
qualtrics$How.much.do.you.want.a.vocational.job..electrician..plumber..chef....mechanic..construction..vehicl....Click.to.write.Choice.1
Vocjob[Vocjob==99]<-NA

#Vocational Job Feeling Thermometer Min, Median, Max, Mean
summary(Vocjob)

#College has given you...an understanding of how what you know is related (Variable Rename and Missing Value Recode)
qualtrics$College.has.given.you....Agree.or.disagree..An.understanding.of.how.what.you.know.is.related.
summary(qualtrics$College.has.given.you....Agree.or.disagree..An.understanding.of.how.what.you.know.is.related.)
Knowledge<-
qualtrics$College.has.given.you....Agree.or.disagree..An.understanding.of.how.what.you.know.is.related.
Knowledge[Knowledge==99]<-NA

#College has given you...an understanding of how what you know is related Min, Median, Max, Mean
summary(Knowledge)

#College has given you...A desire to learn for its own sake after college (Variable Rename and Missing Value Recode)
qualtrics$College.has.given.you....Agree.or.disagree..A.desire.to.learn.for.its.own.sake.after.college.
summary(qualtrics$College.has.given.you....Agree.or.disagree..A.desire.to.learn.for.its.own.sake.after.college.)
Learn<-
qualtrics$College.has.given.you....Agree.or.disagree..A.desire.to.learn.for.its.own.sake.after.college.
Learn[Learn==99]<-NA

#College has given you...A desire to learn for its own sake after college Min, Median, Max, Mean
summary(Learn)

#College has given you...An ability to reason analytically (Variable Rename and Missing Value Recode)
qualtrics$College.has.given.you....Agree.or.disagree..An.ability.to.reason.analytically.
summary(qualtrics$College.has.given.you....Agree.or.disagree..An.ability.to.reason.analytically.)
Reason<-qualtrics$College.has.given.you....Agree.or.disagree..An.ability.to.reason.analytically.
Reason[Reason==99]<-NA

#College has given you...An ability to reason analytically Min, Median, Max, Mean
summary(Reason)

```

```
#College has given you...An ability to make ethical decisions (Variable Rename and Missing Value Recode)
qualtrics$College.has.given.you...Agree.or.disagree..An.ability.to.make.ethical.decisions.
summary(qualtrics$College.has.given.you...Agree.or.disagree..An.ability.to.make.ethical.decisions.)
Ethics<-qualtrics$College.has.given.you...Agree.or.disagree..An.ability.to.make.ethical.decisions.
Ethics[Ethics==99]<-NA
```

```
#College has given you...An ability to make ethical decisions Min, Median, Max, Mean
summary(Ethics)
```

```
#College has given you...An improved self understanding (Variable Rename and Missing Value Recode)
qualtrics$ College.has.given.you...Agree.or.disagree..An.improved.self.understanding.
summary(qualtrics$ College.has.given.you...Agree.or.disagree..An.improved.self.understanding.)
Self<-qualtrics$ College.has.given.you...Agree.or.disagree..An.improved.self.understanding.
Self[Self==99]<-NA
```

```
#College has given you...An improved self understanding Min, Median, Max, Mean
summary(Self)
```

```
#College has given you...Leadership skills (Variable Rename and Missing Value Recode)
qualtrics$College.has.given.you...Agree.or.disagree..Leadership.skills.
summary(qualtrics$College.has.given.you...Agree.or.disagree..Leadership.skills.)
Leadership<-qualtrics$College.has.given.you...Agree.or.disagree..Leadership.skills.
Leadership[Leadership==99]<-NA
```

```
#College has given you...Leadership skills Min, Median, Max, Mean
summary(Leadership)
```

```
#College has given you...Preparation for future service in society (Variable Rename and Missing Value Recode)
qualtrics$College.has.given.you...Agree.or.disagree..Preparation.for.future.service.in.society.
summary(qualtrics$College.has.given.you...Agree.or.disagree..Preparation.for.future.service.in.society.)
Service<-qualtrics$College.has.given.you...Agree.or.disagree..Preparation.for.future.service.in.society.
Service[Service==99]<-NA
```

```
#College has given you...Preparation for future service in society Min, Median, Max, Mean
summary(Service)
```

```
#College has given you...Political consciousness (Variable Rename and Missing Value Recode)
qualtrics$College.has.given.you...Agree.or.disagree..Political.consciousness.
summary(qualtrics$College.has.given.you...Agree.or.disagree..Political.consciousness.)
Political<-qualtrics$College.has.given.you...Agree.or.disagree..Political.consciousness.
Political[Political==99]<-NA
```

```
#College has given you...Political consciousness Min, Median, Max, Mean
summary(Political)
```

```
#College has given you...Openness to change (Variable Rename and Missing Value Recode)
qualtrics$College.has.given.you...Agree.or.disagree..Openness.to.change.
summary(qualtrics$College.has.given.you...Agree.or.disagree..Openness.to.change.)
Openness<-qualtrics$College.has.given.you...Agree.or.disagree..Openness.to.change.
Openness[Openness==99]<-NA
```

```
#College has given you...Openness to change Min, Median, Max, Mean
summary(Openness)
```

```
#College has given you...Awareness and appreciation for human achievements (Variable Rename and Missing Value Recode)
qualtrics$College.has.given.you..last.one..I.promise.....Agree.or.disagree..Awareness.of.and.appreciation.for.human.achievements.
summary(qualtrics$College.has.given.you..last.one..I.promise.....Agree.or.disagree..Awareness.of.and.appreciation.for.human.achievements.)
Awareness<-
  qualtrics$College.has.given.you..last.one..I.promise.....Agree.or.disagree..Awareness.of.and.appreciation.for.human.achievements.
Awareness[Awareness==99]<-NA
```

```
#College has given you...Awareness and appreciation for human achievements Min, Median, Max, Mean
summary(Awareness)
```

```
#College has given you...An ability to communicate effectively (Variable Rename and Missing Value Recode)
qualtrics$College.has.given.you..last.one..I.promise.....Agree.or.disagree..An.ability.to.communicate.effectively.
summary(qualtrics$College.has.given.you..last.one..I.promise.....Agree.or.disagree..An.ability.to.communicate.effectively.)
Communicate<-
  qualtrics$College.has.given.you..last.one..I.promise.....Agree.or.disagree..An.ability.to.communicate.effectively.
Communicate[Communicate==99]<-NA
```

```
#College has given you...An ability to communicate effectively Min, Median, Max, Mean
summary(Communicate)
```

```
#College has given you...Empathy towards others (Variable Rename and Missing Value Recode)
qualtrics$College.has.given.you..last.one..I.promise.....Agree.or.disagree..Empathy.towards.others.
summary(qualtrics$College.has.given.you..last.one..I.promise.....Agree.or.disagree..Empathy.towards.others.)
Empathy<-
  qualtrics$College.has.given.you..last.one..I.promise.....Agree.or.disagree..Empathy.towards.others.
Empathy[Empathy==99]<-NA
```

```
#College has given you...Empathy towards others Min, Median, Max, Mean
summary(Empathy)
```

```
#Multivariate Regression STEM Job Feelings
summary(lm(STEMjob~Knowledge+Learn+Reason+Ethics+Self+Leadership+Service+Political+Openness+Awareness+Communicate+Empathy, data=anes2008,na.action=na.omit))
```

```
#Multivariate Regression Business Job Feelings
summary(lm(Businessjob~Knowledge+Learn+Reason+Ethics+Self+Leadership+Service+Political+Openness+Awareness+Communicate+Empathy, data=anes2008,na.action=na.omit))
```

```
#Multivariate Regression Education or Literature Job Feelings
summary(lm(Educlitjob~Knowledge+Learn+Reason+Ethics+Self+Leadership+Service+Political+Openness+Awareness+Communicate+Empathy, data=anes2008,na.action=na.omit))
```

```
#Multivariate Regression Government or Law Job Feelings
summary(lm(Govlawjob~Knowledge+Learn+Reason+Ethics+Self+Leadership+Service+Political+Openness+Awareness+Communicate+Empathy, data=anes2008,na.action=na.omit))
```

#Multivariate Regression Arts Job Feelings

summary(lm(Artjob~Knowledge+Learn+Reason+Ethics+Self+Leadership+Service+Political+Openness+Awareness+Communicate+Empathy, data=anes2008,na.action=na.omit))

#Multivariate Regression Vocational Job Feelings

summary(lm(Vocjob~Knowledge+Learn+Reason+Ethics+Self+Leadership+Service+Political+Openness+Awareness+Communicate+Empathy, data=anes2008,na.action=na.omit))

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