The Fallacies

This example of flawed logic is just one of many examples of how politicians from both major political parties in the United States have labeled certain majors like art history useless and an intellectual luxury, limiting in employment opportunities and unworthy of public funding. Choose a useful major and you will always have a job, a successful career, and become rich compared with those individuals who choose a useless major and, in turn, end up unemployed, without a career, and become poor. This dichotomy between useful and useless majors lacks substantiation and is too often used to simply make a nuanced connection between major and career. As professor Peter Cappelli of The Wharton School at the University of Pennsylvania observed, "It seems that what a person studies in college should relate to his or her planned career path, but it turns out that it's very hard to predict how those two things will interact with each other." 

This unpredictability has resulted in five common college major fallacies:

1. Confusing association with causation fallacy (also known as cum hoc, ergo propter hoc, "with this, therefore because of this")—"Correlation does not imply causation" is a phrase used in science and statistics to emphasize that a correlation between two variables does not necessarily imply that one causes the other. What does this mean? A brief explanation is that correlation is a measure of how closely related two things are; and just because two things correlate does not necessarily mean that one causes the other. When a visual representation of data illustrates two or more lines sloping or bars rising, "The data practically begs us to assign a reason. We want to believe one exists. Statistically, we can't make that leap, however. Charts that show a close correlation are often relying on a visual parlor trick to imply a relationship." Correlations between two things can be caused by three or more factors, and often are. "Our preconceptions and suspicions about the way things work tempt us to make the leap from correlation
to causation without any hard evidence."^4 This happens quite frequently within higher education and the discussion between the selection of a college major and the potential for lifetime earnings.

- Example: You need to major in business because employers value students with that major over all other disciplines.

2. **Post hoc ergo propter hoc fallacy** ("after this, therefore because of this")—"Since event Y followed event X, event Y must have been caused by event X." The fallacy lies in coming to a conclusion based solely on the order of events, rather than taking into account other factors that might rule out the connection. This is the second fallacy many individuals fall into when discussing the selection of an academic major.

- Example: Shelly had an offer of full-time employment prior to graduation and it's because she majored in economics.

3. **Single-cause fallacy**—It occurs when it is assumed that there is a single, simple cause of an outcome, when, in reality, it may have been caused by a number of only jointly sufficient causes. This fallacy often demonstrates a lack of awareness about the specific topic examined and can disclose one's bias to demonstrate contempt prior to investigation. Judgments are made quickly instead of analyzing the multiple causes of a situation.

- Example: Employers only care about your grade point average; the higher it is, the better your chances of being hired.

4. **Anecdotal fallacy**—This stems from using a personal experience or an isolated example instead of sound reasoning or compelling evidence. This is a common fallacy committed by parents, relatives, or friends of undergraduates. There is a tendency to persuade students, intentionally or unintentionally, into a major based on one's experience with that specific academic program.

- Example: My sorority sisters and I majored in business, economics, or finance and we all have extraordinary careers, so major in one of those subjects and you will be just as successful as we are.

5. **Sweeping generalization fallacy**—This assumes that what is true of the whole will also be true of the part, or that what is true in most instances will be true in all instances. Sweeping generalizations also tend to correspond with other fallacies, such as the single cause or anecdotal.

- Example: Recent college graduates with a history degree are all unemployed.

These fallacies surrounding the college major exist because of the mental models or thinking algorithms that are formed from ingrained assumptions and theories about the way the world works. To help you recognize the existence of uncertainties in measurement, errors in sampling, and biases in research, below are 10 important factors that can help you debunk the college major fallacies. These are just 10 factors, however, as there are dozens of others that impact long-term earnings potential and the ability to achieve a long and productive career. The 10 factors are arranged in no particular order.

**10 Factors**

1. **Understand the impact of geography**—Where one lives plays an important role in one's ability to have a sustained career. For example, current research strongly suggests that looking for work in large urban areas can give workers a better chance to find a job that fits their skills. Additionally, in terms of salary and long-term career earnings, where you live often matters more than what you have on your resume. Upon analyzing two decades of data from more than 200 cities, Rebecca Diamond, an assistant professor of economics at Stanford Graduate School of Business, found that college graduates are increasingly clustering in more expensive cities that offer more amenities such as restaurants and cultural attractions, better parks, less crime, and less pollution. To help recent
college graduates identify key geographical locations, top 10 lists of cities in which to launch a career are now commonplace.5

2. Realize the power of grit—It would be extremely difficult to have a long and successful career without the ability to persevere in difficult situations. Numerous researchers have concluded that getting to the corner office, having long-term earnings potential, and climbing up the corporate ladder all have more to do with grit than graduating with a specific degree. Living a life of leadership, purpose, and service also requires grit. Grit is by far the most important characteristic one needs to demonstrate time and again in order to translate the vision they have for their life into reality. MacArthur Fellow Angela Duckworth, a psychology professor at the University of Pennsylvania, defines grit as the tendency to sustain interest in and effort toward very long-term goals and equips individuals to pursue especially challenging aims over years and even decades. Duckworth noted that people who "accomplished great things often combined a passion for a single mission with an unswerving dedication to achieve that mission, whatever the obstacles and however long it might take."6

3. Market your value—In my book Marketing Your Value: 9 Steps to Navigate Your Career, I explained that college students and even more experienced professionals need to work hard at helping employers understand their value. Doing so requires substantial work if the individual wants to stand out among other job candidates. It is also important to understand that "being average just won't earn you what it used to. It can't when so many more employers have so much more access to so much more above average cheap foreign labor, cheap robotics, cheap software, cheap automation, and cheap genius."7 The student needs to define him- or herself and what he or she is looking for in terms of employment. The student needs to give people a reason to pay attention to him/her. This is important to do in person as well as online. The only people who stand out are those who want to.

4. Demonstrate your level of preparedness—All too often, recent college graduates make the mistake of assuming that their degree is synonymous with career preparedness. The research suggests otherwise. In one study, nearly 70 percent of corporate recruiters said that their company has a hard time managing its younger generation of workers who were perceived as lacking in work ethic, unwilling to pay their dues, and simply being harder to retain.8 More than one-third of business leaders and recruiters give recent grads a "C" or lower for job preparedness.9 A recent survey of U.K. companies found that only one in three employers (23 percent) believe that academic institutions are adequately preparing students for vacant roles in their organizations.

5. Recognize the dynamics of compensation—Focusing solely on salary in and of itself demonstrates a severe lack of professional maturity. In his 1967 publication The Motivation to Work, Frederick Herzberg identified two different categories of factors affecting the motivation to work: hygiene and motivation. Hygiene factors include extrinsic factors like technical supervision, interpersonal relations, physical working conditions, salary, company policies and administrative practices, benefits, and job security. In comparison, motivation factors include intrinsic factors such as achievement, recognition and status, responsibility, challenging work, and advancement in the organization. Herzberg's theory postulates that only motivation factors have the potential to increase job satisfaction. The results indicate that the association between salary and job satisfaction is very weak. When employees are focused on external rewards, the effects of intrinsic motives on engagement are significantly diminished. This means that employees who are intrinsically motivated are three times more engaged than employees who are extrinsically motivated by money.

6. Appreciate the journey—Demanding that college students figure out what they want to do with the rest of their lives is a flawed mental trap that contributes to depression, loneliness, and anxiety. It is also completely unnecessary and a fool's errand. Such thinking exposes logic that believes a successful career can be determined by an exact formula and is nearly quantifiable. This is simply untrue. Achievement on either the personal or professional levels seldom follows a simple formula. "Life is a process, not a state of being. It is a direction, not a destination."10 As John Gardner said in his famous 1990 speech, "Life is…an endless process of self-discovery, an endless and unpredictable dialogue between our own capacities for learning and the life situations in which we find ourselves." Your dream job today may not exist tomorrow, let alone 5, 10, or 20 years from now. You've got to be open to whatever industry change comes your way.
7. Grow personally to develop professionally—In today’s challenging global economy, "individuals are under unprecedented pressure to develop their own abilities more highly than ever before, apart from anything their employers may or may not do to develop them."11 Personal discipline, growth, and a commitment to lifelong development are critical elements that factor into one’s ability to achieve and sustain growth over a long career. In The Start-up of You: Adapt to the Future, Invest in Yourself, and Transform Your Career, authors Reid Hoffman (co-founder of LinkedIn) and Ben Casnocha realize that great people, like great organizations, are in a state of perpetual growth: "They're never finished and never fully developed." Each day presents an opportunity to learn more, do more, and grow more. This state of "permanent beta is a lifelong commitment to continuous personal growth" is a necessity for everyone, regardless of what major you declared.

8. You continue to evolve in your 20s—In Emerging Adults in America: Coming of Age in the 21st Century, Jeffrey Jensen Arnett and Jennifer Lynn Tanner declare that the decade after college graduation is a time for self-discovery. Many parents fail to realize that it takes time for their children to discover the right career path, get married, or become financially independent. New research suggests that people are better equipped to make major life decisions in their late 20s than earlier in the decade. The brain, once thought to be fully grown after puberty, is still evolving into its adult shape well into a person’s third decade, pruning away unused connections and strengthening those that remain. Postponing those decisions makes sense biologically. "It's a good thing that the 20s are becoming a time for self-discovery. It should be reassuring for parents to know that it's very typical in the 20s not to know what you're going to do and change your mind and seem very unstable in your life."12

9. Know that the reality is that people change jobs—The student's first job after graduation is unlikely to be his or her last. Layoffs, quitting, and a host of other reasons explain why people move from one job to another. In 2011, 48,242,000 people changed jobs in the United States. Of those who changed jobs, 20 million were from layoffs and discharges, 23 million workers quit, and 4 million were classified as other separations.13 With 131 million total workers, the 48 million people who changed jobs represented 36.7 percent of the total working population. Also, it is impossible for students at the age of 22 to know what they want to do with the rest of their lives when they have no idea what new jobs will exist in a decade or two. Today’s graduates will have jobs not yet created using technology not yet invented to solve problems not yet identified.

10. Engage in subtle maneuvers—Graduates need to engage in subtle maneuvers so they can purpose interests other than their day job. For those who cry they have limited time, recall the words of Franz Kafka to his fiancée: "Time is short, my strength is limited, the office is a horror, the apartment is noisy, and if a pleasant, straightforward life is not possible, then one must try to wriggle through by subtle maneuvers."14 During the day, Kafka worked his brothberuf, literally "bread job," a job done only to pay the bills, at an insurance company and then he would pursue his passion of writing at night and during the weekend. This subtle maneuver approach has been used by many successful people. An aspiring author once wrote to Irish playwright Oscar Wilde asking for advice on how to have a successful career as a writer. In his response, Wilde told him not to rely on earning a living from writing and declared, "The best work in literature is always done by those who do not depend on it for their daily bread."15

The First Major: Happiness

The myopic valuable v. useless paradigm of decision-making process when it comes to declaring a major has provided people with seriously flawed mental models as to how today's dynamic, hyper-competitive, and ever-changing global marketplace operates. Focusing solely on the undergraduate major ignores the myriad other factors that directly influence long-term earnings potential, career trajectory, and professional development. As outlined above, understanding the impact of geography, realizing the power of grit, and engaging in subtle maneuvers, as well as many other factors, all play a critical role in one’s career. Taken individually or collectively, these factors play a far greater role than any college major. These factors also underscore the significant role that self-awareness plays in personal growth and professional development.

Recognizing that many employees are unhappy or disengaged from their work, one observer noted, "It's no wonder many of us aren't fully satisfied with where we're at professionally. We keep ignoring that crucial personal component that helps drive great results."16 It is time that higher education institutions pay attention to that crucial personal component of a student's undergraduate experience. To develop that component, and to succeed in the job market of today and tomorrow, workers across all industries and titles will need to engage in a great deal of self-
reflection. Doing so will allow people to get better at the skills of human interaction. As Geoff Colvin noted in *Humans Are Underrated: What High Achievers Know that Brilliant Machines Never Will*, workers need to "become champions at the skills of human interaction—empathy above all, social sensitivity, collaboration, storytelling, solving problems together, and building relationships."

To ensure that college students achieve this level of human interaction required to succeed in the workplace of today and tomorrow, they should first major in happiness. (For purposes of this article, "happiness" refers to the pursuit of meaning through a life of purpose, leadership, and service to others.) Undergraduates can best achieve this pursuit through a gradual increase in their self-awareness fostered by adventures in disequilibrium that destabilize their level of comfort, challenge their assumptions about life, and allow them an opportunity to accommodate new information.

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Perhaps now more than ever, the world needs college students on campuses large and small around the globe to declare a major in happiness. We are both witnesses and participants in a global epidemic of unhappiness, disengagement, and negativity. According to Gallup's 142-country study on the *State of the Global Workplace*, only 13 percent of employees worldwide are engaged at work. "In other words, about one in eight workers—roughly 180 million employees in the countries studied—are psychologically committed to their jobs and likely to be making positive contributions to their organizations." Statistics for the United States echo global attitudes. Fewer than one-third (31.5 percent) of U.S. workers were engaged in their jobs in 2014 and just 33 percent of Americans said that they were very happy, remaining consistent with happiness levels in 2011, but dropping from the 35 percent who reported being very happy in 2008 and 2009. Unfortunately, the happiness factor for undergraduates mimics the statistics on both the global and U.S. levels. This has to stop.

If today's undergraduates are going to help solve tomorrow's problems, they need to understand that the pursuit of a college degree has to be more than a collection of *resume* building experiences designed to attract employers and land a high-paying job after graduation. Getting a good-paying job is important, but it is also relative. Achieving financial independence for young professionals should indeed be a priority. After all, graduates have loans to repay, health insurance costs to satisfy, and living expenses to cover. However, if we teach undergraduates, the only thing that matters, the only thing that will make them happy, is a high starting salary, we are providing a tremendous disservice. The research is overwhelmingly clear: "The pressure to be happy makes people less happy. Organizing your life around trying to become happier, making happiness the primary objective of life gets in the way of actually becoming happy." Research within the field of positive psychology continues to illustrate that having purpose and meaning in life increases overall well-being and life satisfaction, improves mental and physical health, enhances resiliency, enhances self-esteem, and decreases the chances of depression. "Happiness without meaning characterizes a relatively shallow, self-absorbed, or even selfish life. What sets human beings apart from animals is not the pursuit of happiness, which occurs all across the natural world, but the pursuit of meaning, which is unique to humans." To major in happiness is to pursue a life of purpose, leadership, and service to others: three traits the world needs more of with each passing day.

Endnotes

9 Susannah Snider, "Get the Best Return on Investment for Your Liberal Arts Degree," *U.S. News and World Report*,


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http://www.naceweb.org/j022016/choosing-a-major.aspx