**The Post-College Fortunes of Humanities Graduates**

**Introduction**

Higher education grew rapidly in the United States throughout the twentieth century and thereafter, increasing from approximately 78 bachelor’s graduates per thousand persons in 1942, to 223 per thousand in 1970, to 370 per thousand in 2018.[[1]](#endnote-1) Recently, this historical trend has reversed; enrollments declined by 1.3 million undergraduates from a high in 2010 to 16.8 million in 2017, and are projected to stagnate from now through 2028, reflecting changes in birth rates and cohort sizes (Grawe 2018; McFarland et al. 2019). Declining enrollment has adversely impacted certain colleges and intensified existing pressures on particular fields of study, as discussed below.

American undergraduate education[[2]](#endnote-2) at the bachelor’s level mostly follows a liberal arts approach, admitting undergraduates who undertake a range of lower-division coursework for a year or two, described as general education or breadth requirements, before choosing a major that requires a sustained engagement with a particular academic discipline. About one-third of all college coursework is taken outside of the major (Carnevale, Cheah, and Hanson 2015:6), with a substantial proportion of these general education courses in the humanities and arts (See Table 1). One-third of bachelor’s students, moreover, change majors in their first three years of college, with ten percent changing major more than once (NCES 2017).

**[Table 1 about here]**

One implication of the American liberal arts approach is that demand for particular majors and courses may fluctuate widely over time, driven by students’ choices. In the last decade, undergraduate enrollments have decreased markedly in several humanities majors (American Academy of Arts and Sciences 2017), while science, technology, engineering and math (STEM) majors have increased, along with several other career or vocationally-oriented subjects.[[3]](#endnote-3) Carnevale et al. (2015) judge that four-fifths of recent graduates have taken a “career-focused” major. These shifts signal an increasing concern on the part of many undergraduates that their degree provide a pathway to a well-paid job (Ahlburg 2019), and perhaps reflect an unease stoked by pundits and politicians[[4]](#endnote-4) who publicly criticize universities for producing unemployable graduates.

This paper, while noting recent enrollment and graduation declines in the humanities (Ahlburg 2019; Schmidt 2018), focuses on the post-college circumstances of recent humanities graduates relative to classmates with other majors. The diminished popularity of the humanities may be a reaction to earnings and other career difficulties experienced by recent cohorts of humanities graduates (Ahlburg and Roberts 2019:243).

Using nationally representative data, we document the educational and family backgrounds of humanities graduates, their family formation, earnings and job satisfaction after leaving college. We also consider whether the humanities constitute risky majors – as some researchers have suggested – and examine the extent to which completing a master’s or a more advanced degree provides a potentially advantageous strategy for undergraduate humanities majors.

**Prior Research and Context**

*Which disciplines constitute the humanities?*

The term ‘humanities’ encompasses an amorphous set of academic disciplines. Even in statistical agency reports there is inconsistency in classification practices. Some scholars argue there is a common perspective underlying these particular disciplines (Kagan 2009); others, however, note that “an institutional grouping that puts together formal logic, biblical scholarship, the study of imaginative literature, Middle High German, Sufi mysticism and the archeology of the ancient world creates serious problems for any attempt to characterize it cohesively” (Small 2013:39). Avoiding that debate, this paper follows the practice of US statistical agencies, such as the National Center for Education Statistics, which classify as humanities majors ancient and modern languages and literatures, linguistics, history and art history, anthropology, archeology, philosophy, as well as gender, ethnic, cultural, legal, religious, and international studies. This classification demarks humanities from other groupings, including the social sciences, STEM subjects, music, visual and performing arts, and several vocational majors including the ministry, business, and education.

*Post-college earnings associated with different majors*

Carnevale et al. (2015) detail and discuss the annual earnings of various college majors for full-time year-round workers, using data from the American Community Surveys (ACS) for 2009 to 2013. Earnings vary dramatically across baccalaureate majors. The authors note that the difference in lifetime earnings between the lowest- and highest-paid major is $3.4 million, far exceeding the mean lifetime earnings difference of $1 million between high school and Bachelor’s graduates. Altonji et al. (2012) report a smaller yet substantial estimate using ACS data, suggesting that the earnings gap between majors at the extremes – between electrical engineers and general education majors – is “nearly as large as the … difference between college graduates and high school graduates.”

Carnevale and colleagues (2015) report that humanities baccalaureates earn $49,000 per annum on average, compared to $61,000 for all bachelor’s graduates, and $30,000 for individuals who hold only a high school diploma. Earning twelve thousand dollars less (20 percent less) than the average full-time employed bachelor’s graduate is a substantial economic detriment for humanities majors. Carnevale and colleagues (2015), however, add this caveat: annual earnings vary considerably even among year-round, full-time workers with an identical major. For example, the authors (Carnevale et al. 2015) note that the top quarter of humanities graduates earn more than the bottom quarter of engineering graduates, despite engineering being the most well compensated major on average.

Carnevale and colleagues’ findings on majors are consistent with several government reports that use data from the Baccalaureate and Beyond (B&B) survey, which periodically draws a nationally representative sample of graduating seniors, following them beyond graduation. The most recent B&B survey followed the graduating class of 2016/2017 for one year after graduation (Velez et al. 2019), reporting that 10.2% of those baccalaureates majored in the humanities.

In some respects, those humanities graduates were advantaged. A smaller proportion of them (64.7%) had taken out loans; and those with loans had borrowed the least amount ($28,800), compared to all other major groups (Velez et al. 2019). The unemployment rate for humanities graduates, however, was significantly higher (7.3%) than that for all other majors. Their median income, moreover, was the lowest of all majors at $25,700. Although these figures were only for one year beyond graduation, other B&B studies that followed earlier cohorts of graduates showed similar patterns (Cataldi et al. 2011, 2014; Velez et al. 2019).

In their analysis of the ACS survey, Carnevale et al. (2015) report differences between majors without adjusting for individuals’ age, gender, ethnicity, or region – all factors that may differ across majors, and that independently influence earnings. Webber (2014; 2016) provides analyses that adjust for such factors in order to reduce the selection bias from individuals of various socio-demographic backgrounds sorting into college majors. Webber (2014) uses the National Longitudinal Survey of Youth to estimate selection adjustments based on demographic and family characteristics plus measures of cognitive and non-cognitive ability, then applies those corrections to lifetime earnings estimates by major using the ACS. His sample is limited to men with bachelor’s and no higher degrees.

Before adjusting for selection, Webber (2014) reports that a humanities/arts graduate earns $2,664,811 in a lifetime, much more than a high school graduate ($1,513,893), but considerably less than a social science, business, or STEM graduate ($3,240,067; $3,573,792; and $3,706,155 respectively). Earnings for the humanities/arts also trail these after adjusting for observed and unobserved selection (Webber 2014).

Kim, Tamborini, and Sakamoto (2015) follow a similar lifetime earnings approach, using a sample from the US Census’ Survey of Income and Program Participation (SIPP) matched to a detailed earnings file from the Social Security Administration. The latter source is more accurate than the self-reported earnings data used in most other studies; matching to the SIPP educational history data, however, limited sample sizes, necessitating aggregation of college majors, including one category containing “liberal arts, humanities, arts and architecture” (Kim et al. 2015)

Consistent with the analyses that used the ACS (Carnevale et al. 2015; Herschbein and Kearney 2014; Julian 2012) Kim et al. (2015) documented significant earnings differences between undergraduate majors, including earnings premia for various majors across the life-course, as well as by gender. At most ages, both men and women bachelor’s graduates in the liberal arts/humanities group earned less than almost all other majors (education majors being even lower). Of note was their finding that “… a graduate degree in liberal arts, humanities, arts, or architecture does not appear to raise earnings considerably relative to a bachelor’s degree in the same field” (Kim et al. 2015:327).

The above studies all indicate that the average humanities bachelor earns less than graduates with most other majors, but still exceeds the earnings of a typical high school graduate. A more extreme position, echoed by some politicians, is that some majors are worthless, in the sense that graduates with those majors might have fared better had they not pursued a degree at all. In the research literature this is often framed as a matter of “underemployment” – college graduates working in occupations that require only a high school diploma or less (Abel and Deitz 2016; Cass 2018; Sigelman et al. 2018; Vedder et al. 2013). For example, Sigelman et al. (2018) report that 43% of all college graduates are currently underemployed. Abel and Deitz (2016:23) find that underemployment is particularly frequent among humanities graduates: “those with majors in less quantitative subjects such as English Language, Communications, Ethnic Studies, Art History, or Anthropology tend to have relatively high rates of underemployment.”

Other scholars nevertheless remain unconvinced that humanities majors are worth less than no college degree. “Several authors (Jay, Geiger, Drakeman, Ahlburg) dispute the claim that the humanities have little value in terms of economic return and that they do not prepare students for success in the labor market” (Ahlburg and Roberts 2019:246). In the analyses that follow, we will bring additional large-scale data to bear on this issue, including an examination of whether humanities baccalaureates who complete higher degrees fare well in the labor market.

Hill and Pisacreta (2019) examine post-college earnings to evaluate the economic benefits of a liberal arts education, but face difficulties defining the ‘liberal arts,’ and choose therefore to distinguish between liberal arts and non-liberal arts *institutions*, rather than majors. Many graduates at liberal arts colleges, however, graduate with STEM and other non-humanities majors, making their comparison not directly relevant to our focus. Hill and Pisacreta (2019:33) find: “There is inadequate evidence to conclude that the earnings impact of receiving a liberal education differs significantly from alternative types of higher education. This is in part because we do not have a clear definition of a liberal education so as to test the hypothesis.” We note that in assessing the earnings impact, their analysis controls for occupation, which they admit is in part a consequence of one’s chosen major.

A separate analysis by Deming and Noray (2018) examines post-college wages of STEM vs. “liberal arts” majors. Again, the liberal arts are broader than our humanities category, including social sciences. In his article for the *New York Times*, Deming (2019) points out that there is a wage advantage to STEM majors at younger ages, but that this wage-gap narrows considerably as the years pass. In our analyses below, we will examine whether the humanities wage-gap similarly shrinks for older workers.

*Human Capital*

Human capital theory within economics addresses the earnings consequences of education. The core theory is that formal education and on-the-job experience both contribute to individuals’ capacities, which in turn affect their workplace productivity. Additional years of education, reflected in additional credentials, tend to be rewarded with incrementally higher pay (Becker 1964; Mincer 1958; Schultz 1961). Human capital theory originally focused on the relationship between earnings and the length of education; in recent years, however, economists have turned to a consideration of distinct types of human capital, as represented by college majors, and their consequences for earnings (Altonji et al. 2012; Hamermesh and Donald 2018; Hastings et al. 2013; Kinsler and Paven 2014; Kirkebøen, Leuven, and Mogstad 2015).

To simplify a complex literature, economists within this tradition all agree that wages differ greatly according to college major. Two different processes are thought to bring this about. First, there is a sorting process that leads different kinds of individuals into certain majors. Differences in skill, ability, and academic preparation that pre-date college entry affect the kinds of individuals who sort into which major. Some majors also use GPA requirements to reduce excess demand for their major, thereby creaming off academically more-successful undergraduates. In addition, family background, gender, and intellectual tastes pattern choice of major. To some extent, differences in wages across majors may reflect or are “returns to” the characteristics of the people who typically enter certain majors (Altonji et al. 2012).

A second process that economists posit to explain differences in economic returns concerns market demand (i.e., demand by employers) for specific skills and knowledge that are developed by some majors and not others. Thus, employers pay more for graduates with certain majors because the tasks they set their employees require specific types of human capital that are aligned with particular college majors. Economists acknowledge that some of these ideas about major-specific human capital draw more from theory than from evidence. As Altonji et al. (2012) note in their review: “Much remains to be learned about why majors pay so differently.”

*Risky Majors*

Approximately 41% of graduates who earn a Bachelor’s in the humanities subsequently obtain an additional credential, whether an MA, Ph.D., or a professional credential such as a J.D. (Carnevale et al. 2015). Studies like Webber’s that assess the earnings associated with humanities or other majors, while excluding anyone with a higher degree, are therefore omitting a substantial portion of students.

Monaghan and Jang (2017) develop a theory that incorporates both individuals who only complete the Bachelor’s degree and those who use it as a stepping-stone to a higher credential. Their evidence comes from two national surveys, the Beginning Post-Secondary Student Longitudinal Survey (BPS04/09) that tracks the freshmen class of 2003/2004 while in college, and the Baccalaureate and Beyond (B&B 93/03), which tracks a cohort of Bachelor’s recipients for the decade after graduation.

Monaghan and Jang (2017) find that college graduates with certain “risky majors” earn significantly less and have a higher risk of unemployment than other majors, ten years after graduation. The authors’ key empirical insight is that a comparatively high proportion of graduates from risky majors obtain an advanced degree in the ten years after receiving their Bachelor’s (Monaghan and Jang 2017). That risky majors are positively associated with continuing into graduate school suggests that majoring in a risky subject may pay off for those who receive an additional degree, but carries an earnings penalty for those who stop at a baccalaureate.

In their examination of whether obtaining a graduate degree mitigates the salary disadvantage of holding a risky major, Monaghan and Jang (2017) uncover three patterns; (1) risky major baccalaureates who do not continue into graduate school earn considerably less on average than those with non-risky majors; (2) the income boost to earning a graduate degree is significantly larger for those with risky undergraduate majors compared to non-risky ones; and (3) despite this higher return to a graduate degree, the salary decrement from a risky undergraduate degree is only partially mitigated by completing a higher degree. On average, risky majors who have a higher degree still do not earn as much as their counterparts who only obtained a bachelor’s degree with a non-risky undergraduate major and went no further.

Monaghan and Jang (2017) use BPS data to examine who chooses a risky major, reporting that women and students from higher SES families are more likely than others to undertake a risky undergraduate major. They find, however, that this SES association reflects institutional effects; enrolling in a smaller and/or selective college that enrolls relatively few students from low-SES families is associated with choosing a risky major.

The sociological puzzle posed by the risky major phenomenon is that a sizeable group of undergraduates from relatively-advantaged backgrounds pursue academic careers that seem to lead to substantially-lower earnings than alternatives, and that additional time and resource investments in advanced degrees does not fully make up for the risk of lower earnings. There is added risk and not much of a reward, monetarily speaking, from pursuing certain majors.

The “risky major” framework clearly applies to humanities degrees – several of which have high risk scores – although Monaghan and Jang (2017) classify several non-humanities undergraduate majors as risky as well, including biomedical sciences, psychology, and physical and natural sciences. In our analyses that follow, we will re-examine several of the same issues as Monaghan and Jang – post-college earnings, enrolling in graduate degrees, and the returns to higher degrees across majors. We, however, will focus on humanities graduates, and will add non-monetary outcomes they were not able to consider. In doing this, we will also employ a more recent dataset with a much larger sample size, providing a greater representation for each major, as well as more detail on types of higher degree, and questions regarding job satisfaction.

*Defenders of the humanities*

Several recent monographs have defended the role of the humanities, and liberal arts more generally (Harpham 2011; Menand 2010; Nussbaum 2010; Roth 2015; Small 2013; Zakaria 2015). These authors largely sidestep the earnings issue and instead emphasize non-monetary benefits of exposure to the humanities for undergraduates, as well as highlighting the social, as well as the individual benefits of these disciplines.

One argument suggests that undergraduates, by studying the humanities, develop a distinctive style of thinking – variously termed a “liberal intelligence,” or a “critical intelligence,” or “critical thinking skills” (Roth 2015; Zakaria 2015). Such authors claim that this sensibility or skill allows for a more informed engagement with politics and community life (Nussbaum 2010). The subtitle of Nussbaum’s book, for example, is “Why Democracy *Needs* the Humanities.”

Another variant of the ‘liberal intelligence’ argument suggests that employers appreciate a humanities degree for the breadth of analytical and communication skills that undergraduates develop from engagement with the humanities. To document this, humanities advocates have sponsored surveys in which employers assert their preference for employees with a liberal arts education (Hart Research Associates 2013; Humphreys and Carnevale 2016.) This leaves an unresolved puzzle: if employers regard the skills and quality of mind of humanities graduates so highly, why does this preference not result in superior wage levels or other employment indicators?

A more complex and tendentious claim links the study of the humanities to human happiness. In Small’s (Small 2013:175) summary: “the humanities may make a vital contribution to individual happiness and to the happiness of large groups.” Small (2013) traces this line of argument back to Plato and through John Stuart Mill, focusing on the latter’s notion that there are intellectual and aesthetic “higher pleasures” associated with engagement with literature and poetry, the arts, and other humanities. Small (2013:175) is wary of reducing this claim regarding happiness to a testable empirical claim, noting: “it cannot be made to rest on the humanities’ power reliably to make their students and scholars happier people…it more importantly takes the form of deepening our understanding of what happiness consists in, how we may best hope to attain it… how education may alter the quality as well as range of pleasures available to the individual.”

There are points at which arguments advanced by defenders of the humanities do touch upon empirical research. In their book *Academically Adrift*, Arum and Roksa (2011) take a measure of critical-thinking drawn from the California Learning Assessment (CLA) to test whether those skills develop during the undergraduate years. Their overall conclusions are pessimistic; in general, not much learning of this critical type occurs in college. They do, however, examine institutional factors, including college major, but unfortunately combine humanities majors with the more numerous social science majors. Their estimates of the amount of change in critical learning skills from freshman to junior year show that, compared to business majors, science/math majors improved most on critical thinking during college, followed by humanities/social science majors, and then by engineering and computer science majors.

Steedle and Bradley (2014) analyze a larger sample of colleges to examine the differences between college majors on CLA scores, finding that majors were clustered quite closely on the CLA, with the highest scoring group of majors being natural sciences and technology, followed by social science majors, and finally humanities and languages, all of which performed considerably better than health, education and business majors.

In terms of citizen engagement, the largest study of undergraduate voting behavior (Thomas et al. 2017) tracks voting records in the 2012 and 2016 presidential elections for nearly 10 million undergraduates drawn from 1,023 colleges, matching public voting records with students’ college records. Data from both years (Thomas et al. 2017) suggest that students majoring in the social sciences voted most frequently, followed by health professions majors, and then by humanities. Undergraduates in business and STEM fields had the lowest voting rates.

In sum, several commentators have argued that the humanities play an important role in equipping undergraduates with critical thinking skills, and in preparing them to be informed and engaged citizens. The few empirical studies that speak to these claims, however, suggest that students who major in the humanities do not score more highly on an established test of critical thinking, nor are they more active as voters. Humanities majors are certainly not the worst on these dimensions, but neither are they the best.

**Data & Methods**

The National Survey of College Graduates (NSCG) is a nationally representative survey undertaken by the U.S. Census Bureau at the behest of the National Science Foundation. Samples are drawn from a previous American Community Survey (ACS), limited to persons who have completed a bachelor’s degree or higher. Using web-based, CATI, and mail questionnaires, the NSCG collects information on educational and occupational history, including detailed fields of study, type of employment, job duties, job satisfaction and earnings. One demographic variable in the NSCG lacking in many other surveys is parental education, an indicator of family class background. Questionnaires and methodology for the NSCG are available at: <https://www.nsf.gov/statistics/srvygrads/>

The NSCG samples are large. We merged and analyzed the two most recent surveys, 2015 and 2017, whose sample sizes are 135,000 and 124,000 respondents respectively. Publicly-released anonymized data were downloaded from: [https://ncsesdata.nsf.gov/datadownload/?#](https://ncsesdata.nsf.gov/datadownload/?). Tables presented in the text below omit coefficients for certain control variables. Complete tables are included in an online appendix.

**Findings**

*Who graduates in the humanities?*

Table 2 presents the results of a logistic regression of the NSCG microdata predicting whether an individual graduated with a bachelor’s degree in a humanities field rather than any other major, excluding arts and education majors. All these models control for the year when the bachelor’s degree was completed and year of survey.

There are significant racial/ethnic differences, with both African-American and Asian graduates less likely to have majored in the humanities compared to non-Hispanic Whites. Hispanic graduates do not differ significantly from non-Hispanic Whites in choice of major. Women graduates are significantly more likely than men to graduate with a humanities major, with an odds ratio of 1.55. Parental educational background is also associated with major. Graduates whose parents had either a master’s or higher degree are significantly more likely to major in the humanities (an odds ratio of 1.26) compared to students whose parents had only a high school education.

**[Table 2 about here]**

Humanities majors are more likely to have attended a private university than graduates from other disciplines (an odds ratio of 1.31). Humanities majors are also over-represented among graduates who go on to earn higher degrees. The odds of holding a humanities undergraduate degree is significantly higher (odds ratio of 1.35) among those who earn an MA, and even higher among those with a doctorate or a higher professional degree (odds ratios of 1.38 and 1.84 respectively).

*Post-College Outcomes*

Table 3 reports multiple variable OLS regressions predicting the natural logarithm of post-college earnings for the NSCG sample of bachelor’s graduates. College major is represented by a set of dummy variables – humanities, arts, and education majors – compared to the reference category which combines all other undergraduate majors. All the coefficients in Table 3 have been translated into percentage differences, for ease of interpretation. Separate analyses were undertaken for men and for women, and are reported in adjacent columns in Table 3.

**[Table 3 about here]**

After controlling for other factors (dual major status, age and age squared, race/ethnicity, highest degree attained, citizenship status, parental education, private/public college and Carnegie classification of the college, community college attendance, hours worked multiplied by weeks worked, region of residence, and year of the survey) both men and women graduates in the humanities still earn significantly less than their non-humanities counterparts. Without controlling for occupation, the humanities earnings disadvantage is significantly smaller for women (16.5%) than for men (25.9%).

After controlling for occupation, these gaps shrink, though remain statistically significant: 13.1% lower for men and 5.9% for women. This demonstrates that much of the earnings disadvantage for humanities majors is accounted for by occupational sorting into less-remunerative occupations. Sizable gaps nevertheless remain after controlling for occupation. One interpretation of lower earnings even after adding occupation fixed-effects is that humanities graduates earn less than non-humanities graduates within the same occupation.

Table 3 also documents that arts and education graduates earn significantly less than other majors when not controlling for occupation: for men 25.2% less for arts, and 16.5% less for education majors; for women 23.7% and 13.9% respectively. For arts majors, the story after controlling for occupation is similar to that of humanities majors; the gap shrinks, but remains substantial, with a 14.8% earnings disadvantage for men arts majors, and a 10.4% gap for women arts majors. For education majors, occupational sorting seems to explain the entire gap; after controlling for occupation, men who major in education actually earn 8.1% more than the reference group, while women show no statistically significant difference. In short, the earnings disadvantage associated with an education degree reflects the fact that people with those degrees go into low-paying occupations (i.e. teaching). For humanities and arts majors, however, only part of their lower earnings is attributable to employment in lower-paying occupations. Even within the same occupation, humanities graduates earn less than other majors.

Table 4 considers the marital status[[5]](#endnote-5) of humanities graduates, compared to other majors, controlling for their age and other covariates. Table 4 shows that humanities graduates of either gender are less likely to have ever married than their same-age counterparts. Male humanities graduates are 3.9 percentage points less likely to have ever been married; women in the humanities are 2.8 percentage points less likely than their non-humanities counterparts.

**[Table 4 about here]**

We earlier raised the possibility that some college graduates might forego more remunerative work in favor of work that is more rewarding in other dimensions. The NSCG includes a global measure of job satisfaction, as well as specific questions about satisfaction with the job’s intellectual challenge, its degree of independence, level of responsibility, and contribution to society. Table 5 reports the relationship between graduating with a major in the humanities compared to other majors, and these multiple dimensions of job satisfaction, reported with odds ratios.

**[Table 5 about here]**

Both men and women humanities majors report significantly lower overall job satisfaction and less satisfaction with their job’s intellectual challenge, compared to “other” majors. Humanities men are also less likely to report satisfaction with their contribution to society. None of the other results are statistically significant, indicating that humanities majors are not more satisfied in any non-monetary aspect of their jobs compared to “other” majors. In sum, there is no evidence of a trade-off for humanities majors between less money and greater job satisfaction.

Additional analyses (not presented) find no humanities advantage, and occasionally a disadvantage in terms of opportunities for advancement, benefits, location, salary, and job security. After earnings are controlled for, there is still no advantage for humanities majors in terms of any dimension of job satisfaction.

Table 6 provides an analysis of statistical interactions between attaining a higher degree and majoring in the humanities (compared to “other” majors; arts and education majors are excluded from this particular analysis). Both earnings and marriage are predicted using these interactions. The possibility being tested is that, while majoring in humanities is clearly related to a disadvantage in earnings and the likelihood of marriage, it might be possible that some of this gap could be mitigated by earning higher degrees. Table 6 shows the statistical significance of these interactions. Table 7 reports marginal estimates that show which groups, all else equal, earn the most or least compared to the baseline group of “other” majors with only bachelor’s degrees.

**[Table 6 about here]**

In Table 6 the coefficients for the humanities variable indicates that, among those with only bachelor’s degrees, there is a gap between humanities majors and “other” majors both in earnings and marriage, for both men and women. In addition, for men there is a statistically significant interaction between majoring in humanities and having a master’s degree in the model predicting earnings. The negative sign implies that, among those with a master’s as their highest degree, the earnings gap between humanities and “other” majors is larger than among those with only a bachelor’s degree. Humanities men who earn a professional degree, however, experience a smaller earnings gap. There are no statistically significant interactions for the earnings models for women, indicating no evidence that earning higher degrees has any bearing on the humanities earnings gap for women. For men, the humanities marriage gap declines among those who earn a doctorate. For women, this gap closes among those who earn a doctorate or professional degree.

Table 7 adds greater context by reporting marginal outcomes. Results are presented for the relevant groups.

**[Table 7 about here]**

As implied from the regression results, the humanities gap for men varies greatly depending on their highest degree earned. “Other” major men with only a bachelor’s degree earn $78,323 on average, while humanities men with only a bachelor’s degree earn $57,819, a decrement of 26.2%. The disadvantage widens among men with a master’s degree to 35.2%, ($93,279 for “other” majors and $60,432 for humanities majors). The gap among doctorate earners is about the same as among bachelor’s earners (28.1%). Among professional degree earners, however, the gap largely disappears; “other” major men with professional degrees earn $114,947; humanities major men with professional degree earn $112,605, a gap of only 2%. This shows that earning a professional degree can more or less make up for the humanities earnings gap among men.

Table 6 reports that higher education makes little difference for women in terms of narrowing the humanities earnings gap. The gaps for humanities women range from 12.8% among those with a doctorate to 17.9% among those with a professional degree. Women with professional degrees earn more than women with lower levels of education, but do not alleviate the humanities gap. Finally, one notes the staggering earnings disadvantage for women across all levels of education and major, a testament to the powerful gender gap in wages in the United States.

Finally, we examined interactions between age and the humanities earnings gap to determine whether the gap was attenuated for older workers in a fashion similar to Deming and Noray (2018). In additional analyses (available from the authors on request) we found no statistically significant interaction between age and humanities for men or women, implying that the gap does not change with age.

As demonstrated in Table 6, higher degrees also have some impact on the humanities gap in marriage rates. For men, the interaction between humanities major and earning a doctorate was statistically significant; we also see a reversal of the humanities marriage gap among those earning a doctorate compared to those earning only a bachelor’s. Humanities men with a bachelor’s marry at a rate of 81.3%, while their “other” majors counterparts marry at a rate of 84.4%, a gap of 3.1 percentage points. Among men with doctorates, however, humanities majors are actually 4.2 percentage points *more likely* to get married: 91.6% compared to 87.4% for “other” majors. None of the other interactions for men were statistically significant.

Women who complete higher degrees also see their humanities marriage gap disappear. Earning a doctorate or professional degree flips the humanities marriage gap for women. Among women only earning a Bachelor’s, humanities majors marry at a rate of 76.6%, a 6 percentage-point gap between them and “other” majors (marriage rate of 82.7%). In contrast, humanities women who complete a doctorate are about as likely to get married (83.8%) as non-humanities graduates with doctorates (82.5%.) Humanities women with professional degrees actually have a 7.7 percentage point higher rate of marriage: 91.4% compared to 83.7% for non-humanities majors.

In summary, marriage rates for men and women are lower among those who received only an undergraduate degree in the humanities, compared to other majors. This marriage gap is not large: a 3.1 percentage point lower marriage rate for men, and 6.1 percentage points lower for women. Humanities graduates who go beyond the Bachelor’s and complete higher degrees improve their marriage chances relative to non-humanities graduates, and in some cases see their marriage gap disappear or reverse.

**Discussion and Conclusion**

Undergraduate enrollments in humanities majors have declined for several years, at an accelerating rate recently. It seems likely that this decline reflects widespread concerns among undergraduates about choosing a major that will lead to a well-paying job. Humanities scholars have defended both the monetary and non-monetary value of their majors. The empirical evidence, however, suggests that humanities graduates of both genders are paid substantially less on average than their non-humanities counterparts. This is even more striking given that humanities undergraduates enter college with stronger academic skills on average and come from more educated families than undergraduates in general. It is possible that those going into the humanities may be able to do so because of this relatively privileged background.

We have presented evidence that humanities graduates also face a lower likelihood of marriage or marriage-like relationships than their age-mates. Our evidence, moreover, contradicts the idea that humanities majors accept lower incomes in return for jobs that are more intellectually challenging or socially meaningful. On the contrary, on several dimensions, humanities graduates have lower job satisfaction after graduation than their peers, and on other dimensions they fare similarly. In no aspect is humanities majors’ work-life more satisfying. It does not compensate for lower earnings.

One theory suggests that certain undergraduate majors are risky (Monaghan and Jang 2017), meaning that if a graduate specializes in that major and does not subsequently obtain a higher degree, that student is likely to earn less than non-risky majors. Our findings suggest that humanities majors are indeed risky earnings-wise for those who stop at the Bachelor’s degree, and that this disadvantage is not easily erased by obtaining a higher degree. On average, master’s degrees earned by former humanities graduates do not bring them up to the earnings level of bachelor’s degrees outside the humanities. Completing a professional or doctoral degree certainly boosts the average earnings power of humanities graduates, but typically not to the level of non-humanities graduates holding equivalent higher credentials.

To the extent to which undergraduates are aware of and weigh their post-college economic circumstances when deciding on an undergraduate major (and a recent review by Altonji et al. 2012 indicates that they do know), then current disparities in market rewards may lead to further shrinkages in humanities majors. Only if employers were to remunerate humanities degrees at a similar level as other majors, turning the regard for humanities degrees they profess in opinion surveys into equitable hiring and remuneration policies, would one expect to see a reversal of the ongoing exodus of humanities majors.

We acknowledge that our statistical findings cannot explain *why* recipients of humanities degrees earn considerably less than graduates with other majors. We have cited public comments from politicians that disparage humanities degrees as useless. It seems plausible that these comments represent a more widespread perception that undergraduates who have studied the humanities lack occupationally-useful skills and competencies. That perception may well be factually inaccurate. Unfortunately, pay differentials seem to reflect that characterization, mistaken as it may be. These post-college challenges faced by humanities majors may contribute to the decline in numbers of students pursuing those majors, although our data do not allow us to confirm that link.

**Statement of Research Ethics**

This paper analyzes unrestricted survey data provided for public use by Federal government education agencies. Those data had been fully anonymized by those agencies and incorporated extensive privacy protections for survey respondents. In preparing this research we had no direct contact with any survey respondents or with other human subjects.

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| **Table 1**. College Course-Taking Among Bachelor’s Graduates of 2008/2009 | |
|  |  |
| Earned credits in the humanities, averaging 18 credits | 96.2% |
| Earned credits in writing beyond English composition, averaging 3 credits | 41.1% |
| Earned credits in history, averaging 5.7 credits | 76.8% |
| Earned credits in a foreign language, averaging 8 credits | 53.3% |
| Earned credits in fine & performing arts, averaging 4.2 credits | 67.5% |
|  |  |
| Source: NCES (2013:Table 10) |  |
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| --- | --- |
| **Table 2.** Logistic regression predicting humanities major for first bachelor's degree (1 = humanities major, 0 = other major, arts and education majors excluded, coefficients are odds ratios) | |
| Variables | Humanities major vs. other major |
|  |  |
| Parental highest degree |  |
| Ref. = high school or equivalent |  |
| Less than high school | 1.27 |
|  | (0.19) |
| Some college, vocational, or trade school (including 2-year degrees) | 1.04 |
|  | (0.091) |
| Bachelor's degree | 1.01 |
|  | (0.085) |
| Master's degree or higher | 1.26\*\* |
|  | (0.10) |
| Not applicable | 1.56 |
|  | (0.46) |
| Race/ethnicity |  |
| Ref. = White |  |
| Black | 0.56\*\*\* |
|  | (0.064) |
| Hispanic | 1.05 |
|  | (0.10) |
| Asian | 0.49\*\*\* |
|  | (0.055) |
| Other race | 1.17 |
|  | (0.19) |
| Female | 1.55\*\*\* |
|  | (0.082) |
| Age | 1.01 |
|  | (0.0066) |
| Dual major (or earned a minor) | 1.03 |
|  | (0.068) |
| Highest degree |  |
| Ref. = bachelor's degree |  |
| Master's degree | 1.35\*\*\* |
|  | (0.074) |
| Doctorate | 1.38\*\*\* |
|  | (0.11) |
| Professional degree | 1.84\*\*\* |
|  | (0.17) |
| Carnegie classification for first bachelor's degree |  |
| Ref. = Research University I & II |  |
| Doctorate Granting I & II | 0.92 |
|  | (0.083) |
| Comprehensive I & II | 0.91 |
|  | (0.063) |
| Liberal Arts I & II | 1.45\*\*\* |
|  | (0.13) |
| Other/missing/not applicable | 1.01 |
|  | (0.16) |
| Private/public institution for first bachelor's degree |  |
| Ref. = public |  |
| Private | 1.31\*\*\* |
|  | (0.084) |
| Missing/not applicable | 1.11 |
|  | (0.20) |
| Attended community college after high school before ever enrolling in college | 0.99 |
|  | (0.080) |
| Constant | 0.085\*\* |
|  | (0.075) |
|  |  |
| Observations | 140,245 |
| Robust standard errors in parentheses |  |
| \*\*\* p<0.001, \*\* p<0.01, \* p<0.05 |  |
|  |  |
| Note: Year of survey and year bachelor's degree was awarded are included in the model but not displayed. | |
| Source: Author analysis of National Survey of College Graduates 2015 & 2017 | |

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| --- | --- | --- | --- | --- |
| **Table 3.** OLS regressions predicting logged earnings with major for first bachelor's degree and controls (main results displayed only, coefficients converted to percentages) | | | | |
|  | Men | | Women | |
| Variables | No control for occupation | Control for occupation | No control for occupation | Control for occupation |
|  |  |  |  |  |
| Major for first bachelor's degree |  |  |  |  |
| Ref. = other major |  |  |  |  |
| Humanities | -25.9%\*\*\* | -13.1%\*\*\* | -16.5%\*\*\* | -5.9%\* |
|  | (0.027) | (0.026) | (0.025) | (0.026) |
| Arts | -25.2%\*\*\* | -14.8%\*\*\* | -23.7%\*\*\* | -10.4%\*\* |
|  | (0.033) | (0.032) | (0.044) | (0.040) |
| Education | -16.5%\*\*\* | 8.1%\* | -13.9\*\*\* | 1.2% |
|  | (0.031) | (0.037) | (0.024) | (0.028) |
| Constant | 7.62\*\*\* | 8.40\*\*\* | 8.27\*\*\* | 8.77\*\*\* |
|  | (0.11) | (0.12) | (0.12) | (0.17) |
|  |  |  |  |  |
| Observations | 65,972 | 65,972 | 53,967 | 53,967 |
| R-squared | 0.278 | 0.408 | 0.303 | 0.405 |
| Robust standard errors in parentheses |  |  |  |  |
| \*\*\* p<0.001, \*\* p<0.01, \* p<0.05 |  |  |  |  |
|  |  |  |  |  |
| Note: Controls for parental highest degree, race/ethnicity, nativity/citizenship, age, age squared, dual major (or earned a minor), highest degree, Carnegie classification, institution type, community college attendance, weeks/hours worked, year of survey, region of residence, and occupation are included in the models but not displayed, complete results in Table A. | | | | |
| Source: Author analysis of National Survey of College Graduates 2015 & 2017 | | | | |

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| --- | --- | --- |
| **Table 4.** Logistic regressions predicting marriage with major for first bachelor's degree and controls (ever married = 1\*, never married = 0, marginal effects, main results only) | | |
|  | Ever married vs. never married | |
| Variables | Men | Women |
|  |  |  |
| Major for first bachelor's degree |  |  |
| Ref. = other major |  |  |
| Humanities | -0.039\* | -0.028\* |
|  | (0.016) | (0.012) |
| Arts | -0.027 | -0.068\*\*\* |
|  | (0.017) | (0.019) |
| Education | 0.037\* | 0.041\*\*\* |
|  | (0.018) | (0.011) |
|  |  |  |
| Observations | 72,737 | 64,154 |
| Standard errors in parentheses |  |  |
| \*\*\* p<0.001, \*\* p<0.01, \* p<0.05 | |  |
|  |  |  |
| \*Ever married = married, in a marriage-like relationship, separated, or divorced. | | |
| Note: Controls for parental highest degree, race/ethnicity, nativity/citizenship, age, age squared, dual major (or earned a minor), highest degree, carnegie classification, instituion type, community college attendance, year of survey, and region of residence are included in the models but not displayed, complete results in Table B. | | |
| Source: Authors’ analysis of National Survey of College Graduates 2015 & 2017 | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 5.** Logistic regressions predicting various measures of job satisfaction with major for first bachelor's degree and controls (1= satisfied, 0 = dissatisfied, odds ratios, main results displayed only) | | | | | | | | | | |
|  | Overall job satisfaction | | Intellectual challenge | | Degree of independence | | Level of responsibility | | Contribution to society | |
|  | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women |
| Variables |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Major for first bachelor's degree |  |  |  |  |  |  |  |  |  |  |
| Ref. = other major |  |  |  |  |  |  |  |  |  |  |
| Humanities | 0.66\*\* | 0.78\* | 0.65\*\*\* | 0.73\*\*\* | 0.74 | 0.90 | 0.80 | 0.91 | 0.70\*\* | 0.88 |
|  | (0.092) | (0.092) | (0.081) | (0.070) | (0.12) | (0.12) | (0.13) | (0.11) | (0.084) | (0.099) |
| Arts | 0.85 | 0.76 | 0.82 | 0.87 | 0.78 | 1.09 | 0.83 | 0.83 | 0.80 | 0.91 |
|  | (0.13) | (0.13) | (0.11) | (0.13) | (0.14) | (0.22) | (0.13) | (0.14) | (0.11) | (0.15) |
| Education | 1.02 | 1.23 | 1.51\* | 2.10\*\*\* | 0.92 | 0.75\* | 1.90\* | 1.18 | 1.90\*\* | 2.54\*\*\* |
|  | (0.21) | (0.17) | (0.27) | (0.26) | (0.22) | (0.095) | (0.57) | (0.15) | (0.41) | (0.40) |
| Constant | 1.85\* | 6.73\*\*\* | 1.03 | 1.89\*\* | 5.32\*\*\* | 16.5\*\*\* | 1.68 | 5.61\*\*\* | 1.35 | 4.17\*\*\* |
|  | (0.49) | (1.79) | (0.22) | (0.41) | (1.65) | (4.59) | (0.47) | (1.48) | (0.30) | (1.02) |
|  |  |  |  |  |  |  |  |  |  |  |
| Observations | 67,068 | 54,772 | 67,068 | 54,772 | 67,068 | 54,772 | 67,068 | 54,772 | 67,068 | 54,772 |
| Robust standard errors in parentheses |  |  |  |  |  |  |  |  |  |  |
| \*\*\* p<0.001, \*\* p<0.01, \* p<0.05 |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Note: Controls for parental highest degree, race/ethnicity, nativity/citizenship, age, dual major (or earned a minor), highest degree, Carnegie classification, institution type, community college attendance, weeks/hours worked, year of survey, and region of residence, are included in the models but not displayed, complete results in Table C. | | | | | | | | | | |
| Source: Author analysis of National Survey of College Graduates 2015 & 2017 | | | | | | | | | | |

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| --- | --- | --- | --- | --- |
| **Table 6.** OLS regression predicting logged earnings (OLS coefficients) and logistic regression predicting marriage (ever married = 1, never married = 0, log odds) with interactions between major and highest degree (main results only, arts and education majors excluded, full results in Table D) | | | | |
|  | Logged earnings | | Ever vs. never married | |
| Variables | Men | Women | Men | Women |
|  |  |  |  |  |
| Humanities | -0.30\*\*\* | -0.17\*\*\* | -0.33\* | -0.43\*\*\* |
|  | (0.037) | (0.036) | (0.16) | (0.13) |
| Highest degree |  |  |  |  |
| Ref. = Bachelor's degree |  |  |  |  |
| Master's degree | 0.17\*\*\* | 0.15\*\*\* | 0.18\* | -0.17\* |
|  | (0.015) | (0.016) | (0.072) | (0.066) |
| Doctorate | 0.23\*\*\* | 0.36\*\*\* | 0.36\*\*\* | -0.15 |
|  | (0.019) | (0.028) | (0.096) | (0.098) |
| Professional degree | 0.38\*\*\* | 0.45\*\*\* | 0.39\*\* | -0.056 |
|  | (0.029) | (0.034) | (0.13) | (0.12) |
| Major \* highest degree |  |  |  |  |
| Ref. = other major, bachelor's degree |  |  |  |  |
| Humanities \* master's degree | -0.13\* | 0.012 | -0.22 | 0.33 |
|  | (0.060) | (0.056) | (0.29) | (0.20) |
| Humanities \* doctorate | -0.027 | 0.033 | 0.88\* | 0.74\* |
|  | (0.067) | (0.065) | (0.36) | (0.36) |
| Humanities \* professional degree | 0.28\*\* | -0.027 | 0.43 | 1.22\*\* |
|  | (0.086) | (0.086) | (0.50) | (0.44) |
| Constant | 7.54\*\*\* | 8.12\*\*\* | -9.99\*\*\* | -7.31\*\*\* |
|  | (0.12) | (0.13) | (0.49) | (0.47) |
|  |  |  |  |  |
| Observations | 63,227 | 50,022 | 69,654 | 59,191 |
| R-squared | 0.274 | 0.305 |  |  |
| Robust standard errors in parentheses |  |  |  |  |
| \*\*\* p<0.001, \*\* p<0.01, \* p<0.05 |  |  |  |  |
|  |  |  |  |  |
| \*Ever married = married, in a marriage-like relationship, separated, or divorced. | | | | |
| Note: Controls not displayed, complete results in Table D. | | | | |
| Source: Authors’ analysis of National Survey of College Graduates 2015 & 2017 | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table 7.** Marginal outcomes for interaction between major and highest degree, predicting earnings and marriage (1 = ever married\*, 0 = never married, arts and education majors excluded) | | | | |
|  | Earnings | | Ever vs. never married | |
|  | Men | Women | Men | Women |
| Other major, BA only | $78,323 | $48,555 | 84.4% | 82.7% |
| Humanities major, BA only | $57,819 | $40,978 | 81.3% | 76.6% |
| Other major, MA | $93,279 | $56,214 | 85.5% | 81.0% |
| Humanities major, MA | $60,432 | $48,026 | 78.8% | 80.0% |
| Other major, doctorate | $98,165 | $69,307 | 87.4% | 82.5% |
| Humanities major, doctorate | $70,566 | $60,443 | 91.6% | 83.8% |
| Other major, professional degree | $114,947 | $76,005 | 86.7% | 83.7% |
| Humanities major, professional degree | $112,605 | $62,433 | 86.8% | 91.4% |
|  |  |  |  |  |
| \*Ever married includes married, in a marriage-like relationship, separated, or divorced. | | | | |
| Source: Authors’ analysis of National Survey of College Graduates 2015 & 2017 | | | | |

1. Figures for 1942 and 1970 come from *Historical Statistics of the United States from Colonial Times to 1970* (U.S. Government 1975). In the historical statistics, the rate of baccalaureates per 1000 population was reported at age 23 because baccalaureates were typically earned by that age. Nowadays, 36.5% of baccalaureates are older than 23 at graduation (Velez et al. 2019). Currently, 370 per 1000 persons ages 25 to 29 have baccalaureates or higher (McFarland et al. 2019:236). [↑](#endnote-ref-1)
2. By contrast, in many foreign universities, prior to entering college, undergraduates are admitted into a single course of study that entails coursework tightly focused on one academic discipline. There are few opportunities to change major and few if any breadth or general education requirements (e.g., Brighouse and Arbelaez 2019:204). That type of university system can set the enrollment size for each major in advance, making it much easier to control and plan for courses, staffing and enrollment in each discipline, compared to the US. [↑](#endnote-ref-2)
3. Data from American Academy of Arts and Sciences (2017) found here: <https://www.humanitiesindicators.org/cmsData/pdf/indII-2c.pdf> [↑](#endnote-ref-3)
4. In 2014, Barak Obama questioned the value of certain liberal arts degrees: <https://www.insidehighered.com/news/2014/01/31/obama-becomes-latest-politician-criticize-liberal-arts-discipline> while in 2015 Marco Rubio disparaged studying philosophy in a Presidential debate: <https://www.insidehighered.com/quicktakes/2015/11/11/gop-debate-rubio-again-criticizes-philosophy> [↑](#endnote-ref-4)
5. Ever married = married, in a marriage-like relationship, or separated, or divorced. [↑](#endnote-ref-5)