

How Do History Majors Fare in the Job Market?

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HOW DO HISTORY STUDENTS fare in the job market? This is a pressing question these days, as history departments (along with others in the humanities) suffer declining enrollments and increased administrative and political pressure to justify their existence. As universities increasingly focus on the college-to-career transition, departments whose graduates suffer high unemployment rates, relatively low earnings, or unsatisfying careers need to prove the value of their degrees. Humanities face real disadvantages in justifying their programs relative to STEM and other “high-skill” majors, whose graduates have earned substantially more than those in the humanities and social sciences at least since the 1980s; although their pay advantage has decreased recently, a bachelor’s degree in a STEM field still increases lifetime earnings about twice as much as a bachelor’s degree in arts and humanities.¹

This does not mean that opportunities do not abound for history majors, of course. History B.A.s have the highest median income among humanities majors, and graduates work in a wide range of interesting fields, including education, management, and law.² History graduates point out that salary is not the only measure of success in the job market, even while reporting that history taught them transferrable

skills that have benefited them powerfully.³ Humanities majors may take longer to find their footing in the job market, however, and frequently suffer an early-career pay disadvantage while searching for the right kind of work.⁴ But humanities and social science B.A.s close the earnings gap with more vocationally oriented degrees as their careers progress,⁵ suggesting advantages to an education that gives them the tools to learn, adapt, and be flexible.

Any discussion about how to best serve our majors should start with a responsible look at the data. Our analysis of individual-level U.S. Census data since 2009 might help us understand the challenges that our majors face in the job market. Simply put, our majors do poorly out of the gate, but better over time. They suffer from above-average unemployment rates right after graduation, but history majors perform generally as well or better than other social science and humanities majors in the long run. In fact, unemployment rates for history majors fall significantly with age cohort. Moreover, historians tend to close early-career wage gaps over time. This reinforces the findings in recent studies that show that majors in the traditional liberal arts tend to perform better in the long run than more vocationally oriented majors later in their careers. History majors are also more likely than their counterparts to seek postgraduate degrees, which also positively affects their earnings and unemployment rates.

Method

Using individual-level U.S. Census data on nearly six million college graduates, we compare history majors to those in twenty-nine other fields on educational attainment, unemployment rates, and earnings, as well as examine the occupations that history majors most commonly work in at various stages of their careers. We use a variety of multiple regression analyses to see whether differences in demographic (gender, race, and age) and other characteristics can account for the initial differences in outcomes we find. As these statistical techniques remain fairly unusual in the field, we put most technical discussions in the endnotes and try to focus on the big picture in the text. Working with big data has both advantages and limitations. We can establish some patterns confidently and clearly, but we cannot isolate specific reasons for success and failure in the

general job market. If we combine our findings with a survey of the literature, several things come into focus. First, if our majors do a poor job of transitioning into the job market, it is a problem shared across the humanities and many social sciences. Second, we teach history majors the very skills many employers regard as the most important. The fact that our students are suffering on the early job market is disquieting. It suggests that we are not serving our students well in preparing them for life beyond the academy. We will end this article with some suggestions about how to help prepare students for a broader job market.

Data

Since 2009, the U.S. Census Bureau's American Community Survey (ACS) has asked college graduates what they majored in for their bachelor's (but not graduate) degrees. Combining individual-level data from 2009 through 2016 gives us detailed personal and job information on 5.8 million college graduates, including 135,000 history majors. We compare history majors to graduates in twenty-nine other fields (listed in all tables) on four outcomes: educational attainment, occupation, unemployment, and annual earnings.

A variety of individual characteristics—especially race, gender, and age—affect college graduates' success on all those outcomes, so we begin by comparing history to other majors on those demographic characteristics. We then compare history majors' educational attainment, unemployment rates, and earnings to those of other majors, first overall and then after controlling for the effects of race, gender, and age (and education for the unemployment and earnings). Many analyses break college graduates down by decade of birth or age to see whether differences between majors shrink as their careers progress.

To compare history majors to other majors who are as similar as possible, we use a variety of statistical techniques—multiple regression, logit, and multinomial logit analyses. We put details about these techniques in the endnotes. They allow us to say, for instance, whether history majors earn more or less than political science majors when both are the same race, sex, and age, and work the same number of hours per week in the same state. Our sample is so large that almost all differences we report are statistically significant, so we focus on the size of the differences.

Some cautionary notes about the data are in order. Students with different interests and abilities choose different majors, and intellectual ability has a major impact on both success in school and future earnings.⁶ Students in the highest-paying majors have the highest mean SAT-Math scores, and math ability and classes have important impacts on earnings.⁷ Because ACS data does not include any measures of ability, our research cannot test the possibility that differences in abilities (rather than the training specific to a major) explain all the differences in unemployment, educational attainment, and earnings. In short, we should not read ACS data to show that history majors would have earned more if they had majored in computer science, or less if they had chosen English. This last point is particularly important because, all too often, students view majors as predictive of future career success. But focusing solely on average incomes of various majors is problematic, particularly when used by administrators or policymakers to try and direct more students to STEM majors. Average income data does not take into account those students who drop out of STEM programs or are forced to switch majors, potentially adding time to the degree and increasing debt loads. Some students who find themselves nudged into STEM programs on the promise of prospective employment when they are not academically suited for them may leave those programs due to poor performance or drop out of school.⁸ Anybody who uses the aggregate data should read it cautiously.

Findings

Who Majors in History? History majors are, and long have been, strikingly white, male, and, specifically, white male (**Table 1**). Overall, 86% of history majors are white, compared to 75% of all college graduates; 62% are male, compared to 48% of all graduates; and 54% are white males, compared to 37% of all graduates. Out of the thirty majors, only environmental and natural resources majors are more likely to be white, only five majors have higher percentages who are white males, and only nine have higher percentages who are male.

History majors have become more diverse over time, but the process is slower than in most majors. (To examine trends in diversity, we focus on the percentage of each major who were white males, by decade of birth.⁹) Among all college graduates born before 1940, 50% were white males; among those born since 1980, only 30% were

Table 1: Percentage of Majors, by Race and Gender Representation

Major	White	Male	White	White	Black	Black	Latino	Latina	Asian	Asian
			Male	Female	Male	Female	Male	Female	Male	Female
Env. & Natural Resources	88	65	59	29	1	1	2	2	2	2
History	86	62	54	32	2	2	3	2	2	2
Agriculture	85	68	59	26	2	1	3	2	3	3
Philosophy	83	68	56	26	3	2	3	2	4	2
Education	83	24	20	62	2	5	1	4	1	3
English	82	34	29	53	1	4	2	3	2	5
Fitness, Parks & Rec.	80	52	41	39	5	3	4	3	2	2
Other Social Sciences	79	47	38	40	3	4	3	4	2	3
Fine Arts	79	38	30	49	2	2	3	4	2	5
Communications	78	41	33	45	3	5	3	4	2	3
Political Science	78	59	48	30	4	3	4	3	3	3
Family & Consumer Sci.	77	7	5	72	1	7	1	5	0	7
Theology	76	71	56	21	7	4	4	1	4	2
Math & Statistics	76	59	45	30	3	3	3	2	7	6
Psychology	75	31	24	51	2	6	2	6	2	4
Foreign Languages	74	28	21	53	1	3	3	7	2	8
Other	74	52	41	33	3	4	4	5	3	4
Liberal Arts	74	40	31	43	3	4	3	6	2	5
Business	73	56	44	29	4	5	4	4	4	5
Physical Sciences	73	65	50	23	3	3	3	2	9	6
Medical & Health Sci.	72	18	12	60	1	7	1	5	3	9
Economics	72	69	53	19	3	2	4	2	8	7
Biology & Life Sciences	72	51	38	34	2	4	3	3	7	8
Sociology	72	33	24	47	4	9	2	5	2	4
Architecture	71	69	51	20	3	1	7	4	7	5
Area Studies	70	35	25	45	2	5	3	6	3	6
Criminal Justice	69	59	44	25	7	8	6	5	2	1
Engineering	67	85	59	8	3	1	6	1	15	4
Pub. Affairs & Soc. Work	67	21	14	53	3	14	2	7	1	3
Computer Science	58	72	44	14	6	4	5	2	15	8
Total	75	48	37	38	3	4	3	4	4	5

white males, a drop of 20 percentage points (**Table 2**). For history majors, those percentages dropped only 12 points (from 60 to 48). In the youngest cohort of college graduates, those born since 1980, only theology and philosophy have higher percentages who were white males, only three majors are more white, and only six are more male.

History majors are also older than the average college graduate (46.1 versus 44.3 years old, on average). The fact that history majors tend to be older and more likely to be white and male emphasizes the importance to use multiple regression analysis to compare history to other majors. Educational attainment and earnings tend to be higher, and unemployment rates tend to be lower, for older, male, and white individuals. Simple comparisons of outcomes will bias our findings to suggest that majoring in history improves outcomes more than it does, because history majors might be faring better just because of their gender, race, and age. Regression analysis allows us to compare individuals of the same gender, race, and age.

Educational attainment. Most history majors earn graduate degrees. By age 34,¹⁰ 52% have earned a graduate degree: 30% have a master's as their highest degree, 16% earn professional degrees (primarily in law), and 6% earn doctorates (**Table 3**). Only five majors have higher percentages who earn graduate degrees, and only political science and philosophy majors are as likely as history majors to earn law degrees. These educational differences also show the need to control for educational attainment in examining unemployment rates and earnings.

Table 4 looks at the differences in educational attainment relative to history majors, after taking race, sex, and age into account.¹¹ History majors still look good. Comparable individuals in only seven of twenty-nine majors are more likely to obtain graduate degrees. Biology and life science majors are 13 percentage points more likely than *comparable* history majors (those of the same age, race, and sex living in the same state in the same year) to obtain graduate degrees. They and physics majors are 9 percentage points more likely to earn doctorates, and biology and political science majors remain the most likely to earn professional degrees. Although graduates from several degree programs are more likely than history majors to complete master's degrees, history majors are among the top handful to earn professional and doctoral degrees.

Table 2: Percentage of Majors Who Are White Males, by Year of Birth

Major	Before 1940	1940- 1949	1950- 1959	1960- 1969	1970- 1979	1980 & Later
Theology	64	56	56	52	55	55
Philosophy	68	67	59	53	51	50
History	60	61	57	54	50	48
Env. & Natural Resources	92	87	70	58	52	45
Engineering	86	78	69	58	46	45
Economics	75	73	57	50	43	44
Computer Science	53	61	52	47	40	42
Agriculture	86	81	64	54	50	42
Architecture	72	69	61	49	43	39
Fitness, Parks & Rec.	45	57	43	38	43	39
Political Science	66	68	58	47	41	38
Math & Statistics	61	58	47	40	35	38
Criminal Justice	74	69	55	43	41	37
Business	72	67	51	40	36	37
Physical Sciences	69	66	57	45	39	36
Other	59	54	44	42	38	35
Other Social Sciences	50	47	41	40	35	30
Fine Arts	29	34	31	30	31	27
Communications	52	50	43	34	32	27
Biology & Life Sciences	57	60	51	38	31	26
English	31	33	31	28	27	24
Liberal Arts	42	39	34	30	27	24
Foreign Languages	26	24	20	21	19	20
Sociology	31	33	27	22	22	19
Area Studies	46	40	31	26	21	18
Education	26	24	21	18	17	16
Psychology	41	44	33	23	18	16
Medical & Health Sci.	20	16	13	11	11	10
Public Affairs & Soc. Work	22	23	18	14	11	10
Family & Consumer Sci.	3	4	4	6	7	6
Total	50	47	40	36	32	30

Table 3: Percentage of Majors Aged 34 and Above, by Educational Attainment

Major	Bachelor's Degree	Master's Degree	Professional Degree	Doctoral Degree
Biology & Life Sciences	35	22	27	15
Philosophy	39	32	17	12
Physical Sciences	44	26	12	17
Area Studies	46	34	14	7
Political Science	46	25	24	5
History	48	30	16	6
Math & Statistics	48	36	6	10
Psychology	48	35	8	9
Foreign Languages	48	36	8	8
Education	51	43	4	3
English	51	33	10	6
Economics	54	30	11	5
Public Affairs & Soc. Work	54	40	4	2
Theology	55	32	5	8
Other Social Sciences	57	29	7	6
Engineering	59	32	4	5
Sociology	61	29	6	4
Architecture	63	28	7	2
Medical & Health Sciences	64	23	8	4
Env. & Nat. Resources	68	24	4	4
Other	68	21	8	3
Family & Consumer Sci.	69	26	3	2
Fitness, Parks & Rec.	69	23	5	3
Agriculture	70	18	6	6
Liberal Arts	70	21	6	3
Fine Arts	71	23	3	3
Computer Science	71	26	2	2
Criminal Justice	75	18	5	2
Communications	75	19	4	2
Business	76	20	3	1
Total	61	28	7	5

Table 4: Percentage Differences of Majors Aged 34 and Above (Relative to History Majors), by Educational Attainment

Major	Bachelor's Degree	Master's Degree	Professional Degree	Doctoral Degree
Biology & Life Sciences	-13.3***	-7.1***	11.6***	8.8***
Philosophy	-9.0***	3.4***	0.3	5.3***
Area Studies	-3.4***	2.8***	-0.7	1.2***
Physical Sciences	-3.0***	-2.9***	-3.6***	9.4***
Political Science	-2.0***	-4.5***	7.4***	-0.9***
Psychology	-1.6***	4.4***	-6.4***	3.6***
Foreign Languages	-0.8**	4.8***	-6.1***	2.1***
History	0	0	0	0
Math & Statistics	0.4	6.5***	-9.7***	2.8***
Education	1.6***	12.5***	-11.0***	-3.0***
English	2.4***	1.9***	-4.6***	0.3**
Public Affairs & Soc. Work	5.2***	9.3***	-10.7***	-3.7***
Economics	6.7***	0.6**	-5.5***	-1.8***
Theology	6.9***	2.4***	-10.9***	1.7***
Other Social Sciences	8.1***	-0.6*	-7.8***	0.3*
Engineering	11.5***	2.5***	-12.2***	-1.8***
Sociology	11.8***	-1.8***	-8.3***	-1.6***
Medical & Health Sciences	13.7***	-7.3***	-5.2***	-1.2***
Architecture	14.4***	-0.9**	-8.9***	-4.6***
Env. & Nat. Resources	18.1***	-5.3***	-10.9***	-1.9***
Family & Consumer Sci.	18.7***	-4.3***	-11.4***	-3.0***
Fitness, Parks & Rec.	18.7***	-6.0***	-10.2***	-2.6***
Other	18.8***	-8.5***	-7.5***	-2.8***
Liberal Arts	20.7***	-8.5***	-8.9***	-3.3***
Agriculture	20.8***	-10.5***	-9.9***	-0.4**
Fine Arts	21.2***	-6.5***	-11.6***	-3.0***
Computer Science	21.9***	-4.3***	-13.5***	-4.1***
Communications	25.6***	-10.7***	-11.0***	-3.9***
Criminal Justice	25.9***	-11.4***	-10.3***	-4.3***
Business	26.4***	-9.7***	-11.8***	-5.0***

Note: Differences from History are significant at .10 (*), .05 (**), or .01 (***) level.

Occupational attainment. About 12% of history majors were working as attorneys during this period. (**Table 5** lists all occupations in which at least 1% of some sub-group of history majors work.) Percentages rose fairly steadily with age, and they were substantially higher for men than women (13% versus 8%). About 15% were employed as teachers (7% in elementary schools, 4% in colleges, and 3% in high schools). The percentages in primary and high schools tend to decline with age, but college professors make up a higher percentage among older groups. Women were much more likely than men to teach, primarily because they were nearly twice as likely to become elementary school teachers. Another 16% were managers of some type, with one-sixth of them being managers in education. The percentage with management positions doubled from those in their 20s to those in their 40s, then remained fairly stable. Another 8% worked in sales, with the percentage reasonably consistent with age levels, though about 50% higher for men than women.

These occupations account for about half of working history majors, with the percentages rising steadily with age. Of those in their 20s, 14% of history majors work as retail sales clerks, secretaries, customer service representatives, administrative support, general office clerks, wait staff, or in the military, but that drops by half for those in their 30s, as history majors move into more professional and administrative positions. History majors also end up in some surprising occupations, with 1% to 3% in each of the following: computer-related occupations, financial specialties, the clergy, the police, and medicine.

The numbers offer some interesting observations on gender and career path. While it is not surprising that more women than men went into primary school teaching, roughly equal proportions went into secondary school teaching and college teaching (a higher percentage of women actually went on to be college professors). Women were nearly as likely as men to be managers.

Comparisons to occupational attainment in the other twenty-nine majors would be excessively complex, but the top occupations for history majors generally offer rewarding, respected careers. Contrary to the fears of parents, the apparently dead-end jobs that many history graduates take in their 20s give way to professional careers as they reach middle age.

Table 5: Percentage of Most Common Occupations for History Majors, by Age and Sex

Occupation	Total	20-29	30-39	40-49	50-59	60+	Female	Male
Lawyers	11.6	5.3	10.8	10.6	14.2	16.4	8.2	13.2
Primary school teachers	6.9	8.3	9.0	6.9	6.0	4.0	10.1	5.4
Managers and admins.	6.6	3.9	6.3	8.1	7.8	6.1	5.3	7.2
College professors	3.8	1.9	3.1	3.8	4.1	6.2	4.0	3.7
Supervisors of salespeople	3.0	3.1	3.2	3.0	3.1	2.9	2.5	3.3
Secondary school teachers	3.0	3.8	3.7	3.0	2.5	1.8	3.1	2.9
Salespersons, n.e.c.	2.7	2.7	2.5	3.0	2.5	2.7	1.7	3.2
Managers in education	2.5	1.0	2.4	2.8	2.8	3.1	3.1	2.2
Chief executives	2.1	0.3	1.1	2.5	2.9	3.7	1.1	2.6
Computer systems analysts	1.9	1.9	2.2	2.4	1.6	1.1	1.5	2.1
Managers in marketing	1.8	1.9	1.9	2.2	1.4	1.2	1.8	1.7
Other financial specialists	1.6	1.3	1.4	1.8	1.4	1.8	1.1	1.8
Clergy and religious	1.4	0.5	0.9	1.0	1.8	3.1	0.7	1.8
Retail sales clerks	1.4	2.5	1.1	1.1	1.2	1.7	1.0	1.6
Secretaries	1.4	2.6	1.1	1.0	1.4	1.3	3.5	0.4
Teachers, n.e.c.	1.4	2.2	1.3	1.1	1.2	1.4	2.1	1.0
Military	1.4	2.6	2.3	1.5	0.3	0.0	0.2	1.9
Accountants and auditors	1.3	1.2	1.2	1.2	1.4	1.5	1.5	1.2
Management analysts	1.3	1.1	1.2	1.3	1.3	1.6	1.1	1.4
Financial managers	1.3	1.0	1.4	1.5	1.4	1.0	1.2	1.3
Customer service reps	1.3	2.7	1.4	0.9	0.8	0.8	1.7	1.1
Physicians	1.2	0.4	1.3	1.4	1.1	1.7	1.0	1.3
Librarians	1.2	0.9	0.9	1.2	1.4	1.5	2.3	0.6
Legal assts. and paralegals	1.2	2.2	1.2	1.0	0.9	0.7	1.9	0.8
Police and detectives	1.1	1.0	1.4	1.6	0.9	0.5	0.4	1.5
Personnel, HR, training	1.1	1.4	1.3	1.0	0.8	0.8	1.5	0.8
Office supervisors	1.0	0.9	0.9	1.0	1.3	1.0	1.2	0.9
Real estate sales	1.0	0.6	0.7	1.0	1.0	1.7	0.8	1.1
Managers of service	0.9	0.9	1.0	1.0	0.8	0.9	1.4	0.7
Voc. and edu. counselors	0.9	1.1	1.0	0.8	0.9	0.9	1.4	0.7
Computer software devs.	0.9	0.6	0.9	1.3	0.9	0.6	0.5	1.1
Editors and reporters	0.9	0.8	0.9	0.8	1.0	0.9	1.0	0.8
Insurance salespeople	0.8	0.6	0.7	0.8	0.7	1.1	0.5	0.9
Social workers	0.7	0.7	0.7	0.6	0.6	0.8	1.2	0.5
Archivists and curators	0.7	0.9	0.7	0.6	0.7	0.4	1.2	0.4
Registered nurses	0.6	0.6	0.7	0.6	0.7	0.7	1.4	0.3
Administrative support staff	0.6	1.1	0.7	0.3	0.5	0.4	1.0	0.4
General office clerks	0.5	1.1	0.4	0.3	0.5	0.4	0.9	0.3
Wait staff	0.4	1.3	0.4	0.2	0.1	0.1	0.5	0.3

Unemployment. Unemployment rates were relatively high for college graduates from 2009-2016 in the wake of the Great Recession, but they were substantially lower than for those without bachelor's degrees (3.9% versus 10.0%). Unemployment rates were especially high for those in their 20s during this period, but again substantially lower for college graduates than for those with less education (5.4% versus 15.6%). **Table 6** shows that history majors' unemployment rates were relatively high among college graduates, both overall (4.2%) and for those in their 20s (6.8%).

Controlling for individual characteristics did not substantially alter that picture (**Table 7**).¹² Agriculture majors in their 20s, for instance, were 3.3 percentage points less likely than comparable history majors to be unemployed. All told, nineteen of twenty-nine majors had significantly lower unemployment rates than history majors in their 20s, and none had significantly higher rates. For those in their 30s, the differences were substantially less, but nineteen majors still had significantly lower unemployment rates, and only architecture had a higher rate. History looks better among older employees, and for those in their 60s, about as many majors had significantly higher as had significantly lower rates.

Earnings. A college education still pays, despite some popular arguments that it is no longer worth the cost. History majors with bachelor's degrees earn, on average, 49% more than comparable high school graduates (those of the same age, educational attainment, race, sex, citizenship and relationship status, working the same number of hours in the same state); those with master's, professional, and doctoral degrees earn 73%, 168%, and 109% more than high school graduates, respectively.¹³ This is somewhat worse than college graduates in general, combining all majors. They earned, on average, 65%, 95%, 174%, and 134% more than comparable high school graduates.

Table 8 restricts the sample to college graduates and shows how earnings vary across majors, with majors ranked by expected earnings.¹⁴ Numbers represent the percentage differences in earnings from comparable history majors. Engineering, computer science, economics, and health and medical sciences and services majors all earn at least 25% more than history majors. Another five majors make 10% to 25% more than history majors.

Table 6: Unemployment Rates of Majors, by Age

Major	Total	18-29	30-39	40-49	50-59	60+
Medical & Health Sciences	2.4	3.8	2.1	1.9	2.2	2.8
Agriculture	2.5	3.4	1.8	2.2	2.6	2.7
Education	2.8	3.6	2.4	2.3	2.8	3.4
Biology & Life Sciences	3.2	5.3	2.5	2.6	3.0	3.0
Theology	3.2	3.8	2.5	3.0	3.6	3.3
Physical Sciences	3.4	4.8	2.4	2.7	3.3	2.9
Fitness, Parks & Rec.	3.5	4.7	3.1	2.8	3.4	4.1
Engineering	3.6	4.5	2.5	2.8	4.0	5.5
Math & Statistics	3.7	5.2	2.8	2.8	3.8	4.4
Family & Consumer Sci.	3.8	4.2	3.5	3.8	3.5	4.1
Env. & Nat. Resources	3.9	6.8	3.0	2.8	3.5	3.6
Computer Science	4.1	5.3	3.1	3.7	4.6	7.4
History	4.2	6.8	3.7	3.2	4.0	3.5
Business	4.2	5.1	3.6	3.7	4.3	5.1
Criminal Justice	4.2	6.4	3.5	3.1	4.1	4.4
Public Affairs & Soc. Work	4.3	5.4	4.0	3.9	4.4	4.1
Economics	4.5	6.6	3.4	3.9	4.4	4.8
Other	4.5	5.6	3.5	4.1	4.5	5.6
Psychology	4.5	6.0	4.0	3.8	4.5	4.2
Political Science	4.5	7.1	3.9	3.6	4.3	4.2
Philosophy	4.5	7.2	4.1	4.0	4.2	3.4
Sociology	4.6	6.5	3.8	4.1	4.5	4.4
Foreign Languages	4.6	6.7	4.4	4.0	4.3	3.8
English	4.7	6.8	4.1	4.2	4.5	4.5
Area Studies	4.8	6.6	4.8	3.7	4.1	4.1
Liberal Arts	4.9	6.9	4.7	4.4	4.4	4.8
Communications	5.1	6.3	4.0	4.5	5.6	5.9
Other Social Sciences	5.1	7.6	4.4	4.5	4.6	5.3
Fine Arts	5.6	7.2	4.8	5.2	5.3	5.4
Architecture	5.6	7.3	5.3	4.9	5.3	6.0
Total	3.9	5.4	3.3	3.4	3.9	4.3

Table 7: Differences in Unemployment Rates among Comparable College Graduates, by Age

Major	18-29	30-39	40-49	50-59	60+
Agriculture	-3.3***	-2.1***	-1.2***	-1.6***	-0.9***
Theology	-3.1***	-1.4***	-0.6	-0.7**	-0.5
Medical & Health Sciences	-3.0***	-2.3***	-2.0***	-2.2***	-0.9***
Education	-2.9***	-1.7***	-1.4***	-1.6***	-0.4**
Engineering	-2.9***	-1.6***	-0.8***	-0.4*	1.2***
Family & Consumer Sci.	-2.6***	-1.0***	-0.3	-1.1***	0.4
Physical Sciences	-2.5***	-0.7***	-0.6***	-0.6***	0.7***
Computer Science	-2.3***	-1.3***	-0.2	0.3	3.1***
Fitness, Parks & Rec.	-2.3***	-1.6***	-0.9***	-1.1***	-0.9**
Business	-2.1***	-0.8***	-0.3	-0.2	0.8***
Math & Statistics	-2.1***	-1.2***	-0.8***	-0.5*	0.5**
Biology & Life Sciences	-1.9***	-1.3***	-0.6***	-0.8***	-0.1
Other	-1.4***	-0.8***	0.3	0	1.6***
Public Affairs & Soc. Work	-1.3***	-0.6**	-0.1	-0.2	0.1
Economics	-1.2***	-0.8***	0.2	0.1	0.8***
Criminal Justice	-1.2***	-1.0***	-0.8***	-0.4	0.2
Psychology	-1.1***	-0.3	0.1	0.2	0.6***
Sociology	-0.9**	-0.8***	0.1	-0.3	0.4
Communications	-0.8***	-0.4**	0.5***	1.1***	2.0***
Area Studies	-0.8	0.3	0	-0.1	0.5
Liberal Arts	-0.2	0	0.3	-0.2	0.8***
Political Science	-0.1	0	0.2	0.4	0.8***
History	0	0	0	0	0
English	0	0	0.6***	0.3	0.8***
Foreign Languages	0	0.3	0.2	-0.1	0.1
Fine Arts	0.1	0.3	1.2***	0.7***	1.5***
Env. & Nat. Resources	0.1	-0.9***	-0.6*	-0.8**	-0.1
Philosophy	0.2	0.6	1.0**	0.4	0
Architecture	0.4	1.0***	1.1***	0.6*	1.7***
Other Social Sciences	0.5	0.2	0.8***	0.2	1.5***
Observations	667,585	1,009,924	1,028,907	994,948	644,301

Note: Differences from History are significant at .10 (*), .05 (**), or .01 (***) level. Models control for age, educational attainment, race/ethnicity, gender, year, and state of residence with sets of dummy variables.

Table 8: Percentage Differences in Earnings among Comparable College Graduates, by Age

Major	Total	18-29	30-39	40-49	50-59	60+
Engineering	35.9***	49.9***	40.4***	31.3***	31.8***	27.1***
Computer Science	33.2***	44.9***	35.6***	28.3***	27.8***	21.4***
Economics	29.5***	34.1***	36.2***	30.9***	24.0***	16.6***
Medical & Health Sci.	26.3***	32.3***	25.5***	22.7***	26.5***	29.6***
Math & Statistics	23.4***	24.3***	22.4***	23.9***	25.3***	19.9***
Physical Sciences	17.7***	7.4***	15.2***	17.3***	21.8***	23.9***
Business	17.1***	21.9***	20.4***	15.3***	14.8***	11.2***
Biology & Life Sciences	15.5***	1.2	14.1***	19.5***	23.1***	24.7***
Political Science	12.1***	12.9***	15.4***	11.7***	11.4***	8.0***
Architecture	6.1***	8.5***	4.9***	3.5***	8.8***	5.9***
Other	6.1***	8.7***	8.9***	4.5***	5.1***	8.0***
Communications	5.2***	7.0***	9.2***	4.2***	0.7	-2.6*
Area Studies	4.2***	-0.3	6.8***	6.5***	1.5	6.5**
Criminal Justice	0.3	5.1***	2.6***	-1.7**	-1.9*	-6.1***
History	0	0	0	0	0	0
Foreign Languages	-0.3	0.3	1.8*	-1.6	-1.7	2.7*
Sociology	-0.6	1.8*	1	-2.9***	-1.8*	-1.2
Env. & Nat. Resources	-1.2**	-1.8	0	-4.1***	3.0**	-4.5*
Other Social Sciences	-1.4***	-1.8	-1.1	-1.5	-1.6	-0.7
English	-1.6***	-3.3***	-1.5*	-1.8**	-0.5	-0.3
Psychology	-1.8***	-2.3***	-0.2	-3.4***	-2.6***	0.7
Liberal Arts	-3.0***	-2.1*	-3.4***	-3.3***	-3.6***	-3.5**
Pub. Affairs & Soc. Work	-6.5***	-1.1	-5.8***	-9.2***	-7.1***	-6.0***
Agriculture	-6.9***	1.5	-2.4**	-11.9***	-7.1***	-12.5***
Fitness, Parks & Rec.	-7.1***	-4.6***	-1.8*	-10.3***	-9.4***	-8.4***
Family & Consumer Sci.	-7.8***	-3.8***	-6.6***	-10.7***	-8.5***	-8.2***
Fine Arts	-9.6***	-5.3***	-6.7***	-11.3***	-13.6***	-13.4***
Philosophy	-9.7***	-1.7	-6.1***	-10.6***	-14.0***	-13.2***
Education	-12.1***	-2.7***	-11.8***	-17.1***	-12.6***	-10.5***
Theology	-31.3***	-17.2***	-25.9***	-31.8***	-34.7***	-38.8***
Observations	3,022,004	407,442	750,218	769,198	728,338	364,284

Note: Differences from History are significant at .10 (*), .05 (**), or .01 (***) level. Models control for age, educational attainment, race/ethnicity, gender, year, and state of residence with sets of dummy variables.

History majors make about the same amount as criminal justice, sociology, psychology, foreign language, and English majors. A handful of majors make 10% less than history majors (philosophy, fine arts, education, and theology). In general, history majors make as much as most social science majors (economics and political science are the exceptions) and more than many of the humanities. Most of the highest paid majors are far more mathematical than history (business and political science are the exceptions), and most do not seem obvious competitors for the types of students that history attracts.

The good news is that pay disparities tend to narrow over time. Engineering majors in their 20s make 50% more than comparable history majors; among those in their 60s, the difference is only 27%. Similarly, the pay advantages for computer science and economics drop from 45% and 34% for those in their 20s, to 21% and 17% for those in their 60s. History majors also start out ahead of fine arts, philosophy, education, and theology majors, but widen the pay gap fairly steadily as their careers progress.

Conclusions

Historians can take comfort in several hard conclusions from this study. First of all, we can generally confirm the perception that history majors find good and rewarding work in a variety of different fields.¹⁵ Prospective students should know that history majors end up earning 50% more than comparable high school graduates and that many earn graduate degrees, which further increase their lifetime earnings. History majors' lifetime earnings are better than or comparable to most of those in the social sciences and humanities. Our graduates work in a huge variety of fields, and substantial percentages work as lawyers, teachers, and managers.

The news is not all good, of course. History majors earn one-quarter to one-third less than comparable graduates who studied engineering, economics, computer science, and health sciences. Although pay gaps narrow over the course of the career, these same graduates make one-third to one-half more than history majors in their 20s. History majors also have unfortunately high unemployment rates in their 20s, significantly higher than those in more career-oriented majors, a problem they share with other social science and humanities majors.¹⁶

These weaknesses point to difficulty transitioning into the labor market. This comports with most historians' understanding of their degree as a generalist one that prepares its students by imparting transferrable skills rather than specific vocational training. If that is so, some new evidence ought to alarm us. Recent literature argues that college students are not learning much of anything on college campuses.¹⁷ Disconcertingly, a recent study finds that college students, including history majors, are no better at identifying core elements of the discipline (such as distinguishing primary from secondary sources) than high school students.¹⁸ It is, in short, possible that our students do not transition well to the job market because we are failing them.

If this is so, then one of the easiest fixes might be for history departments to pay more attention to calibrating their learning outcomes to the skills recognized as important in the labor market. The American Historical Association's Tuning Project did precisely this.¹⁹ Some universities have taken this even further. The University of Central Florida has adopted a Quality Enhancement Project (QEP) under the theme, "What's Next: Integrative Learning for Professional and Civic Preparation," part of which is to gear curriculum specifically towards providing history majors with career counseling, internships, and—importantly—direct advice on what skills they are learning and how those skills transfer to the broader job market.²⁰

There is some evidence, albeit anecdotal, that opportunity abounds for advocates of generalist degrees to better prepare their students for the job market. Recent employer surveys have highlighted skills like communication, critical thinking, and writing as the most important skills to obtain in college, and have indicated that general preparation may be preferable to specific, vocational-style training. Employers have long been complaining about the inability of business majors to think critically, write effectively, and work with teams. Many have talked up the value of humanities degrees—and the skills they promote—in the popular press.²¹

If all this is so, then focused "College to Career" initiatives could help history departments better articulate the transferrable nature of the skills they teach and help smooth history graduates' transition to the job market. This will require history teachers to be more intentional in our own teaching, to have students identify more readily what are the core elements of historical analysis. It may

also require that we have students learn how to explain what they are doing and why it is important to people beyond the academy. But such an approach need not displace the intellectual benefits of studying history. It is somewhat cliché to point out that we live in a world of rapid technological and economic change. The value of studying economic transitions brought on by industrialization and the consumer revolution (to name a couple) are all the more important for a society that tends to treat the advent of the Internet as if it was the very first communications revolution. The right pedagogical blend ought to combine professionalization of our majors with a cultivation of their intellectual curiosity.

One last cautionary note. The ACS data cannot necessarily tell us how our students will perform for the job market of the future. While it is doubtful that the job market will stop valuing STEM degrees, we must be aware that the effects of automation are not entirely predictable. Certainly, the automation and outsourcing in the 1980s targeted many jobs composed largely of manual and routine tasks for elimination.²² Wage growth was largely confined in the 1990s to fields that resisted automation or outsourcing, such as engineering, medicine, law, and management.²³ But recent evidence suggests that wage growth for these high-skill positions has slowed between 2007-2012. The reason is not entirely clear. They might be a temporary result of sluggishness since the Great Recession, or an indication that over-investment in information technology stunted innovation. But they also might be because artificial intelligence has begun to automate abstract tasks that were once beyond the computer's ken.²⁴ The speed of automation and innovation is constantly changing the nature of work, and it will be difficult to know what jobs (and what specific skills they will require) will exist ten years in the future. So even if all that is solid melts into air, it will likely still be true that the jobs of the future will require flexibility and adaptability. The historical profession is grounded on skills that might just help future workers cope with relentless and unceasing change over time, but only if we are aware of our own context.

Notes

1. Peter Arcidiacono, "Ability Sorting and the Returns to College Major," *Journal of Econometrics*, Higher Education (Annals Issue), 121, nos. 1-2 (July-August 2004): 343-375; Estelle James, Nabeel Alsalam, Joseph C. Conaty, and Duc-Le To, "College Quality and Future Earnings: Where Should You Send Your Child to College?" *The American Economic Review*, Papers and Proceedings of the Hundred and First Annual Meeting of the American Economic Association, 79, no. 2 (May 1989): 247-252; Jeff Grogger and Eric Eide, "Changes in College Skills and the Rise in the College Wage Premium," *The Journal of Human Resources* 30, no. 2 (Spring 1995): 280; Joseph G. Altonji, Lisa B. Kahn, and Jamin D. Speer, "Trends in Earnings Differentials across College Majors and the Changing Task Composition of Jobs," *The American Economic Review*, Papers and Proceedings of the One Hundred Twenty-Sixth Annual Meeting of the American Economic Association, 104, no. 5 (May 2014): 387-393; Douglas A. Webber, "The Lifetime Earnings Premia of Different Majors: Correcting for Selection Based on Cognitive, Noncognitive, and Unobserved Factors," *Labour Economics* 28 (June 2014): 14-23.
2. Paul B. Sturtevant, "History Is Not a Useless Major: Fighting Myths with Data," *Perspectives on History* 55, no. 4 (April 2017): 25-28; Francis Oakley, "The Humanities Indicators Project," *Bulletin of the American Academy of Arts and Sciences* 62, no. 2 (Winter 2009): 27-28.
3. Sadie Bergen and Emily Swafford, "Why Study History? Survey of History BAs Provides Some Real Answers," *Perspectives on History* 55, no. 1 (January 2017): 116-154.
4. Joseph G. Altonji, Erica Blom, and Costas Meghir, "Heterogeneity in Human Capital Investments: High School Curriculum, College Major, and Careers," *Annual Review of Economics* 4, no. 1 (September 2012): 185-223. This is just as true for graduates of selective colleges and universities as it is for those of public institutions. Scott L. Thomas and Liang Zhang, "Post-Baccalaureate Wage Growth within Four Years of Graduation: The Effects of College Quality and College Major," *Research in Higher Education* 46, no. 4 (June 2005): 437-459.
5. Debra Humphreys and Patrick Kelly, *How Liberal Arts and Sciences Majors Fare in Employment: A Report on Earnings and Long-Term Career Paths* (Washington DC: Association of American Colleges and Universities, 2014).
6. Arcidiacono, "Ability Sorting and the Returns to College Major"; Webber, "The Lifetime Earnings Premia of Different Majors."
7. Altonji, Blom, and Meghir, "Heterogeneity in Human Capital Investments."
8. Ralph Stinebrickner and Todd R. Stinebrickner, "A Major in Science? Initial Beliefs and Final Outcomes for College Major and Dropout," *The Review of Economic Studies* 81, no. 1 (January 2014): 426-472. There are multiple factors to consider here beyond the ken of this article, but anybody generalizing from average salaries culled from the ACS should be aware of ACS limitations. For instance, there is also evidence that poor performance in certain degree programs can negatively impact one's employment prospects. See Timothy M. Diette and Manu Raghav, "A Student's Dilemma: Is There a Trade-Off between a Higher

Salary or Higher GPA,” *Education Economics* 24, no. 6 (December 2016): 612-621. The economic return on elite colleges is also easy to overstate if one does not consider performance. See Linda Datcher Loury and David Garman, “College Selectivity and Earnings,” *Journal of Labor Economics* 13, no. 2 (April 1995): 289-308; Scott L. Thomas, “Deferred Costs and Economic Returns to College Major, Quality, and Performance,” *Research in Higher Education* 41, no. 3 (June 2000): 281-313; Scott L. Thomas, “Longer-Term Economic Effects of College Selectivity and Control,” *Research in Higher Education* 44, no. 3 (June 2003): 263-299. Finally, college selectivity has a much stronger impact on future earnings potential for humanities majors than for those in STEM fields. Eric R. Eide, Michael J. Hilmer, and Mark H. Showalter, “Is It Where You Go or What You Study? The Relative Influence of College Selectivity and College Major on Earnings,” *Contemporary Economic Policy* 34, no. 1 (January 2016): 37-46.

9. This table implicitly assumes that most students finish schooling reasonably early in life, or at least that age at graduation does not vary dramatically across majors.

10. We restrict this analysis to those aged at least 34, because the vast majority of people in the ACS had finished schooling by that age.

11. These findings are based on multinomial logit analysis, the appropriate statistical method when the dependent variable is nominal level (the values do not have a clear order). Our key independent variables are 29 dummies that identify majors, with history as the reference group. To achieve comparability, we include 9 dummy variables for race/ethnicity/gender, 70 dummy variables for age, 50 dummy variables for state of residence, and 6 dummy variables for ACS year. The coefficients on the major dummies represent differences from history majors of the same race, sex, and age, living in the same state. We translate those coefficients into average probability differences relative to history majors using the Stata “margins” command.

12. These findings are based on binary logit analysis, the appropriate statistical method when the dependent variable is dichotomous. As in the educational attainment model, our key independent variables are 29 dummies that identify majors, and our control variables are 9 dummy variables for race/ethnicity/gender, 70 dummy variables for age, 50 dummy variables for state of residence, and 6 dummy variables for ACS year. We also add 3 dummy variables for educational attainment. We use the Stata “margins” command to translate the coefficients on the dummy variables for major into average differences in probability of unemployment relative to history majors of the same race, sex, educational attainment, and age, living in the same state.

13. We do not show the regressions for this paragraph. They use all full-time, full-year employees aged 21 to 65, regardless of their educational attainment. We use multiple regression analysis, with the natural logarithm of annual earnings as the dependent variable. (This coding that assumes that the independent variables have consistent percentage [rather than dollar] effects on earnings.) This model drops the variables for major, but includes 9 dummy variables for race/ethnicity/gender, 70 dummy variables for age, 50 dummy variables for state of residence, and 6 dummy variables for ACS year. This model also adds 23 dummy variables

for educational attainment, with high school graduates as the reference group, and 65 dummy variables for hours worked in a typical week. We convert the coefficients on bachelor's, master's, professional, and doctoral degrees into percentage differences from comparable high school graduates by exponentiating the coefficients, subtracting 1, and multiplying times 100. We run two separate models. The first only includes history majors among the college graduates (but everyone who did not graduate from college). The second includes all college graduates except history majors.

14. This model restricts the sample to college graduates who worked at least fifty weeks in the previous year and at least thirty hours in a typical week. As in the previous earnings model, the dependent variable is the natural logarithm of annual earnings and we include all the control variables (except the redundant educational level variables). As in the other previous models, our key independent variables are 29 dummies that identify majors, with history majors as the reference group. We convert the regression coefficients on those variables into percentage differences in expected earnings, relative to history majors of the same race, gender, age, and educational attainment, working the same number of hours in the same state (see previous note for more detail).

15. Paul B. Sturtevant, "History Is Not a Useless Major," 25-28.

16. This was one area where Sturtevant incorrectly downplayed the statistical differences between history and other majors.

17. Richard Arum and Josipa Roksa, *Academically Adrift: Limited Learning on College Campuses* (Chicago, IL: The University of Chicago Press, 2011).

18. Sam Wineburg, Mark Smith, and Joel Breakstone, "What Is Learned in College History Classes?" *The Journal of American History* 104, no. 4 (March 2018): 983-993. The only thing worse, apparently, is history professors' abysmal understanding of assessment itself. See Anne Hyde, "Five Reasons History Professors Suck at Assessment," *The Journal of American History* 102, no. 4 (March 2016): 1104-1107.

19. David Trowbridge, "Tuning, Teaching, and Taking Care of Students," *Perspectives on History* 51, no. 4 (April 2013): 27-28; James Grossman, "The AHA's Tuning Project at Twelve Months," *Perspectives on History* 51, no. 4 (April 2013): 7.

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21. Hershey H. Friedman, William Hampton-Sosa, and Linda Weiser Friedman, "The Decline and Fall of the Business Major: Is It Inevitable?" *SS (Social Science) International Journal of Business and Management Research* 3, no. 4 (July 2013); George Anders, "That 'Useless' Liberal Arts Degree Has Become Tech's Hottest Ticket," *Forbes* 196, no. 2, August 17, 2015, 70-80; Daniel Gelernter, "Why I'm Not Looking to Hire Computer-Science Majors (opinion)," *Wall Street Journal (Online)*, August 28, 2015, 1; John Fea, "Mark Cuban: Don't Go to College to Study Business. Study the Humanities," *The Way of Improvement Leads Home* (blog), February 18, 2017, <<https://thewayofimprovement>.

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22. Grogger and Eide, "Changes in College Skills"; Webber, "The Lifetime Earnings Premia of Different Majors."

23. Altonji, Kahn, and Speer, "Trends in Earnings Differentials across College Majors."

24. David H. Autor and David Dorn, "The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market," *The American Economic Review* 103, no. 5 (August 2013): 1553-1597; David H. Autor, "Why Are There Still So Many Jobs? The History and Future of Workplace Automation," *The Journal of Economic Perspectives* 29, no. 3 (Summer 2015): 3-30.