DEPARTMENT OF DATA

# The most-regretted (and lowest-paying) college majors

Almost half of humanities and arts majors regret their choice — and enrollment in those disciplines is shrinking rapidly



Analysis by Andrew Van Dam
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Nearly 2 in 5 American college graduates have major regrets.

That is, they regret their major.

The regretters include a healthy population of liberal arts majors, who may be responding to pervasive social cues. When he delivered his 2011 State of the Union address in the shadow of the Great Recession, former president Barack Obama plugged math and science education and called on Americans to "out-innovate, out-educate, and out-build the rest of the world." Since then, the number of new graduates in the arts and humanities has plunged.



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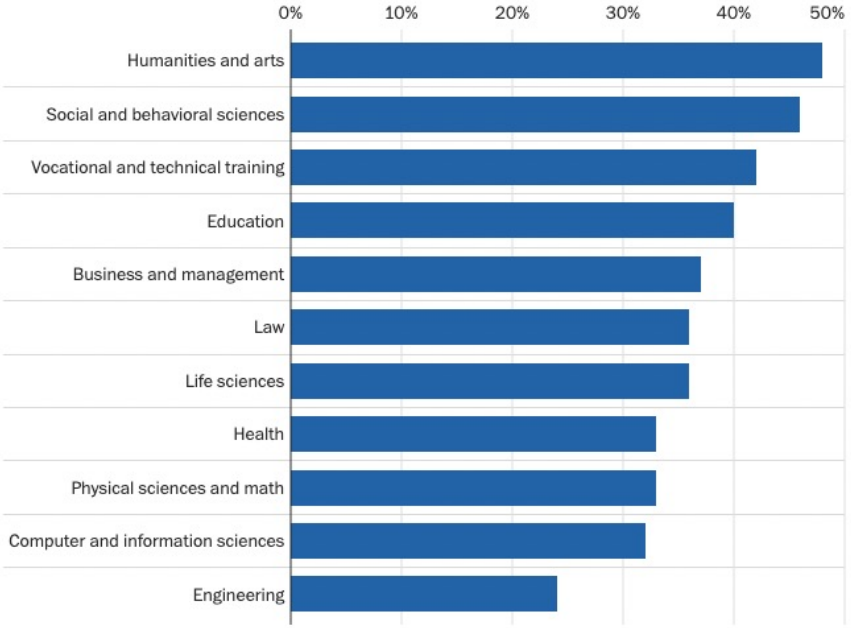
Meanwhile, nearly half of humanities and arts majors have studier's remorse as of 2021. Engineering majors have the fewest regrets: Just 24 percent wish they'd chosen something different, according to a Federal Reserve survey.

As a rule, those who studied STEM subjects — science, technology, engineering and mathematics — are much more likely to believe they made the right choice, while those in social sciences or vocational courses second-guess themselves.

There doesn't seem to be much relationship between loans, gender, race or school selectivity and your regrets. Though, as you may have guessed, our analysis of Fed data shows that the higher your income is today, the less you regret the major you chose back in college.

**Many humanities and social science majors have regrets**

Those who wish they'd chosen a different field of study, as a share of all who majored in each subject, 2021




Note: includes those who attended college but aren't currently enrolled

Source: Federal Reserve Survey of Household Economics and Decisionmaking DEPARTMENT OF DATA / THE WASHINGTON POST

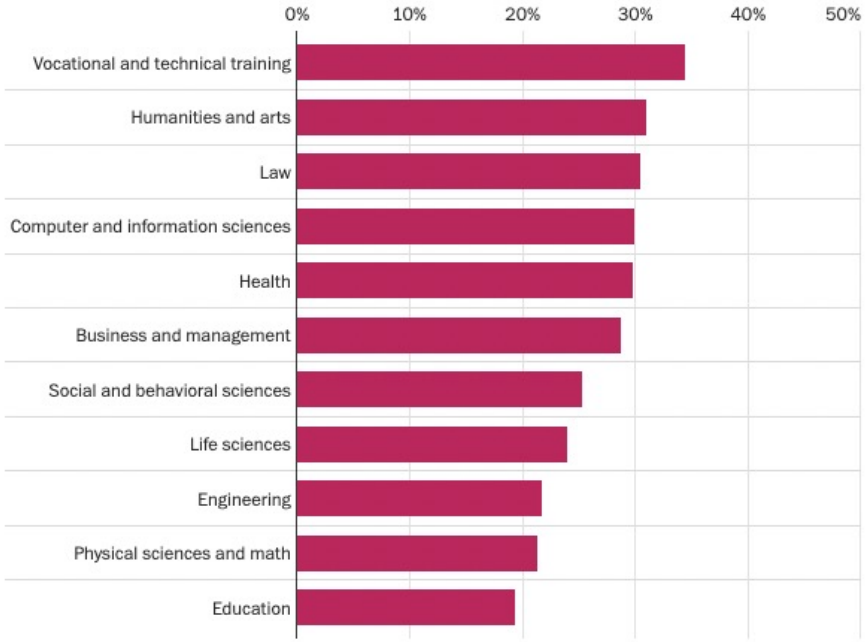
https://www.washingtonpost.com/business/2022/09/02/college-major-regrets/

Regrets have remained relatively steady since 2016, the earliest year for which we have consistent data. The most notable exception, education, went from below-average regrets before the pandemic to above-average regrets in 2021. Life sciences, on the other hand, have seen a steady and substantial decline in regret.

The annual Fed's Survey of Household Economics and Decisionmaking also asks if folks regret the specific school they went to. Those in vocational programs are most likely to regret their school, while education majors are least likely.

**Vocational and humanities grads often regret their choice of school**

Those who wish they'd chosen a different school, as a share of all who majored in each subject, 2021




Note: includes those who attended college but aren't currently enrolled

Source: Federal Reserve Survey of Household Economics and Decisionmaking DEPARTMENT OF DATA / THE WASHINGTON POST

Regardless of major, half of those who went to private, for-profit schools regret their decision, perhaps because students at for-profit schools are much more likely to struggle to repay their student debt. Similar regrets plague only 21 percent of those who went to public colleges and universities and 30 percent of those who attended private nonprofits.

A substantial majority of vocational and technical students (60 percent) wish they'd gone for more schooling, while less than 40 percent of law, life science and engineering students believe the same.

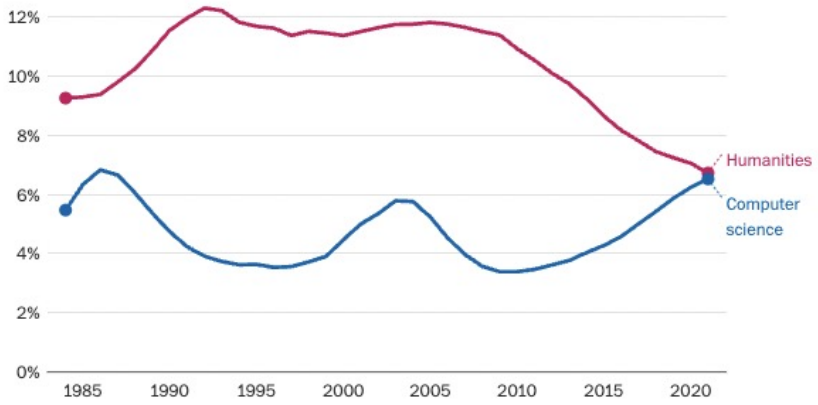
The burgeoning regret among humanities and arts majors may help explain why humanities graduates are a dying breed.

"There's a pretty significant change underway," historian and digital humanist Ben Schmidt said. "The numbers have dropped by 50 percent, and there's no sign that they're going to rebound."

By 2021, disciplines such as history, English and religion graduated less than half as many students as they did in their early 2000s heyday, relative to the overall size of the graduating student body, according to Schmidt's analysis of data from the National Center for Education Statistics.

**Oh, the humanities!**

Share of bachelor's degrees, by major




Note: doesn't include second majors; computer science includes computer and electrical engineering

Source: Ben Schmidt's analysis of data from the National Center for Education Statistics DEPARTMENT OF DATA / THE WASHINGTON POST

According to Schmidt, the Great Recession sparked the beginning of a downward spiral in humanities such as history, art, philosophy, English and foreign languages.

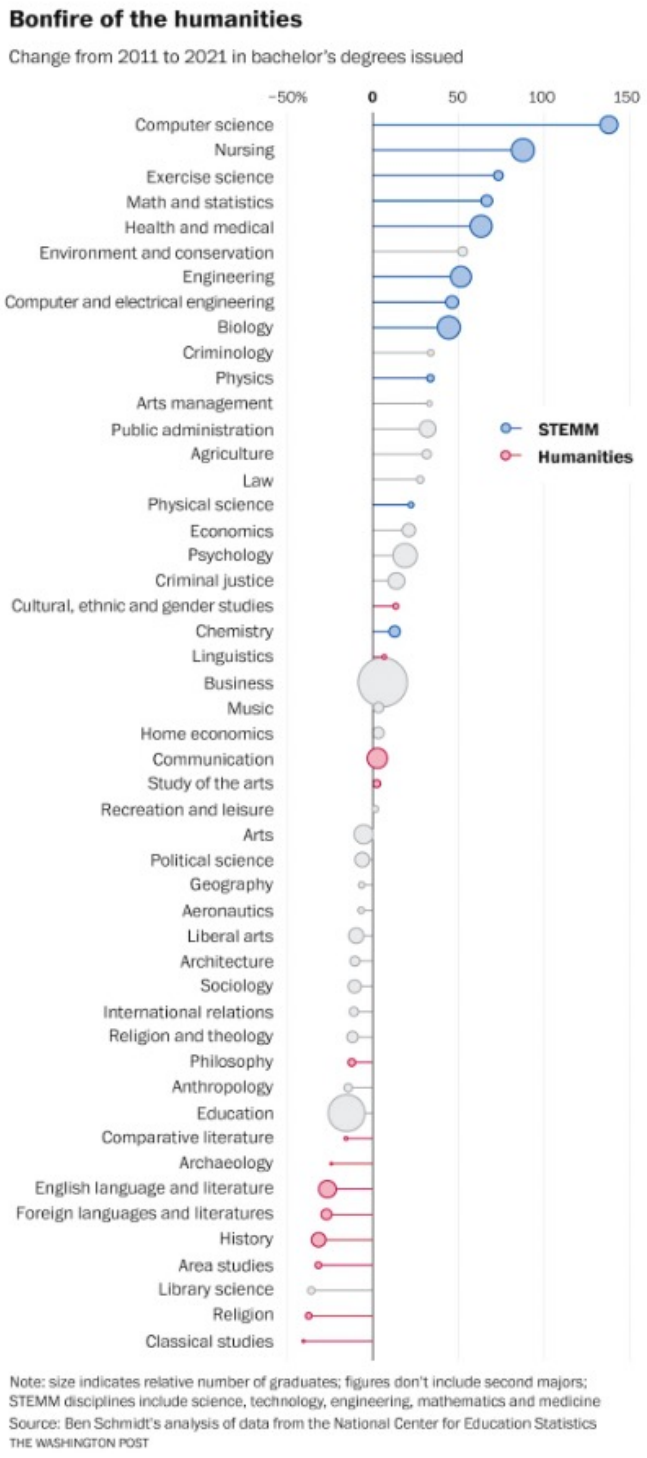
“In the period of the Great Recession, you had Barack Obama out there saying we need more STEM majors and fewer English majors,” Schmidt said. “That was a story you were hearing from a lot of people in influential positions … and I think that made a difference.”

In the decade since our national pivot to STEM, the number of people graduating with computer science degrees has doubled. Every STEM field notched significant gains. Nursing, exercise science, medicine, environment, engineering, and math and statistics are all up by at least 50 percent. Among the humanities, only two increased: cultural, ethnic and gender studies, and linguistics.

Schmidt said it’s possible that the nation’s pro-STEM campaign led many humanities graduates to regret their choice of degree in retrospect, even if a different major may not actually have improved their employment opportunities at the height of a global downturn. They were struggling, and their degree was an obvious scapegoat.

In an analysis published in the Atlantic a few years back, Schmidt noted that while culture wars and student debt didn’t explain the humanities data well — even Christian colleges and colleges with generous financial aid have seen declines — it does line up with a wave of younger millennials who, scarred by the financial crisis, are increasingly fixated on majors with better job prospects.

Over their lifetime, a typical history or journalism major can expect to earn about $3.4 million, according to an analysis of Census Bureau data from 2014 to 2018 by economist Douglas Webber, who is now with the Federal Reserve. A typical economics, biological sciences or chemistry major can expect to make $4.6 million over that same time, adjusted for inflation.



But those typical earnings hide that who you are matters just as much as what you study. Many of the highest-earning humanities majors earn more than the lowest-earning STEM majors, Webber's research shows. For example, the top quarter of history majors earn $4.2 million over their career. That puts them above the bottom quarter of earners from even the highest-paying majors, such chemical and aerospace engineering.

**STEM majors win the earnings game**

Expected lifetime earnings by college major, 2014-2018, adjusted for inflation

Search in table

Page 1 of 5 >

| FIELD | MEDIAN (50TH PERCENTILE) | 25TH PERCENTILE | 75TH PERCENTILE |
|---|---|---|---|
| Chemical engineering | $4.97M | $4.20M | $6.01M |
| Aerospace engineering | $4.69M | $4.01M | $5.54M |
| Chemistry | $4.64M | $3.81M | $5.58M |
| Economics | $4.61M | $3.70M | $5.74M |
| Biological sciences | $4.58M | $3.77M | $5.64M |
| Computer engineering | $4.55M | $3.89M | $5.44M |
| Electrical engineering | $4.54M | $3.85M | $5.39M |
| Finance | $4.48M | $3.65M | $5.48M |
| Mechanical engineering | $4.44M | $3.74M | $5.23M |
| Industrial engineering | $4.34M | $3.64M | $5.15M |
| Computer science | $4.30M | $3.61M | $5.09M |
| Physics | $4.25M | $3.54M | $5.15M |
| Political science | $4.20M | $3.45M | $5.27M |
| Mathematics and statistics | $4.15M | $3.45M | $5.04M |
| Civil engineering | $4.15M | $3.53M | $4.84M |
| Engineering (other) | $4.12M | $3.51M | $4.86M |
| Nursing | $4.11M | $3.53M | $4.89M |
| Management and information science | $3.99M | $3.44M | $4.70M |
| Accounting | $3.98M | $3.22M | $4.90M |
| Information science | $3.95M | $3.35M | $4.67M |

Note: adjusted for inflation, in constant 2016 dollars

Source: Douglas Webber

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Humanities specialists argue that these majors open up higher-earning opportunities later in life because they don't lock students into a narrow programming language, certification or career path. The critical thinking taught in humanities courses allows students to adapt to jobs that may not have existed when they enrolled in college.

"Having training to ask hard questions is pretty significant, and that applies across all kinds of different career situations," said Quinn Dombrowski, an academic technology specialist at Stanford University.

Dombrowski's degree in Slavic linguistics has taken her to a career in academic information technology, high-performance computing and helping researchers use computers to analyze languages. In her spare time, she founded the Data-Sitters Club and co-founded an effort to archive Ukrainian websites before they're destroyed by Russian hackers and mortars.

"When we work with undergraduates on digital humanities projects," Dombrowski said, "it's often easier to take a humanities undergrad and teach them just enough coding to do what they need to do rather than taking some of the CS majors who can do the coding in their sleep but don't really think about the questions in the nuanced ways that we need them to."

Schmidt said that while he now spends much of his time coding and analyzing data, he's still glad he studied humanities as an undergraduate.

"I don't regret my undergrad major in part because I was able to pick up all the programing languages I needed on my own," Schmidt said. "I didn't need a computer science course to do that," he added.

But Dombrowski said she understands undergraduates' desire to walk into a highly paid tech career immediately out of college rather than roll the dice on a humanities degree and trust that opportunities will arise.

"It's fine to tell people that this sets them up for brighter prospects in the longer term for their career," Dombrowski said. "But students — especially [those] who've taken on substantial student debt — have immediate needs for paying rent and then paying those loans back."