Brown University: Liberal Arts College or Pre-professional Institution?

By Samantha Savello

Betsy Amanda Lehman '77 Memorial Award for Excellence in Journalism, 2nd place prize

For Helen Denisenko, the campus computing lab has quickly become a second home. Each day, computer in hand, she heads to the retro, cubelike technology building to work on computer science assignments, which might involve anything from tediously testing a myriad of code combinations to creating a game application about the Cold War. Sometimes, if she sees a clear objective for the project, Denisenko feels a burst of confidence and readily begins coding. Other times, when she's unsure about the objective or finds that her codes aren't working, she begins to feel frustrated and spends hours laboriously testing combinations.

Though she is a college student, computer science isn't something new for Denisenko. In fact, she was just 17 years old when she discovered her passion for coding. After participating in Girls Who Code, a summer high school program developed to give young women programming experience, Denisenko was hooked. Not only did the program give her exposure to the of world coding, but it also gave her the opportunity to visit famous technology companies and listen to speakers in the field. Just a few days into the program, Denisenko couldn't contain her excitement. "There was just so much to learn–and so many ways to make an impact," she says, looking back on the experience. "I went in (to the program) thinking I would be more oriented towards the policy aspect of the program, but I left really enjoying the (coding) content. I decided to major in computer science at whatever college I went to."

The Trends

Denisenko, a current Brown University senior, is one of many students who was encouraged to explore the sciences at an early age. With the rise of new technologies and the skyrocketing demand for computer scientists, financial consultants and engineers, the number of high school programs promoting the sciences have increased–and, unsurprisingly, so have the number of college students studying these fields. In fact, according to the National Center for Education Statistics, only 2,388 students in the U.S. graduated with Bachelor's degrees in computer and information studies during the 1970-71 school year, compared to an astounding 59,581 students in 2014-2015. Similarly, the number of engineering graduates has more than doubled within the same time frame, increasing from 45,034 graduates to 97,858.

While STEM (Science, Technology, Engineering and Mathematics) fields are rapidly growing, however, the humanities departments are shrinking. Brown University, an institution distinguished for its academic freedom and strong liberal arts focus, is no exception to these trends. In fact, according to the Office of Institutional Research, the humanities at Brown might be in serious danger.

Over the years, the large majority of humanities departments at Brown have seen in a major decrease in the number of students graduating with degrees in their fields. The history of art and architecture department and religious studies department, for example, have seen an 84% decrease and 66.7% decrease, respectively, in graduating concentrators in the past nine years. But these trends don't just affect the number of concentrators in each field; they have also drastically impacted course enrollment at Brown.

Though Brown aims to provide its students with a rich, interdisciplinary education across diverse fields, it seems like students have been taking less and less advantage of this opportunity over time. As shown in Image 1, the number of students enrolling in humanities courses has plummeted in the past nine years, while physical science course enrollment is at an all-time high. In fact, during the 2007-2008 school year, the humanities and the social sciences made up the largest percentages of course enrollments at Brown. However, as of the 2014-2015 school year, it is now the physical sciences and the social sciences that dominate course enrollment.

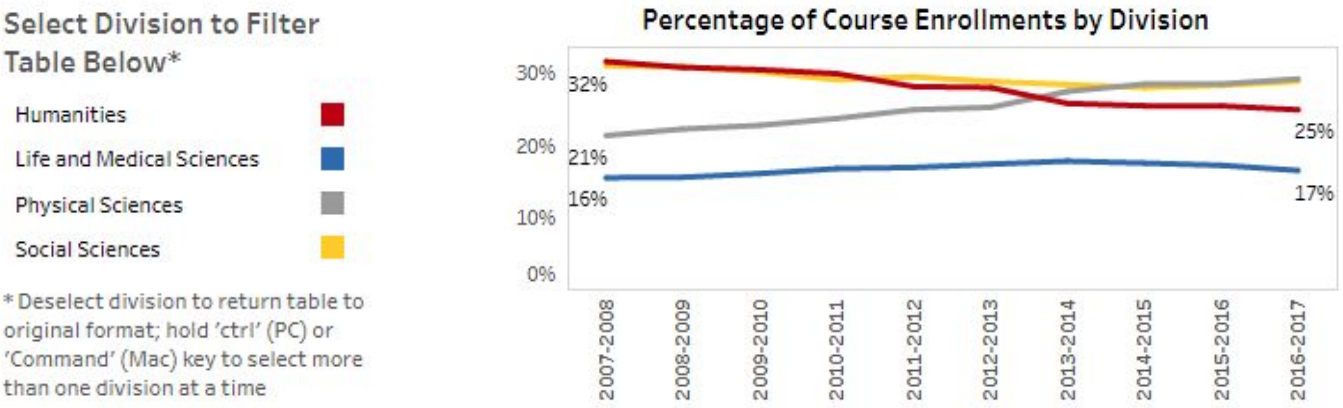

Image 1. *Source: Office of Institutional Research.*

These course enrollment and concentration trends seem to point to a larger pattern at hand–which begins with admitted students. According to Brown's Office of Admissions, the top 20 intended concentrations for the admitted class of 2019 were mostly in the sciences–with 30% of them in the physical science departments and 25% in the social science departments. In contrast, only 20% of the top concentrations were in the humanities departments. These admissions data show that in recent years, Brown has been admitting more students interested in

the sciences than those interested the humanities, which may explain the current enrollment trends at hand.

Not only are these statistics shocking, but they also make us question the fate of humanities at Brown, a school which has always been known for its strong liberal arts departments. In his much-debated book, *Excellent Sheep,* former-professor William Deresiewicz argues that many of America's most prestigious universities are betraying their mission to provide students with a well-rounded education by de-emphasizing the humanities and pushing students into profitable fields. Given that Brown is admitting mostly science-oriented students and is experiencing reduced enrollment in many departments in the humanities, it begs an important question: Is Brown becoming one of these pre-professional schools?

Why are these trends happening?

Before addressing this question, it's first important to understand why these trends are taking place. Students and faculty alike agree that aside from pure interest, some of the most common motivators for taking courses or concentrating in these fields are job-related. Computer science and engineering degrees result in more jobs prospects, higher salaries and greater job security than degrees in other fields–which is particularly encouraging given the complicated nature of today's job search. "You're basically guaranteed a job directly after college," Denisenko says of her computer science concentration. Based on these promising career opportunities, it's no surprise that computer science is now the most popular concentration at Brown, followed closely by economics, another highly applicable major.

In contrast to these science-based concentrations, humanities departments are less appealing because they don't promise the same type of marketability and job options.

Comparative literature concentrator William Portilla has experienced this first hand, and is disappointed at the lack of career opportunities presented on campus for humanities majors. "Tech and consulting have big recruitment events. We (the humanities) don't have that," he explains. "I went to the Career Fair this year, and it was mostly geared towards students in STEM, consulting and finance. I'm obviously not going to get a job in those fields."

Portilla also pointed out that in addition to less job opportunities, there is less guidance for humanities students at Brown. While there are career advising programs for students interested in health, law and business, there are no specific career resources for students in the humanities–perhaps due to the indirect nature of their career applications. There are also fewer career panels and workshops for humanities concentrators at the CareerLAB, where public policy, STEM, non-profit and technology fields dominate the event schedule. Usually, there are only one or two humanities-oriented programs per semester, which is extremely discouraging to students looking to go into these areas of study.

Slavic Studies concentrator Yasmin Ibarra disagrees with this. "There's more you can do with a Slavic Studies degree than you think. It opens the door to law, business, government, and diplomacy," she says. "My professors have helped me explore these options. I agree that many people don't know what to do with their humanities degrees. But there is support out there, you just have to really seek it out."

Ibarra has a valid point. Humanities degrees can be applied to a variety of fields, ranging from governmental jobs to publishing to consulting. In fact, according to the U.S. Census Bureau's 2010 American Community survey, 62% of recent college graduates worked in jobs that required a degree, yet only 27% of college graduates worked in a job that even related to

their major–meaning that undergraduate majors don't necessarily dictate people's career paths. However, with the national hype surrounding the astounding benefits of a STEM degree compared to a humanities degree, most students choose to ignore this information. "We try to explain this concept to students," says Dean Yolanda Rome, Associate Dean for First-year and Sophomore Studies. "But it's very hard to get them to break free of their mindsets."

Aside from job prospects and opportunities, high school experiences also tend to influence students' concentration decisions, as exemplified by Denisenko's experience in the Girls Who Code program. Thanks to pre-college programs and multi-disciplinary high school curricula, most students come to Brown already having a solid idea of what they will want to do, and the majority don't veer too far from it. "Maybe they'll (students will) change from physical sciences to a social science or life science," says Dean Rome. "But they won't change from physical sciences to the humanities. And vice versa."

In other words, many students' college journeys begin in high school, which might actually be the root of the problem. There aren't many programs that encourage students to engage in the humanities the way there are programs that promote engineering, business and computer science. "Most high schools don't allocate too much money in the budgets for the humanities," Dean Rome says. "So they (the students) don't get the same encouragement to study humanities."

Another factor that affects students' concentration decisions is their socioeconomic background. "Some students cannot afford to concentrate in what they want," explains Carla Dager, a senior studying economics. "There are low-income and first gen(eration) students who aren't in a place where they can major in less profitable or applicable fields."

Many students on campus resonate with Dager's comment. On the Brown University Class Confessions Facebook page, for example, one student anonymously wrote a post about how low-income students do not have the same freedom to choose whatever major they want. Instead, they feel pressured to go into STEM, economics, medicine and other profitable fields to acquire financial security. The post states: "...Not everyone can choose their concentration based purely on their interests. Many of us want nothing more than to support our families..."

Closely related to socioeconomic pressures is parental influence, which also impacts the large majority of students on campus. "If mom and dad are the ones paying for it (tuition), they want to know their child is getting a degree that is practical and will help them make money," says Professor David Weil, chair of the Economics department. For many parents, a humanities concentration does not seem like a valuable investment in their hard-earned tuition money.

Portilla, for example, told his parents he was pre-law to help compensate for the fact that he was concentrating in the humanities. "When I told them I was pre-law, they stopped questioning me (about my humanities degree) and were more okay with it. They thought 'okay, he's going to become a successful lawyer, so it's fine'," he explains. "But now I'm not so sure I want to do that, and I'm worried."

Brown's Impact

While there are many external motivators encouraging students to major in STEM and economics, from job prospects to parents to high school programs, Brown itself is also in part responsible for the current course enrollment and concentration trends. Providing less career support to humanities concentrators and admitting more students interested in the sciences isn't Brown's only fault; the University also fails to sufficiently promote many of the smaller

humanities departments on campus. In fact, many students don't even know that some of these departments exist.

"There's a lack of advertising for our concentration. We don't really attract many people. It's easier for the bigger departments like economics or engineering," says Portilla, in regards to the Comparative Literature department. "I think there's only about 25 of us (concentrators). It's very small."

Meanwhile, Brown does not hesitate to boast of their growing engineering department. "They love showing off the engineering department," says Sierra Fisher, a senior concentrating in mechanical engineering. "Our Brown Design Workshop is always prominently featured on tours for prospective students." And that's not all they do to promote engineering. In 2015, Brown launched an $88-million project to create a new three-story School of Engineering research building, which will be finished in a few months. This decision was no doubt an effort to attract more students interested in STEM to the university and help Brown compete with other universities that have a stronger focus on research.

President Christina Paxson's P'19 strategic plan, "Building on Distinction," seems to confirm this shift towards a university with more emphasis on research and technology endeavors. The plan, which was devised in 2015, proposed that Brown move away from the university-college model of its past, which focused on fostering an intimate and rigorous learning environment for undergraduates, and instead work towards becoming a research-university structure comparable to Columbia or Harvard.

Ibarra offers some insight for the University's demonstrated emphasis on the sciences and their newfound shift towards a research-university. "I think Brown definitely wants to improve

their numbers and show how successful their students are," she says. "I always get emails from CareerLAB and they're always pushing for technology, engineering and consulting jobs. It seems like Brown is really pushing these fields onto people."

Portilla agrees with this concept, explaining how Brown was nothing like the liberal arts institute he expected. "I think Brown really emphasizes the STEM concentrations. It's really ironic because when I came in here, I thought Brown was a more humanities-centered school with the open curriculum and everything," he says. "But I guess really isn't. There are students who want to try humanities, but probably not stick with it."

Why are these students coming to Brown anyways?

As Brown begins to shift its focus in response to the recent trends, it makes us question why these STEM-oriented students are coming to a traditionally liberal arts college in the first place–instead of attending a technology-intensive schools. Some STEM concentrators say that it was actually the open curriculum and academic variety that drew them in. "I chose Brown because I wanted some diversity in the campus culture," says Fisher. "I wanted to get a more well-rounded education that I wouldn't otherwise get at an engineering school like Cal Poly (California Polytechnic State University)."

Fisher's classmate and fellow mechanical engineering concentrator Arianne Spaulding echoes this sentiment. "Brown isn't the best engineering school in the world. I chose this school because it allows me to get a scientific degree, but also get exposure to non-science fields. I didn't want to go to a technical school. I like being able to take different subjects in the humanities," she says.

Unfortunately, due to their 21 engineering course requirements, engineering concentrators don't have much room in their schedules for humanities courses. "We aren't given much freedom," says Fisher. "I can only take about one humanities course per semester. So far I've taken courses in Spanish, anthropology and history. But the lack of flexibility is frustrating."

While many students like Fisher and Spaulding like to take advantage of Brown's humanities departments–even if it's on a small scale–the same cannot be said about other students. Portilla, who is a Meiklejohn (peer advisor for first-year students), says he's seen students take all math classes in one semester, which is not uncommon amongst STEM concentrators.

To prevent things like this from happening, Brown has implemented a writing requirement or "WRIT requirement" to ensure that *all* Brown students work to improve their writing during their undergraduate career, regardless of their major. The requirement states that all students must take two writing courses at Brown before they graduate, including one during their first two years, and another within their second two.

Unfortunately, the WRIT requirement has quickly become a looming fear for many students, especially those outside of the humanities. "It's taken on a different image than we had hoped it would. Students tend to view it as intensive writing, but really it's intended for them to get feedback on writing," explains Dean Rome. "There's a big fear."

As a result, some STEM concentrators, who don't want to add to their already heavy course loads or simply aren't interested in writing, try to work the system. These students circumvent the English and Literary Arts departments, which offer the bulk of writing courses, and instead take writing courses in their own fields, like engineering or applied math.

Professor Larry Stanley, chair of the Nonfiction Writing department, argues that these technical writing classes do little to provide students with the writing feedback they need–and that the requirement itself is not nearly enough to sufficiently improve students' writing. "A lot of students are not taught how to write when they take writing courses in these disciplines," he says of the STEM writing classes, which are usually highly mechanical, involve little writing and don't offer extensive evaluations of written work.

Writing courses aren't the only classes that many STEM concentrators shun. The romance language departments, which include French, Spanish and Italian, have seen a big drop in enrollment over the past decade as well– and the sciences might be to blame. "We've found that many STEM students are told not to take introductory language courses," Dean Rome says. "It really hurts the numbers."

To combat this drop in course enrollment and improve their enrollment rates, some humanities departments have tried offering more courses directed at the general student body. "There was one class in French Literature that they taught in English to attract more people," says Dean Rome. "But they didn't have many students enrolling, and they might as well have just taught it in French. It's a big loss to the department."

What do these trends mean for the future of Brown?

Unsurprisingly, most of the aforementioned humanities departments suffer from a lack of sufficient funding. According to Professor Stanley, the Nonfiction Writing program at Brown is one of the few areas of the humanities that isn't in decline, yet the budget hasn't increased in years. As a result, the spots in these courses are highly limited, causing dozens of

students–including non-concentrators–to vye for a seat each semester, often being put on waitlists for the next term. “We definitely aren’t meeting the demand,” Professor Stanley says.

This lack of funding makes us wonder where Brown’s money really is being spent. A logical assumption would be that the University is putting its money towards the STEM department budgets, to help Brown achieve its mission of becoming a research-intensive institution. But this is not the case either. In fact, according to Professor Ugur Centintemel, the chair of the Computer Science department, his department hasn’t experienced growth in their budget in the past five years, despite the fact that it has seen a threefold increase in enrollment in the past decade–with the number of enrolled students skyrocketing from 1,568 just nine years ago to a record-breaking 4,680 during the 2016-2017 school year.

Without a sufficient budget, the computer science department’s staff can barely keep up with the demand. In fact, according to Centintemel’s calculations, Brown currently has the highest faculty-student ratio out of all the Ivy League schools–31.3 concentrators per faculty member–which means students in this department get very little individual attention from professors. To combat this lack of support, computer science administrators have begun to rely heavily upon their Undergraduate Teaching Assistants (UTA), who work one on one with groups of eight to ten students. “We have 400-450 undergraduates as our UTAs–perhaps one of the largest groups in the world,” says Professor Centintemel.

But the University isn’t responsible for funding the UTA program either. In order to pay for and maintain this astonishing number of UTAs, the Computer Science department launched a fundraising campaign to build a $10 million endowment for its UTA program in 2015, which ultimately raised $8.5 million. Despite this new endowment, however, the UTAs are still

overworked and underpaid. “I have friends who work 40 hours a week sometimes,” Denisenko says. “It’s grueling. And they don’t get paid enough.” Professor Centintemel does not deny this. “We wish we could pay them more,” he says. “The budget just doesn’t allow for it.”

Computer science isn’t the only department that’s suffering. Professor David Weil says that the Economics department has budgetary issues very similar to those of the Computer Science department. “The budget has barely budged in the past two decades. Every year, there are more and more graduates per full time equivalent,” he says. “The classes are overloaded and staff hasn't kept up.” The Economics department is also a big user of UTAs, relying on students to pick up the slack for budgetary shortcomings.

Ultimately, Brown needs to address these budgeting issues and clearly define the divide between the humanities and the sciences at Brown. Moving forward, they have to make a decision about the future of the university and respond to the changing enrollment and concentration trends, both financially and socially. As the world continues to change, will Brown begin to allocate its funds to the underfunded and overpopulated STEM and economics departmental budgets? Or will it choose to bolster the humanities departments to keep them intact? Is there a middle ground that can be attained?

Dean Maud Mandel, Dean of the College, weighs on in the questionable nature of Brown’s future. “Brown is constantly changing,” she says. “It will never be the Brown it was 50 years ago or 10 years ago. It will continue to change and adapt to what’s going on in the world.” Hopefully, this change will be in a positive direction that encompasses all fields of study, allocating resources where they are needed in growing technological fields while simultaneously

giving much-needed attention to the humanities, which have always been a central part of Brown's mission.

Sources

Interviewees

Dean Maud Mandel, Dean of the College | maud_mandel@brown.edu

Dean Yolanda Rome, Associate Dean for First-year/Sophomore Studies, yolanda_rome@brow.edu

Professor Ugur Centinel, Chair of Computer Science | ugur@cs.brown.edu

Professor David Weil, Chair of Economics | david_weil@brown.edu

Professor Larry Stanley, Chair of Nonfiction Writing | lawrence_stanley@brown.edu

Arianne Spaulding, Mechanical engineering concentrator, senior | arianne_spaulding@brown.edu

Sierra Fisher, Mechanical engineering concentrator, senior | sierra_fisher@brown.edu

William Portilla, Comparative Literature concentrator, junior | william_portilla@brown.edu

Carla Dager, Economics concentrator, senior | carla_dager@brown.edu

Yasmin Ibarra, Slavic Studies concentrator, senior | yasmin_ibarra@brown.edu

Yelena (Helen) Denisenko, Computer Science concentrator, senior | yelena_denisenko@brown.edu

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