

Photo illustration by Delcan & Company

## What College Admissions Offices Really Want

Elite schools say they're looking for academic excellence and diversity.

But their thirst for tuition revenue means that wealth trumps all.

By PAUL TOUGH SEPT. 10, 2019

Trinity College, a small liberal-arts school that occupies a picturesque 100-acre hillside campus overlooking Hartford. Trinity is in many ways a typical private northeastern college. It was founded by a group of Episcopalians in the early 19th century, and its student body has been dominated ever since by white, wealthy graduates of New England prep schools. Its architecture is Gothic, its squash teams are nationally ranked and despite its small size (about 2,200 undergraduates), it manages to support five separate student a cappella groups. Two of Trinity's most famous graduates are George Will and Tucker Carlson, meaning that the college has pretty much cornered the market on conservative TV personalities known for wearing bow ties.

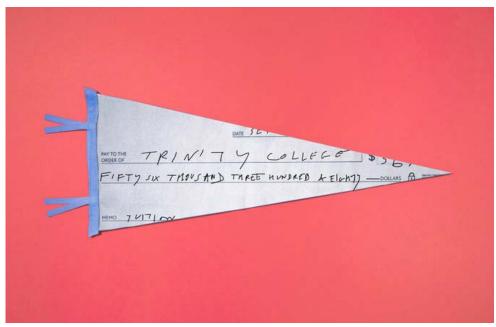
Pérez grew up in very different circumstances, born in Puerto Rico in 1976 to a teenage mother and a father who delivered milk door to door. When Pérez was 5, his family moved to New York to find better opportunities, but they landed instead in a public housing development in the South Bronx during the worst years of the borough's disintegration. Pérez's memories of childhood are mostly of a pervasive fear, both at home and on the streets. His father drank too much and was sometimes violent with Pérez's mother, and Pérez, a pale, nerdy kid who loved books, was easy prey for the gangs that controlled his neighborhood. Twice he was attacked on the street and beaten so badly that he ended up in the hospital.

[Read The Times's review of "The Years That Matter Most: How College Makes or Breaks Us," from which this essay is adapted.]

In high school, Pérez joined every club, pursued summer internships, ran for student government — anything to stay out of the apartment, anything to improve his chances for a better future. A guidance counselor persuaded him to apply to Skidmore College, a selective private institution in upstate New York that Pérez had never heard of. He took the SAT just once, and he scored poorly. But miraculously, someone in Skidmore's admissions office decided to ignore his lousy test score in favor of his excellent grades and admit him with full financial aid. It was a decision that changed Pérez's life.

Pérez got his first job in admissions straight out of college, motivated by the opportunity to do for young people what that admissions officer did for

him: spot hidden potential in students with unconventional academic records and transform young lives. He rose through the profession, working first at Skidmore and then at the Claremont Colleges in Southern California, earning a master's degree and a Ph.D. along the way.



"We were taking some students who probably should not have been admitted, but we were taking them because they could pay." Photo illustration by Delcan & Company

When Pérez was hired at Trinity, the college was in a period of anxious transition. Trinity's board of trustees had recently named a new president, Joanne Berger-Sweeney, a neuroscientist who was both the first woman president and the first African-American president in the college's history, and she had inherited at Trinity a slow-moving but unrelenting financial crisis. Tuition revenue, which along with room and board provides about two-thirds of Trinity College's operating budget, had been falling for several years, and Trinity was running a steep deficit, losing \$8 million a year. The college had taken steps to reduce its expenses, refinancing its debt and renegotiating contracts with vendors, but the deficits continued to grow.

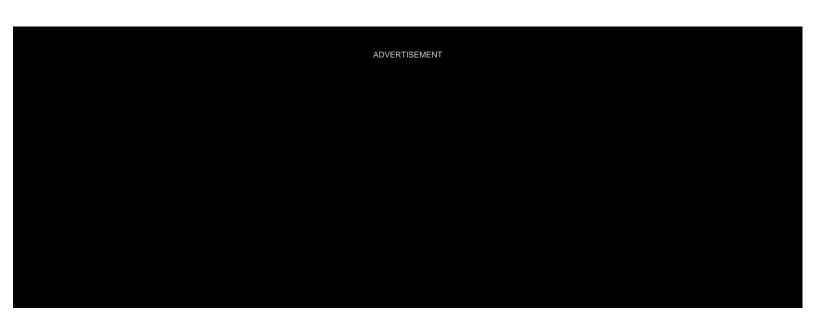
Pérez was charged with two important missions when he was hired, and they sometimes seemed to be in conflict. The first was to help balance the budget — to bring in more tuition revenue and stanch Trinity's financial losses. The second was to diversify the student body at Trinity, expanding it beyond the narrow prep-school demographic that had traditionally dominated its freshman classes and reshaping it into something more balanced and diverse. It was that second mission that was closest to Pérez's

heart.

"I remember when I got the call about this job," Pérez told me the first time we met, on a cold winter day in 2017. We were in his window-lined office in Trinity's admissions building, which looked out over the college's snow-covered athletic fields. "I was sitting in lovely Claremont, California, and my response was, *Why would I move to Hartford, Connecticut?* But then I started having conversations with the president, and I was so inspired by her vision of taking an institution that has been historically white, wealthy and privileged and really bringing it into the modern day and age."

Pérez was two years into the job when we spoke. He mostly sounded upbeat, proud of the changes he had already made at Trinity and hopeful about the ones still to come. But there were moments when the strains of his position became apparent. Admissions is "very painful work, and it's getting so much more difficult," he told me. Trying to reconcile his competing missions at Trinity was a constant challenge. "Everybody wants to have more selectivity and better academic quality and more socioeconomic diversity, and they want more revenue every single year," he explained. "Part of my job since arriving at Trinity College has been educating this community about the fact that you can't have it all at the same time. You've got to pick which goals you're going to pursue."

[Frank Bruni writes about Paul Tough's book.]



In February 2004, Lawrence H. Summers, at the time the president of Harvard University, made international headlines when he announced that

Harvard would fully cover tuition and other expenses for undergraduates whose parents earned less than \$40,000 a year. A news release announcing the new policy cited an array of statistics showing that at academically selective universities like Harvard, the student bodies were dominated by young people who had grown up in affluence. That needed to change, Summers said, and Harvard's new policy was designed to help to bring about a more democratic and egalitarian era in elite higher education. Other highly selective colleges, including Amherst and Vassar and Princeton, soon followed Harvard's lead, announcing a variety of changes in their admissions policies intended to improve their socioeconomic diversity.

When Caroline Hoxby, an economist then at Harvard, heard Summers's announcement, she decided, along with a colleague named Christopher Avery and others, to study the effect of the new policy on Harvard's admissions patterns. The effect, it turned out, was negligible: The first year after Summers's policy was introduced, the number of low-income students in Harvard's 1,600-student freshman class increased by about 20. Hoxby was puzzled by this minimal impact, and she began investigating elite-college admissions more deeply. Working with Avery and another economist, Sarah Turner from the University of Virginia, she spent the next several years trying to understand how the individual admissions decisions made by students and by universities might be contributing to the imbalances that Summers had described.

In March 2013, Hoxby published two research papers, one written with Avery and one with Turner, that presented a new theory regarding the inequities of higher education and, at the same time, proposed an innovative solution. The problem, Hoxby and Avery explained, was that many high-achieving low-income students were making self-destructive decisions as high school seniors, applying to local community colleges or nearby public universities rather than the highly selective institutions where their academic records would likely win them admission — and where generous need-based financial aid policies like Harvard's might enable them to earn their degree at a significant discount.

The good news, according to Hoxby and Turner, was that this problem was solvable — and in fact, they announced, they had started to solve it. In a national experiment, Hoxby and Turner had sent semipersonalized information packets, including application-fee waivers, to thousands of high-achieving low-income students, and the packets seemed to be

changing the application behaviors of the students who received them, making them more likely to apply to and attend selective colleges.

Hoxby's papers gave new momentum to the national effort to make selective colleges more socioeconomically diverse. In news releases, wealthy colleges trumpeted their efforts to recruit and admit more low-income and black and Latino students. Gene Sperling, President Obama's national economic adviser at the time, convened a White House summit in 2014 of more than 100 college presidents to discuss how they might better attract and retain low-income students. That same year, New York's former mayor, Michael Bloomberg, announced a plan to spend millions of dollars through his philanthropic foundation on a project to counsel low-income high school students to apply to more selective colleges. And the College Board (the nonprofit organization that oversees the SAT), under its new president, David Coleman, introduced a range of initiatives intended to propel more low-income students to more-selective institutions of higher education.

By the end of the Obama administration, the emerging consensus was that these efforts had paid off, that things had changed. The inequities that had plagued elite higher education, as an article in Smithsonian magazine on Hoxby's work put it, "may be one problem on the way to being solved." A recent Atlantic article distilled this new conventional wisdom into a single sentence: "The more elite the institution, the more likely it is to be racially and socioeconomically diverse."

But in 2017, a group of economists led by Raj Chetty, who was then at Stanford and is now at Harvard, undercut that consensus, showing that, in fact, the opposite was true: The most selective colleges in America were the least socioeconomically diverse. Chetty and his team issued what they called mobility report cards for each institution of higher education in the United States. At "Ivy plus" colleges (Chetty's term for the Ivy League plus Stanford, M.I.T., Duke and the University of Chicago), more than two-thirds of undergraduates, on average, came from families in the top income quintile, and fewer than 4 percent of students grew up in the bottom income quintile. At the very most selective colleges, low-income students were even more of an endangered species; at Yale, for example, Chetty found that just 2.1 percent of the student body came from the bottom fifth of the income distribution.

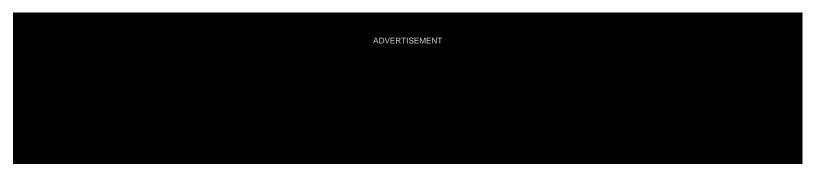
Chetty's data may have been a shock to those who had been following higher education from a distance, through the optimistic headlines of the previous decade. But they came as no surprise to Angel Pérez and his peers in admissions. The world Chetty described was the world they had been living in for years. Trinity may have been less selective than those Ivy-plus institutions, and it had a smaller endowment, but it was no less dominated by affluent students. In fact, the mobility-report-card data revealed that in the years before Pérez arrived, Trinity had one of the wealthiest student bodies in the entire nation. In 2013, 26 percent of Trinity's student body came from families with incomes in the top 1 percent. That was the single highest concentration of ultrarich students to be found at any college among the 2,395 institutions that Chetty and his colleagues examined.

Over the last decade, two distinct conversations about college admissions and class have been taking place in the United States. The first one has been conducted in public, at College Board summits and White House conferences and meetings of philanthropists and nonprofit leaders. The premise of this conversation is that inequity in higher education is mostly a demand-side problem: Poor kids are making regrettable miscalculations as they apply to college. Selective colleges would love to admit more low-income students — if only they could find enough highly qualified ones who could meet their academic standards.

The second conversation is the one that has been going on among the professionals who labor behind the scenes in admissions offices — or "enrollment management" offices, as they are now more commonly known. This conversation, held more often in private, starts from the premise that the biggest barriers to opportunity for low-income students in higher education are on the supply side — in the universities themselves, and specifically in the admissions office. Enrollment managers know there is no shortage of deserving low-income students applying to good colleges. They know this because they regularly reject them — not because they don't want to admit these students, but because they can't afford to.

There is a tiny minority of American colleges where tuition revenue doesn't matter much to the institution's financial health. Harvard and Princeton and Stanford have such enormous endowments and such dependable alumni donors that they are able to spend lavishly to educate their students, with only a small percentage of those funds coming from the students themselves. But most private colleges, including Trinity, operate on a model that depends heavily on tuition for their financial survival. And for many colleges, that survival no longer seems at all certain: According to Moody's Investors Service, about a quarter of private American colleges are

now operating at a deficit, spending more than they are taking in.



In public, university leaders like to advertise the diversity of their freshman classes and their institutions' generosity with financial aid. In private, they feel immense pressure to maintain tuition revenue and protect their school's elite status. The public and private are inevitably in conflict, and the place on each campus where that conflict plays out is the admissions office.

[What it's really like to be a low-income student at an elite college.]

When Angel Pérez arrived at Trinity and took a close look at the way the admissions office had been making its decisions, what he found left him deeply concerned. "We were taking some students who probably should not have been admitted, but we were taking them because they could pay," he told me. "They went to good high schools, but they were maybe at the bottom of their class. The motivation wasn't there. So the academic quality of our student body was dropping."

At Trinity, Pérez's predecessors had been able to capitalize on a pattern that admissions officers say they often see: At expensive prep schools, even students close to the bottom of the class usually have above-average SAT scores, mostly because they have access to high-octane test-prep classes and tutors.

"O.K., you're not motivated, you're doing the minimum at your high school," Pérez explained, describing the students Trinity used to admit in droves. "You have not worked as hard as your peers. But you did the test prep, and you learned how to play the SAT game."

## 'Admissions for us is not a matter of turning down students we'd like to

## admit. It's a matter of admitting students we'd like to turn down.'

If you work in admissions at a place like Trinity was before Pérez arrived, SAT scores can provide a convenient justification for admitting the kind of students you might feel compelled to accept because they can pay full tuition. It's hard to feel good about choosing an academically undeserving rich kid over a striving and ambitious poor kid with better high school grades. But if the rich student you're admitting has a higher SAT score than the poor student you're rejecting, you can tell yourself that your decision was based on "college readiness" rather than ability to pay.

The problem is, rich kids who aren't motivated to work hard and get good grades in high school often aren't college-ready, however inflated their SAT scores may be. At Trinity, this meant there was a growing number of affluent students on campus who couldn't keep up in class and weren't interested in trying. "It had a morale effect on our faculty," Pérez told me. "They were teaching a very divided campus. The majority of students were really smart and engaged and curious, and then you've got these other students" — the affluent group with pumped-up SAT scores and lower G.P.A.s — "who were wondering, *How did I get into this school?*"

Hidden away among the wealthy masses on the Trinity campus was a small cohort of low-income students. When Pérez arrived, about 10 percent of the student body was eligible for a Pell grant, the federal subsidy for college students from low-income families, and many of those were students of color. Academically, Trinity's low-income students were significantly outperforming the rich kids on campus; the six-year graduation rate for Pell-eligible students at Trinity was 92 percent, compared with 76 percent for the rest of the student body. But Trinity's low-income students — at least the ones I spoke to during my visits to campus in 2017 — were often miserable, struggling to find their place on a campus where the dominant student culture was overwhelmingly privileged and white.

But perhaps the most startling fact about the pre-Pérez admissions strategy at Trinity was that it was not doing much to help the college stay afloat financially. As Pérez saw it, this was mostly a question of demographics. The pool of affluent 18-year-old Americans was shrinking, especially in the Northeast, and the ones who remained had come to understand that they had significant bargaining power when it came to negotiating tuition

discounts with the colleges that wanted to admit them. As a result, paradoxically, Trinity was going broke educating an unusually wealthy student body.

Pérez thought Trinity could do better. To him, the school's existing enrollment-management strategy was simply unsustainable — financially, academically and morally. In the fall of 2015, he recommended to the president and the board of trustees that Trinity abandon its previous approach to admissions and move in more or less the opposite direction. If the school put more emphasis on recruiting and enrolling excellent low-income and first-generation students, Pérez argued, it might require an additional short-term investment in financial aid — not an easy step, he acknowledged, for an institution losing millions of dollars a year. But it would improve Trinity's flagging reputation by making the school not only more socioeconomically diverse but also more academically elite. That transformation, Pérez believed, would attract more applicants and bring in more alumni donations as well.



Part of what makes life in enrollment management so challenging is that each admissions decision you make has implications for your college that go well beyond the composition of next fall's freshman class. Which students you accept and which ones you reject this year will help determine who will apply to your college next year.

That phenomenon was due, in large part, to the power of the "America's Best Colleges" list published each year by U.S. News & World Report. The list rewards colleges for admitting students with high SAT scores; the more high-scoring students you admit, the better U.S. News likes you.

The U.S. News list is openly loathed by people who work in admissions; in a 2011 poll, the most recent available, only 3 percent of admissions officials nationwide said they thought the "America's Best Colleges" list accurately

reflected the actual best colleges in America, and 87 percent said the list caused universities to take steps that were "counterproductive" to their educational mission in order to improve their ranking. But people in admissions can't ignore the U.S. News rankings. They know that American high school students and their families take them very seriously. Research on national universities has demonstrated, using data analysis, what enrollment managers know in their bones: If you rise even one place on the U.S. News list, you will receive more and better applications from next year's crop of high school seniors. And if you fall even one place on the list ... well, God help you.

Jon Boeckenstedt, who spent 17 years helping run the enrollment department at DePaul University in Chicago before moving west this summer to take a similar position at Oregon State, has traced this effect from inside the profession. Boeckenstedt, who is in his early 60s, was a first-generation college student himself, the son of a manual laborer from Dubuque, Iowa. He maintains two lively blogs about the practice of college admissions, and in recent years he has used them as a platform to advocate for more clarity, honesty and fairness in the field of enrollment management — or as he sometimes calls it, the admissions-industrial complex.

"Few enrollment-management people will admit this publicly, but we're all sort of in the same boat," Boeckenstedt told me when I visited him in his office at DePaul in 2017. "Admissions for us is not a matter of turning down students we'd like to admit. It's a matter of admitting students we'd like to turn down."

In his writing, Boeckenstedt explains the connections between the everyday pressures enrollment managers like him experience in their jobs and the stark socioeconomic stratification that now pervades higher education. For one recent post on his blog Higher Ed Data Stories, he created a detailed multicolored chart that compared admissions data from more than 1,000 colleges and sorted those colleges according to three cross-referenced variables: their mean freshman SAT score, the percentage of their freshmen who receive federal Pell grants and the percentage of their students who are black or Latino.

The resulting graphic demonstrates, in a vivid way, what might be called the iron law of college admissions: The colleges with high average SAT scores — which are also the highest-ranked colleges and the ones with the lowest acceptance rates and the largest endowments — admit very few low-

income students and very few black and Latino students. In fact, Boeckenstedt's chart shows an almost perfect correlation between institutional selectivity and students' average family income, a steady, unwavering diagonal line slicing through the graph. With only a few exceptions, every American college follows the same pattern.

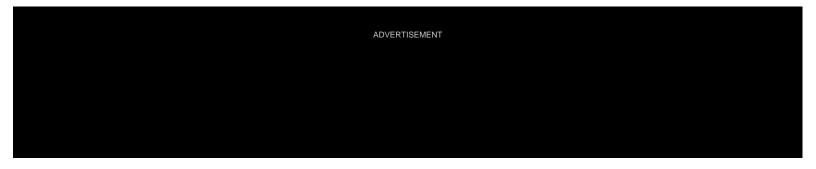
There is a popular and persistent image of college admissions in which diversity-obsessed universities are using affirmative action to deny spaces to academically talented affluent students while admitting low-income students with lower ability in their place. Boeckenstedt says the opposite is closer to the truth. If you're an enrollment manager, he explains, the easiest category of students for you to admit are below-average students from high-income families. Because their parents can afford tutoring, they are very likely to have decent test scores, which means they won't hurt your U.S. News ranking. They probably won't distinguish themselves academically at your college, but they can pay full tuition. And they don't have a lot of other options, so they're likely to say yes to your admission offer. "These are the kids who will gladly pay more to move up the food chain," Boeckenstedt says. "I call them the C.F.O. Specials, because they appeal to the college's chief financial officer. They are challenging for the faculty, but they bring in a lot of revenue."

Boeckenstedt says that there are two structural factors that make life difficult for enrollment managers who want to admit more low-income students. The first factor is the simple need for tuition revenue. Unless colleges can reduce their costs, it is going to be difficult for them to resist the lure of wealthy students who can pay full price. And there are several perverse incentives in the marketplace that make it hard for colleges to cut costs. The most basic one is that the U.S. News algorithm rewards them for spending a lot of money: Higher faculty salaries and more spending on student services lead directly to better rankings. If you reduce your expenses, your ranking will fall, which means that next year your applicant pool will probably shrink. So instead you keep your spending high, which means you need a lot of tuition revenue, which means you need to keep admitting lots of rich kids.

Things are different among the wealthiest colleges. They often advertise themselves as "need blind," and yet their freshman classes tend to include relatively few students from families with the greatest financial need. Boeckenstedt points out a fact that is somehow simultaneously totally obvious and yet still kind of dumbfounding: Some of the most selective

colleges have so much money that they could easily admit freshman classes made up entirely of academically excellent Pell-eligible students and charge them nothing at all. The cost in lost tuition would amount to a rounding error in their annual budgets. But not only do those and other selective colleges not take that step; they generally do the opposite, year after year. As a group, they admit fewer Pell-eligible students than almost any other institutions. Colleges like DePaul, with much smaller endowments, somehow manage to find the money to admit and give aid to twice as many low-income students, proportionally, as elite colleges do.

Why don't the most selective colleges do more? The answer, in Boeckenstedt's opinion, is that staying "elite" depends not just on admitting a lot of high-scoring students. It also depends on admitting a lot of rich ones. And he has a point: The researchers Nicholas A. Bowman and Michael N. Bastedo showed in a 2008 paper that when colleges take steps to become more racially or socioeconomically diverse, applications tend to go down in future years. "Maybe — just maybe — the term 'elite' means 'uncluttered by poor people,' " Boeckenstedt wrote. "And maybe that's the problem?"



There is a second big structural problem standing in the way of colleges that want to admit a more socioeconomically balanced freshman class: the extraordinary power of standardized admission tests and the apparently unbreakable relationship between family income and SAT or ACT scores. "In general, the higher your freshman-class SAT, the lower the percentage of freshmen on Pell and the less diverse you are," Boeckenstedt wrote in one blog post. "Thus, when we ask universities to be 'excellent,' and we define 'excellence' by input variables like SAT or ACT scores and selectivity, this is what we're left with: Colleges who want to do the right thing have to act counter to their own interests."

There is a continuing and often impassioned debate in higher education

over the value of standardized tests in college admissions. Most analysts concur, though, on a couple of basic premises. They agree that high school grades are the single best predictor of college success — more accurate than test scores alone — and they agree that test scores and high school grades considered together are a more reliable predictor of college performance than grades alone.

Beyond that, however, there's a lot of disagreement; not only over what the data say but also over what they mean. People who support the use of standardized tests in admissions often argue that even if test scores offer up just a small amount of extra predictive power, that's still valuable: Every little bit helps. Standardized-test skeptics, including Pérez and Boeckenstedt, respond that the statistical benefit gained by adding the SAT to a student's high school grades is outweighed by the degree to which the tests consistently favor well-off students.



SAT scores can provide a convenient justification for admitting the kind of students you might feel compelled to accept because they can pay full tuition. Photo illustration by Delcan & Company

Here are the data: Among the roughly two million students who take the SAT each year, about two-thirds, according to the College Board's categorization, receive scores that are "nondiscrepant," or in line with their high school grades.

For those students, the SAT doesn't really affect their college prospects at all — their test scores send the same signal to college-admissions offices that their high school grades do. The students for whom test scores make a difference in admissions are the two groups who have "discrepant" scores

— meaning either that their SAT score is much higher than their high school grades would predict (let's call them the inflated-SAT group) or their SAT score is much lower than their high school grades would predict (let's call them the deflated-SAT group). Those two categories each make up about a sixth of each cohort of high school seniors.

In 2010 three College Board researchers analyzed data from more than 150,000 students who took the SAT, and they found that the demographics of the two "discrepant" groups differed substantially. The students with the inflated SAT scores were more likely to be white or Asian than the students in the deflated-SAT group, and they were much more likely to be male. Their families were also much better off. Compared with the students with the deflated SAT scores, the inflated-SAT students were more than twice as likely to have parents who earned more than \$100,000 a year and more than twice as likely to have parents with graduate degrees. These were the students — the only students — who were getting an advantage in admissions from the SAT. And they were exactly the kind of students that Trinity was admitting in such large numbers in the years before Pérez arrived.

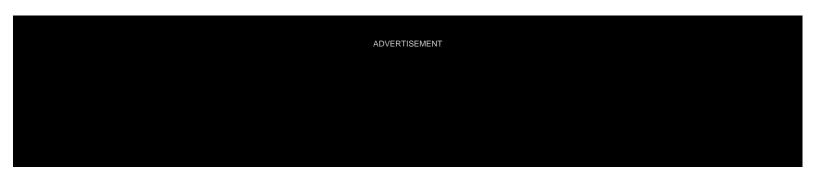
By contrast, according to the College Board's demographic analysis, students in the deflated-SAT group, the ones whose SAT scores were significantly lower than their high school grades would have predicted, were twice as likely to be black as students in the inflated-SAT group, nearly twice as likely to be female and almost three times as likely to be Hispanic. They were three times as likely as students in the inflated-SAT group to have parents who earned less than \$30,000 a year, and they were almost three times as likely to have parents who hadn't attended college. They were the students — the only students — whose college chances suffered when admissions offices considered the SAT in addition to high school grades.

The significance of the College Board's discrepant-score research comes into clearer focus when you consider data from a second College Board study, the National SAT Validity Study, which every year or two analyzes the records of students who take the SAT and then enroll in college. The 2018 validity study (which used data from 2013, before the SAT was redesigned) showed that working- and middle-class high school students, students whose parents earned between \$40,000 and \$80,000, had an average grade-point average in high school of 3.63. Wealthy students, whose parents earned more than \$200,000, had an average high school

G.P.A. of 3.66, almost exactly the same as the working-class ones.

But students in the \$40,000-to-\$80,000 family-income cohort had average SAT scores of 1,624 (out of 2,400, as the SAT was scored before the redesign), while students in the over-\$200,000 cohort had average scores of 1,793. That's a 169-point advantage for the well-off ones. High school grades, considered alone, made for a fairly level playing field for students from different economic backgrounds. But SAT scores tilted that playing field in favor of the rich.

So what do you do if you're an enrollment manager interested in "doing the right thing," as Boeckenstedt puts it, and admitting more low-income students? For Boeckenstedt, one answer is to quit paying so much attention to the SAT and the ACT. Over the last few decades, a growing number of colleges and universities have chosen to become "test-optional," meaning they no longer require applicants to submit SAT or ACT scores. Currently, about half of the top 100 schools on the U.S. News list of the best liberal-arts colleges in the nation are test-optional, as are a number of larger national universities, including George Washington, Brandeis and the University of Chicago. Under Boeckenstedt, DePaul decided to join them, and in 2012, the university became the largest private nonprofit university in the country to offer test-optional admissions.



About 10 percent of the students in each 2,500-member freshman class at DePaul are now admitted without the university seeing their scores. Demographically, those students are quite different from the rest of DePaul's applicant pool: They are more likely to be low-income — almost half of them are eligible for Pell grants — and more than one-third are black or Latino.

For research purposes, after they are admitted, DePaul asks nonsubmitting students to submit their test scores anyway. And after several years of

following their progress, here's what Boeckenstedt and his DePaul colleagues found: Students who enroll at DePaul having chosen not to submit their scores do indeed have much lower ACT and SAT scores than students who submitted their scores. The average ACT scores of nonsubmitters are about 5 points lower than those of submitters, which is a substantial gap on the ACT's 36-point scale. But nonsubmitting students do just as well at DePaul as the submitters do. Their freshman G.P.A.s are equivalent. They have the same likelihood of returning to DePaul for their sophomore year. And the six-year graduation rate for nonsubmitters in the first class admitted under the test-optional policy was 69.4 percent, just 2.6 percentage points below the 72 percent graduation rate for the class as a whole.

When Boeckenstedt looked at all that data, his conclusion was that the nonsubmitters' low test scores were essentially a false signal, predicting an academic disaster in college that never arrived. Allowing those students to apply without submitting their scores made it easier for Boeckenstedt and his admissions staff not to be misled by that false signal. It made it easier for them to do the right thing.

Pérez helped introduce test-optional admissions at Pitzer College during his tenure there, and he became a believer. So when he proposed to overhaul the enrollment-management strategy at Trinity, he recommended that Trinity go test-optional as well. President Berger-Sweeney and the trustees agreed, and in October 2015, just four months after Pérez's arrival on campus, Trinity announced that beginning with the class of 2020, applicants could choose to withhold their test scores from consideration. By the application deadline in early January 2016, 40 percent of applicants had opted not to submit their scores. The class that Pérez and his team selected in the spring of 2016 wasn't much different demographically from Trinity's previous freshman classes; it was still pretty white and wealthy. But by Trinity's new measures of academic quality (which emphasized high school grades and a rigorous curriculum over test scores), it was the most highly qualified class in years.

When the U.S. News & World Report list came out in September 2017, though, Trinity had fallen six spots on the ranking of the nation's top liberal arts colleges, from No. 38 to No. 44. The U.S. News algorithm penalizes colleges if more than one-quarter of their admitted students don't submit scores, and at the time it didn't give them points for increasing their percentage of low-income or first-generation students. (It now does.)

Trinity was paying more attention to diversity in its admissions, and its freshman class was becoming more academically accomplished, but by U.S. News's standards, the college was heading in exactly the wrong direction.

Soon after the U.S. News ranking came out, 17 members of Trinity's English department sent a letter to the college's board of trustees acknowledging that Trinity's slide in the rankings might "spark some misgivings among Trustees about admissions policies enacted by Angel Pérez." The professors urged the trustees to ignore the rankings and continue the new direction in admissions. The students that Pérez was admitting, they explained, were qualitatively different than those in earlier classes. They were more rewarding to teach. They were just plain better students.

"We perceive in many of these students a refreshing array of qualities that were all too rare in prior years: intellectual curiosity, openness of mind and spirit and genuine will to engage with their peers," the professors wrote. If Pérez's admissions policies were "having inadvertent, temporary effects on U.S.N.W.R.'s dubious 'selectivity' measure," they added, "we think this is a small price to pay for one of the most exciting transformations Trinity has witnessed in many years."

There are a few weeks each year, beginning in late February and extending through March, when Pérez's idealistic vision of Trinity College as a place newly committed to inclusion and excellence meets up most bluntly with the practical demands of 21st-century enrollment management. During the admissions season of 2017, Pérez agreed to give me an inside look at how Trinity's decision-making process worked.

Throughout the summer and fall, Pérez and his team worked to recruit applicants. Then in early winter, in what he calls the "read your conscience phase of the admissions process, Pérez instructed his staff to consider each of the 6,000 applications without thinking about the college's finances or calculating who could pay and how much. Instead, he told them simply to consider each student as an individual and ask themselves: Does this person belong at Trinity? Can they do the work? Will they add to our community? Do they deserve to be here?

By the end of February, those questions resulted in a "tentative admit" list of about 3,200 prospective students. This was far too many. Trinity's freshman class each year is made up of about 600 students. But half of them are selected in the early-decision rounds. Early-decision admissions

became popular among American colleges, especially selective liberal-arts colleges like Trinity, in the 1980s and '90s. According to the current rules, students apply early-decision to just one college, and they make a binding commitment to enroll there if admitted.

Researchers have found that the early admissions process tends to benefit affluent students, in part because nonrich students generally can't afford to commit to an early offer without knowing how much financial aid will come with it. Those students need, instead, to be able to compare tuition costs and aid packages from multiple colleges before deciding where to enroll — which means they need to apply in the regular-decision round.

At Trinity, the 300 or so students admitted early in 2017 were quite a bit wealthier, on average, than the rest of the freshman class, and about half of those 300 early admits were athletes. Trinity is a Division III college, and according to National Collegiate Athletic Association rules, Division III schools are not allowed to offer athletic scholarships. But coaches do recruit athletes, and colleges are allowed to offer those athletes preferential admission. Each fall, Trinity's coaches and athletic director bring Pérez their wish lists of prospects, and while Pérez is, strictly speaking, under no obligation to admit students from their lists, he feels pressure to admit a lot of them, and he mostly admits them early. Most of Trinity's athletes play sports that are popular in prep schools and rare in low-income public schools: field hockey, lacrosse, rowing and, especially, squash. The result is that at Trinity, as at many other Division III schools in the Northeast, the recruited athletes are actually more likely to be white and wealthy than the rest of the freshman class.

American colleges collectively now give more aid to each student with a family income over \$100,000, on average, than they do to each student with a family income under \$20,000.

For Pérez, as for many enrollment managers, one key benefit of early admissions is eliminating uncertainty. When colleges send out acceptance notices to students each spring, they know that a significant number of those students will turn down the offer and enroll somewhere else. The percentage of the students a college accepts who then wind up actually enrolling is a college's "yield," and that figure has been falling steadily at American colleges for decades — in part because students today apply to more colleges than they used to. The average yield rate among four-year, nonprofit colleges now stands at 27 percent, nationwide. By contrast, students admitted early, who are bound by the rules of early decision to enroll, have essentially a 100 percent yield rate.

Trinity's overall yield in recent years has been about 30 percent, but that includes its 300 early admits. Among its regular-decision students, it has less than a 20 percent yield rate, meaning that Pérez needed to offer admission to about 1,700 regular-decision students in March in order to yield 300 freshmen the following fall. Which meant that once Pérez and his team were finished reading their consciences and had whittled the list of prospective admits down to 3,200 students, they still needed to cut that list almost in half.

Pérez divided his admissions counselors into teams of two or three, depending on which region of the country they were responsible for, and each team set up in a different office or conference room around the admissions building. The teams considered the tentative admits from each high school in their region, debated their comparative merits and rejected the least qualified. The first 500 cuts were relatively easy, reducing the tentative admit pool to 2,700 — but there were still about 1,000 students to cut.

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There were two numbers that Pérez knew he needed to hit on May 1, the last day that admitted students could accept or reject Trinity's offer of admission. The first number was the size of the class, which had to be as close as possible to 600 students. The second number, even more pressing, was the combined tuition revenue those 600 students needed to bring in.

And back in February, Trinity's board of trustees decided on the tuition target for the class of 2021: \$19 million.

Pérez knew that if he was going to hit those two numbers, there was one tool that was going to be more important than any other: financial aid. The modern practice of enrollment management was invented in the mid-1970s by a man named Jack Maguire, who was then the dean of admissions at Boston College, and one of his most important innovations was to deploy financial aid strategically, as a way to attract the students he most wanted to admit, whether they genuinely needed financial assistance or not. It was something of a radical idea — giving aid to students who didn't need it and it didn't seem, at first, to make sense. But in the 1980s, other colleges began experimenting with this new strategy, giving these grants the euphemistic name "merit aid," and they found it worked remarkably well. It turned out that offering grants — even relatively small ones — to students with high family incomes made it significantly more likely that those students would enroll in your college. (If you called the grant a "scholarship," it worked even better.) And if a well-off student was willing to pay, say, \$30,000 of your \$40,000 tuition, that was still a pretty good deal for your college.

Over the last 30 years, as list-price tuitions have climbed rapidly, this strategy has spread to almost every private college in the nation, and many public ones, as well. And as merit aid has expanded, it has created two big problems. The first, and most obvious, is that if you give more aid to rich kids, you have less to offer to poor kids. American colleges collectively now give more institutional aid to each student with a family income over \$100,000, on average, than they do to each student with a family income under \$20,000.

Equity aside, many enrollment managers have come to see the spread of merit aid as a dire threat to their institutions' financial health. Maguire's approach may have worked well when only a few colleges were doing it, but it works much less well now that everyone is. Beginning in the early 2000s, the practice of giving out merit aid evolved first into an arms race and then, more recently, into what is beginning to look like a death spiral. At private, nonprofit four-year colleges — a category that includes most of the nation's highly selective institutions — 89 percent of students receive some form of financial aid, meaning that almost no one is paying full price.

Colleges still publish official tuition rates, just as they used to, and those published rates are often astoundingly high. But the official numbers have

become almost entirely divorced from reality. Each year, colleges offer larger and larger "tuition discounts" — a broad term for institutional aid — in order to attract the students they want. In 2018 the average tuition-discount rate for freshmen at private, nonprofit universities hit 50 percent for the first time, meaning that colleges were charging students, on average, less than half of their posted tuition rates. Rising tuition rates may still dominate the headlines, but the truth is that discount rates are rising just as quickly, and at some colleges, more quickly. At Trinity, this phenomenon was a major contributor to the financial crisis that took hold in the years before Pérez was hired — its wealthy admits were demanding steeper and steeper tuition discounts in order to attend, and overall tuition revenue was falling as a result.

Trinity's official, list-price tuition in 2017 stood at \$54,360, before room and board. The \$19 million Pérez needed to receive in tuition from his 600 freshmen worked out to be about \$32,000 per student. That meant that he was aiming for a 42 percent discount rate. But the discount would not be the same for each student. There were plenty of highly qualified applicants who needed full financial aid, or something close to it, and Pérez wanted to admit as many of them as he could; he was trying, after all, to make the college more diverse. But he knew he would need to balance each full-need student he admitted with enough full-paying students to hit his revenue target.

If colleges were simply giving each student the same 50 percent discount, that would be challenging enough for enrollment managers like Pérez. But the discounts they offer vary widely from student to student. In fact, if you pick any two freshmen at the same college, they are very likely to be paying completely different tuition rates. Those rates are based not on the true value of the service the college is offering or even on the ability of the student's family to pay. Instead, they are based on a complex calculation, using sophisticated predictive algorithms, of what the student is worth to the college and what the college is worth to the student.

The consultants many colleges hire to perform those calculations — known in the trade as "financial-aid optimization" — are the hidden geniuses of enrollment management, the quants with advanced math degrees who spend hours behind closed doors, parsing student decision-making patterns, carefully adjusting their econometric models, calculating for admissions directors precisely how many dollars they would need to cut from their list price to persuade each specific Chloe or Josh to choose their

college. Outside the ranks of enrollment management, the work done by the companies that employ these back-room prodigies is almost entirely unknown. But collectively, they play as big a role as anyone in shaping American college admissions today.

Like most enrollment managers, Pérez contracts with an outside financial-aid-optimization company to perform econometric modeling on his applicant pool. The company he worked with, the year I was following his progress, was Hardwick Day, a firm based in Bloomington, Minn., that, after a recent round of consolidation in the industry, is now a division of a giant higher-education consulting company called EAB. Hardwick Day's predictive models allowed its analysts to identify, based on the behavior of past students, precisely what tuition each individual applicant would probably be willing to pay. A white student from Danbury with, say, a 3.1 G.P.A. and a 1,200 SAT? Hardwick Day's models might predict that if Trinity offered him a \$15,000 discount, he would accept, but if it offered him a \$5,000 discount, he would go to the University of Connecticut instead.

On March 6, once Pérez's admission counselors had finished whittling down the list of tentative admits, this was the math problem that he presented to Hardwick Day: Help me find the right 1,700 students to produce a class of 600 freshmen who will be willing to pay, together, \$19 million — and tell me how much of a tuition discount I need to offer each one. Over the next two weeks, data flew back and forth between Hartford and Bloomington as Pérez and his team gradually cut their pile of tentative admits to 2,500, and then 2,300, and then 2,100, heading ever closer to 1,700, always trying to balance the students they wanted with the ones they needed. Each morning, Pérez would give his team a new set of instructions, based on the previous day's analysis from Hardwick Day. One day, the tentative admit pile had too many men from the Northeast who needed financial aid, so they spent the day slicing away at that demographic. The next day, they needed to cut women from the Northeast. And on it went.

After each round of cuts, Pérez and his team would send their new, pared-down collection of proposed admits to Hardwick Day, and an hour or two later, a Financial Aid Monitoring Report, in the form of a PDF file, would show up in Pérez's email inbox. Each report included a precise prediction of the overall class size and tuition revenue that Pérez's latest set of theoretical admits would produce, and each time, the result was the same: The class size was too large, and the tuition revenue was too small. There

were too many full-need students on Pérez's wish list, and not enough fullpay ones.

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The rise of predictive analytics in admissions and financial aid has had the effect of automating and turbocharging the pressures that enrollment managers have always felt. Colleges' predictive models and the specific nature of their inputs may differ somewhat from one institution to another, but the output is always the same: *Admit more rich kids*. That's the message that almost every enrollment manager hears each spring, either obliquely or explicitly, and it was certainly the pressure that Pérez felt each time he opened up the latest PDF from Hardwick Day.

The math in the reports might have been cold and hard, but in Trinity's admissions building, the process was growing more emotional. By this point, Pérez's admissions counselors felt personally attached to many of the tentative admits. Each morning, they would gather in a conference room down the hall from Pérez's office. One by one, Pérez would display the application profile for each student whose fate was still uncertain on a large monitor on the wall, and together he and his staff would discuss and debate and horse-trade over each one. Counselors often made passionate defenses for certain students — only to learn, a few hours later, that the latest report from Hardwick Day had ruled them out.

By March 17, a week before Trinity's admission offers were due to go out to the class of 2021, Pérez and his team were still 25 students over their target class size and several hundred thousand dollars short of the tuition target. Staff morale was low. Pérez decided it was time for him and Anthony Berry, the director of admissions, to make the final cuts. So they sent the rest of the admissions staff home, and over the weekend, the two men sat in Pérez's office and removed students one by one from the list of prospective admits. Early in the process, they had done what they could to protect highly qualified low-income and first-generation students. But at this point,

with the tuition revenue estimates still shy of the trustees' target, every student they were cutting was a full-need, low-income student.

In the end, Pérez enrolled 580 students in the class of 2021, and they brought in slightly more than \$19 million. Fifteen percent were first-generation, 14 percent were eligible for Pell grants and 16 percent were black or Latino. (Those categories significantly overlap at Trinity.) All three figures were somewhat higher than when Pérez was hired.

When I talked to Pérez last month, the class of 2023 was about to arrive on campus. It had been another grueling admissions season, he told me, but he had managed to push Trinity's diversity numbers forward by another percentage point or two. It was another important step, he said, but Trinity remained a work in progress.

The dictates of financial-aid optimization and the algorithms of modern enrollment management have made the process of college admissions more opaque and unbalanced than ever. They have empowered affluent students, allowing them to be more choosy about where they go and how much they pay to go there. They have created brand-new obstacles for working-class and low-income students trying to rise above their family's economic situation. And they have made it challenging, each year, for Angel Pérez to admit the students he most wants to admit, the ones he thinks deserve an excellent college education, the ones he knows would excel at Trinity if given a chance: students like the young Angel Pérez, applying to Skidmore from the South Bronx and hoping for a miracle.

Correction September 19, 2019

An earlier version of this article referred incompletely to "tuition discounts." The term applies to merit and need-based institutional aid, not just merit aid.

Paul Tough is a contributing writer for the magazine. His article in this week's issue is adapted from his new book, "The Years That Matter Most: How College Makes or Breaks Us," which has its roots in his last article for the magazine about the disparity in graduation rates between rich and working-class students.

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