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ARMS RACE

Going to College

If you sit down to dinner with friends in certain cities—San Francisco and Portland, to name two—you'll likely find that sharing plates is an impossibility. No two people

can eat the same things. They're all on different diets. These range from vegan to various strains of Paleo, and people swear by them (if only for a month or two). Now imagine if one of those regimes, say the caveman diet, became the national standard: if 330 million people all followed its dictates.

The effects would be dramatic. For starters, a single national diet would put the agricultural economy through the wringer. Demand for the approved meats and cheeses would skyrocket, pushing prices up. Meanwhile, the diet's no-no sectors, like soybeans and potatoes, would go begging. Diversity would shrivel. Suffering bean farmers would turn over their fields to cows and pigs, even on land unsuited for it. The additional livestock would slurp up immense quantities of water. And needless to say, a single diet would make many of us extremely unhappy.

What does a single national diet have to do with WMDs? Scale. A formula, whether it's a diet or a tax code, might be perfectly innocuous in theory. But if it grows to become a national or global standard, it creates its own distorted and dystopian economy. This is what has happened in higher education.

The story starts in 1983. That was the year a struggling newsmagazine, *U.S. News & World Report*, decided to undertake an ambitious project. It would evaluate 1,800 colleges and universities throughout the United States and rank them for excellence. This would be a useful tool that, if successful, would help guide millions of young people through their first big life decision. For many, that single choice would set them on a career path and introduce them to lifelong friends, often including a spouse. What's more, a college-ranking issue, editors hoped, might turn into a newsstand sensation. Perhaps for that one week, *U.S. News* could match its giant rivals, *Time* and *Newsweek.*

But what information would feed this new ranking? In the beginning, the staff at *U.S. News* based its scores entirely on the results of opinion surveys it sent to university presidents. Stanford came out as the top national university, and Amherst as the best liberal arts college. While popular with readers, the ratings drove many college administrators crazy. Complaints poured into the magazine that the rankings were unfair. Many college presidents, students, and alumni insisted that they deserved a higher ranking. All the magazine had to do was look at the *data*.

In the following years, editors at *U.S. News* tried to figure out what they could measure. This is how many models start out, with a series of hunches. The process is not scientific and has scant grounding in statistical analysis. In this case, it was just people wondering what matters most in education, then figuring out which of those variables they could count, and finally deciding how much weight to give each of them in the formula.

In most disciplines, the analysis feeding a model would demand far more rigor. In agronomy, for example, researchers might compare the inputs—the soil, the sunshine, and fertilizer—and the outputs, which would be specific traits in the resulting crops. They could then experiment and optimize according to their objectives, whether price, taste, or nutritional value. This is not to say that agronomists cannot create WMDs. They can and do (especially when they neglect to consider long-term and wide-ranging effects of pesticides). But because their models, for the most part, are tightly focused on clear outcomes, they are ideal for scientific experimentation.

The journalists at *U.S. News*, though, were grappling with "educational excellence," a much squishier value than the cost of corn or the micrograms of protein in each kernel. They had no direct way to quantify how a four-year process affected one single student, much less tens of millions of them. They couldn't measure learning, happiness, confidence, friendships, or other aspects of a student's four-year experience. President Lyndon Johnson's ideal for higher education—"a way to deeper personal fulfillment, greater personal productivity and increased personal reward"—didn't fit into their model.

Instead they picked proxies that seemed to correlate with success. They looked at SAT scores, student-teacher ratios, and acceptance rates. They analyzed the percentage of incoming freshmen who made it to sophomore year and the percentage of those who graduated. They calculated the percentage of living alumni who contributed money to their alma mater, surmising that if they gave a college money there was a good chance they appreciated the education there. Three-quarters of the ranking would be produced by an algorithm—an opinion formalized in code—that incorporated these proxies. In the other quarter, they would factor in the subjective views of college officials throughout the country.

U.S. News's first data-driven ranking came out in 1988, and the results seemed sensible. However, as the ranking grew into a national standard, a vicious feedback loop materialized. The trouble was that the rankings were self-reinforcing. If a college fared badly in *U.S. News*, its reputation would suffer, and conditions would deteriorate. Top students would avoid it, as would top professors. Alumni would howl and cut back on contributions. The ranking would tumble further. The ranking, in short, was destiny.

In the past, college administrators had had all sorts of ways to gauge their success, many of them anecdotal. Students raved about certain professors. Some graduates went on to illustrious careers as diplomats or entrepreneurs. Others published award-winning novels. This all led to good word of mouth, which boosted a

college's reputation. But was Macalester better than Reed, or Iowa better than Illinois? It was hard to say. Colleges were like different types of music, or different diets. There was room for varying opinions, with good arguments on both sides. Now the vast reputational ecosystem of colleges and universities was overshadowed by a single column of numbers.

If you look at this development from the perspective of a university president, it's actually quite sad. Most of these people no doubt cherished their own college experience—that's part of what motivated them to climb the academic ladder. Yet here they were at the summit of their careers dedicating enormous energy toward boosting performance in fifteen areas defined by a group of journalists at a second-tier newsmagazine. They were almost like students again, angling for good grades from a taskmaster. In fact, they were trapped by a rigid model, a WMD.

If the *U.S. News* list had turned into a moderate success, there would be no trouble. But instead it grew into a titan, quickly establishing itself as a national standard. It has been tying our education system into knots ever since, establishing a rigid to-do list for college administrators and students alike. The *U.S. News* college ranking has great scale, inflicts widespread damage, and generates an almost endless spiral of destructive feedback loops. While it's not as opaque as many other models, it is still a bona fide WMD.

Some administrators have gone to desperate lengths to drive up their rank. Baylor University paid the fee for admitted students to *retake* the SAT, hoping another try would boost their scores—and Baylor's ranking. Elite small schools, including Bucknell University in Pennsylvania and California's Claremont McKenna, sent false data to *U.S. News*, inflating the SAT scores of their incoming freshmen. And Iona College, in New York, acknowledged in 2011 that its employees had fudged numbers about nearly everything: test scores, acceptance and graduation rates, freshman retention, student-faculty ratio, and alumni giving. The lying paid off, at least for a while. *U.S. News* estimated that the false data had lifted Iona from fiftieth to thirtieth place among regional colleges in the Northeast.

The great majority of college administrators looked for less egregious ways to improve their rankings. Instead of cheating, they worked hard to improve each of the metrics that went into their score. They could argue that this was the most efficient use of resources. After all, if they worked to satisfy the *U.S. News* algorithm, they'd raise more money, attract brighter students and professors, and keep rising on the list. Was there really any choice?

Robert Morse, who has worked at the company since 1976 and heads up the college rankings, argued in interviews that the rankings pushed the colleges to set

meaningful goals. If they could im prove graduation rates or put students in smaller classes, that was a good thing. Education benefited from the focus. He admitted that the most relevant data—what the students had learned at each school—was inaccessible. But the *U.S. News* model, constructed from proxies, was the next best thing.

However, when you create a model from proxies, it is far simpler for people to game it. This is because proxies are easier to manipulate than the complicated reality they represent. Here's an example. Let's say a website is looking to hire a social media maven. Many people apply for the job, and they send information about the various marketing campaigns they've run. But it takes way too much time to track down and evaluate all of their work. So the hiring manager settles on a proxy. She gives strong consideration to applicants with the most followers on Twitter. That's a sign of social media engagement, isn't it?

Well, it's a reasonable enough proxy. But what happens when word leaks out, as it surely will, that assembling a crowd on Twitter is key for getting a job at this company? Candidates soon do everything they can to ratchet up their Twitter numbers. Some pay $19.95 for a service that populates their feed with thousands of followers, most of them generated by robots. As people game the system, the proxy loses its effectiveness. Cheaters wind up as false positives.

In the case of the *U.S. News* rankings, everyone from prospective students to alumni to human resources departments quickly accepted the score as a measurement of educational quality. So the colleges played along. They pushed to improve in each of the areas the rankings measured. Many, in fact, were most frustrated by the 25 percent of the ranking they had no control over—the reputational score, which came from the questionnaires filled out by college presidents and provosts.

This part of the analysis, like any collection of human opinion, was sure to include old-fashioned prejudice and ignorance. It tended to protect the famous schools at the top of the list, because they were the ones people knew about. And it made it harder for up-and-comers.

In 2008, Texas Christian University in Fort Worth, Texas, was tumbling in the *U.S. News* ranking. Its score, which had been 97 three years earlier, had fallen to 105, 108, and now 113. This agitated alumni and boosters and put the chancellor, Victor Boschini, in the hot seat. "The whole thing is very frustrating to me," Boschini told the campus news site, TCU 360. He insisted that TCU was advancing in every indicator. "Our retention rate is improving, our fundraising, all the things they go on."

There were two problems with Boschini's analysis. First, the U.S. News ranking model didn't judge the colleges in isolation. Even schools that improved their numbers would fall behind if others advanced faster. To put it in academic terms, the U.S. News model graded colleges on a curve. And that fed what amounted to a growing arms race.

The other problem was the reputational score, the 25 percent TCU couldn't control. Raymond Brown, the dean of admissions, noted that reputation was the most heavily weighted variable, "which is absurd because it is entirely subjective." Wes Waggoner, director of freshman admissions, added that colleges marketed themselves to each other to boost their reputational score. "I get stuff in the mail from other colleges trying to convince [us] that they're a good school," Waggoner said.

Despite this grousing, TCU set out to improve the 75 percent of the score it could control. After all, if the university's score rose, its reputation would eventually follow. With time, its peers would note the progress and give it higher numbers. The key was to get things moving in the right direction.

TCU launched a $250 million fund-raising drive. It far surpassed its goal and brought in $434 million by 2009. That alone boosted TCU's ranking, since fund-raising is one of the metrics. The university spent much of the money on campus improvements, including $100 million on the central mall and a new student union, in an effort to make TCU a more attractive destination for students. While there's nothing wrong with that, it conveniently feeds the *U.S. News* algorithm. The more students apply, the more selective the school can be.

Perhaps more important, TCU built a state-of-the-art sports training facility and pumped resources into its football program. In the following years, TCU's football team, the Horned Frogs, became a national powerhouse. In 2010, they went undefeated, beating Wisconsin in the Rose Bowl.

That success allowed TCU to benefit from what's called "the Flutie effect." In 1984, in one of the most exciting college football games in history, a quarterback at Boston College, Doug Flutie, completed a long last-second "Hail Mary" pass to defeat the University of Miami. Flutie became a legend. Within two years, applications to BC were up by 30 percent. The same boost occurred for Georgetown University when its basketball team, anchored by Patrick Ewing, played in three national championship games. Winning athletic programs, it turns out, are the most effective promotions for some applicants. To legions of athletically oriented high school seniors watching college sports on TV, schools with great teams look appealing. Students are proud to wear the school's name. They paint their faces and celebrate.

Applications shoot up. With more students seeking admission, administrators can lift the bar, raising the average test scores of incoming freshmen. That helps the rating. And the more applicants the school rejects, the lower (and, for the ranking, better) its acceptance rate.

TCU's strategy worked. By 2013, it was the second most selective university in Texas, trailing only prestigious Rice University in Houston. That same year, it registered the highest SAT and ACT scores in its history. Its rank in the *U.S. News* list climbed. In 2015, it finished in seventy-sixth place, a climb of thirty-seven places in just seven years.

Despite my issues with the *U.S. News* model and its status as a WMD, it's important to note that this dramatic climb up the rankings may well have benefited TCU as a university. After all, most of the proxies in the *U.S. News* model reflect a school's overall quality to some degree, just as many dieters thrive by following the caveman regime. The problem isn't the *U.S. News* model but its scale. It forces everyone to shoot for exactly the same goals, which creates a rat race—and lots of harmful unintended consequences.

In the years before the rankings, for example, college-bound students could sleep a bit better knowing that they had applied to a so-called safety school, a college with lower entrance standards. If students didn't get into their top choices, including the long shots (stretch schools) and solid bets (target schools), they'd get a perfectly fine education at the safety school—and maybe transfer to one of their top choices after a year or two.

The concept of a safety school is now largely extinct, thanks in great part to the *U.S. News* ranking. As we saw in the example of TCU, it helps in the rankings to be selective. If an admissions office is flooded with applications, it's a sign that something is going right there. It speaks to the college's reputation. And if a college can reject the vast majority of those candidates, it'll probably end up with a higher caliber of students. Like many of the proxies, this metric seems to make sense. It follows market movements.

But that market can be manipulated. A traditional safety school, for example, can look at historical data and see that only a small fraction of the top applicants ended up going there. Most of them got into their target or stretch schools and didn't need what amounted to an insurance policy. With the objective of boosting its selectivity score, the safety school can now reject the excellent candidates that, according to its own algorithm, are most likely not to matriculate. This process is far from exact. And the college, despite the work of the data scientists in its admissions office, no doubt loses a certain number of top students who would have chosen to attend.

Those are the ones who learn, to their dismay, that so-called safety schools are no longer a sure bet.

The convoluted process does nothing for education. The college suffers. It loses the top students—the stars who enhance the experience for everyone, including the professors. In fact, the former safety school may now have to allocate some precious financial aid to enticing some of those stars to its campus. And that may mean less money for the students who need it the most.

It's here that we find the greatest shortcoming of the *U.S. News* college ranking. The proxies the journalists chose for educational excellence make sense, after all. Their spectacular failure comes, instead, from what they chose *not* to count: tuition and fees. Student financing was left out of the model.

This brings us to the crucial question we'll confront time and again. What is the objective of the modeler? In this case, put yourself in the place of the editors at *U.S. News* in 1988. When they were building their first statistical model, how would they know when it worked? Well, it would start out with a lot more credibility if it reflected the established hierarchy. If Harvard, Stanford, Princeton, and Yale came out on top, it would seem to validate their model, replicating the informal models that they and their customers carried in their own heads. To build such a model, they simply had to look at those top universities and count what made them so special. What did they have in common, as opposed to the safety school in the next town? Well, their students had stratospheric SATs and graduated like clockwork. The alumni were rich and poured money back into the universities. By analyzing the virtues of the name-brand universities, the ratings team created an elite yardstick to measure excellence.

Now, if they incorporated the cost of education into the formula, strange things might happen to the results. Cheap universities could barge into the excellence hierarchy. This could create surprises and sow doubts. The public might receive the *U.S. News* rankings as something less than the word of God. It was much safer to start with the venerable champions on top. Of course they cost a lot. But maybe that was the price of excellence.

By leaving cost out of the formula, it was as if U.S. News had handed college presidents a gilded checkbook. They had a commandment to maximize performance in fifteen areas, and keeping costs low wasn't one of them. In fact, if they raised prices, they'd have more resources for addressing the areas where they were being

measured.

Tuition has skyrocketed ever since. Between 1985 and 2013, the cost of higher education rose by more than 500 percent, nearly four times the rate of inflation. To attract top students, colleges, as we saw at TCU, have gone on building booms, featuring glass-walled student centers, luxury dorms, and gyms with climbing walls and whirlpool baths. This would all be wonderful for students and might enhance their college experience—if they weren't the ones paying for it, in the form of student loans that would burden them for decades. We cannot place the blame for this trend entirely on the U.S. News rankings. Our entire society has embraced not only the idea that a college education is essential but the idea that a degree from a highly ranked school can catapult a student into a life of power and privilege. The U.S. News WMD fed on these beliefs, fears, and neuroses. It created powerful incentives that have encouraged spending while turning a blind eye to skyrocketing tuitions and fees.

As colleges position themselves to move up the *U.S. News* charts, they manage their student populations almost like an investment portfolio. We'll see this often in the world of data, from advertising to politics. For college administrators, each prospective student represents a series of assets and usually a liability or two. A great athlete, for example, is an asset, but she might come with low test scores or a middling class rank. Those are liabilities. She might also need financial aid, another liability. To balance the portfolio, ideally, they'd find other candidates who can pay their way and have high test scores. But those ideal candidates, after being accepted, might choose to go elsewhere. That's a risk, which must be quantified. This is frighteningly complex, and an entire consulting industry has risen up to "optimize recruitment."

Noel-Levitz, an education consulting firm, offers a predictive analytics package called ForecastPlus, which allows administrators to rank enrollment prospects by geography, gender, ethnicity, field of study, academic standing, or "any other characteristic you desire." Another consultancy, RightStudent, gathers and sells data to help colleges target the most promising candidates for recruitment. These include students who can pay full tuition, as well as others who might be eligible for outside scholarships. For some of these, a learning disability is a plus.

All of this activity takes place within a vast ecosystem surrounding the *U.S. News* rankings, whose model functions as the de facto law of the land. If the editors rejigger the weightings on the model, paying less attention to SAT scores, for example, or more to graduation rates, the entire ecosystem of education must adapt. This extends from universities to consultancies, high school guidance departments,
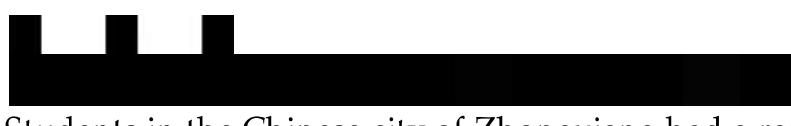
and, yes, the students.

Naturally, the rankings themselves are a growing franchise. The *U.S. News & World Report* magazine, long the company's sole business, has withered away, disappearing from print in 2010. But the rating business continues to grow, extending into medical schools, dental schools, and graduate programs in liberal arts and engineering. *U.S. News* even ranks high schools.

As the rankings grow, so do efforts to game them. In a 2014 *U.S. News* ranking of global universities, the mathematics department at Saudi Arabia's King Abdulaziz University landed in seventh place, right behind Harvard. The department had been around for only two years but had somehow leapfrogged ahead of several giants of mathematics, including Cambridge and MIT.

At first blush, this might look like a positive development. Perhaps MIT and Cambridge were coasting on their fame while a hardworking insurgent powered its way into the elite. With a pure reputational ranking, such a turnaround would take decades. But data can bring surprises to the surface in a hurry.

Algorithms, though, can also be gamed. Lior Pachter, a computational biologist at Berkeley, looked into it. He found that the Saudi university had contacted a host of mathematicians whose work was highly cited and had offered them $72,000 to serve as adjunct faculty. The deal, according to a recruiting letter Pachter posted on his blog, stipulated that the mathematicians had to work three weeks a year in Saudi Arabia. The university would fly them there in business class and put them up at a five-star hotel. Conceivably, their work in Saudi Arabia added value locally. But the university also required them to change their affiliation on the Thomson Reuters academic citation website, a key reference for the *U.S. News* rankings. That meant the Saudi university could claim the publications of their new adjunct faculty as its own. And since citations were one of the algorithm's primary inputs, King Abdulaziz University soared in the rankings.

Students in the Chinese city of Zhongxiang had a reputation for acing the national standardized test, or *gaokao*, and winning places in China's top universities. They did so well, in fact, that authorities began to suspect they were cheating. Suspicions grew in 2012, according to a report in Britain's *Telegraph*, when provincial authorities found ninety-nine identical copies of a single test.

The next year, as students in Zhongxiang arrived to take the exam, they were dismayed to be funneled through metal detectors and forced to relinquish their

mobile phones. Some surrendered tiny transmitters disguised as pencil erasers. Once inside, the students found themselves accompanied by fifty-four investigators from different school districts. A few of these investigators crossed the street to a hotel, where they found groups positioned to communicate with the students through their transmitters.

The response to this crackdown on cheating was volcanic. Some two thousand stone-throwing protesters gathered in the street outside the school. They chanted, "We want fairness. There is no fairness if you don't let us cheat."

It sounds like a joke, but they were absolutely serious. The stakes for the students were sky high. As they saw it, they faced a chance either to pursue an elite education and a prosperous career or to stay stuck in their provincial city, a relative backwater. And whether or not it was the case, they had the perception that others were cheating. So preventing the students in Zhongxiang from cheating *was* unfair. In a system in which cheating is the norm, following the rules amounts to a handicap. Just ask the Tour de France cyclists who were annihilated for seven years straight by Lance Armstrong and his doping teammates.

The only way to win in such a scenario is to gain an advantage and to make sure that others aren't getting a bigger one. This is the case not only in China but also in the United States, where high school admissions officers, parents, and students find themselves caught in a frantic effort to game the system spawned by the U.S. News model.

An entire industry of coaches and tutors thrives on the model's feedback loop and the anxiety it engenders. Many of them cost serious money. A four-day "application boot camp," run by a company called Top Tier Admissions, costs $16,000 (plus room and board). During the sessions, the high school juniors develop their essays, learn how to "ace" their interviews, and create an "activity sheet" to sum up all the awards, sports, club activities, and community work that admissions officers are eager to see.

Sixteen thousand dollars may sound like a lot of money. But much like the Chinese protesters in Zhongxiang, many American families fret that their children's future success and fulfillment hinge upon acceptance to an elite university.

The most effective coaches understand the admissions models at each college so that they can figure out how a potential student might fit into their portfolios. A California-based entrepreneur, Steven Ma, takes this market-based approach to an extreme. Ma, founder of ThinkTank Learning, places the prospective students into his own model and calculates the likelihood that they'll get into their target colleges.

He told Bloomberg BusinessWeek, for example, that an American-born senior with a 3.8 GPA, an SAT score of 2000, and eight hundred hours of extracurricular activities had a 20.4 percent shot of getting into New York University, and a 28.1 percent chance at the University of Southern California. ThinkTank then offers guaranteed consulting packages. If that hypothetical student follows the consultancy's coaching and gets into NYU, it will cost $25,931, or $18,826 for USC. If he's rejected, it costs nothing.

Each college's admissions model is derived, at least in part, from the U.S. News model, and each one is a mini-WMD. These models lead students and their parents to run in frantic circles and spend obscene amounts of money. And they're opaque. This leaves most of the participants (or victims) in the dark. But it creates a big business for consultants, like Steven Ma, who manage to learn their secrets, either by cultivating sources at the universities or by reverse-engineering their algorithms.

The victims, of course, are the vast majority of Americans, the poor and middle-class families who don't have thousands of dollars to spent on courses and consultants. They miss out on precious insider knowledge. The result is an education system that favors the privileged. It tilts against needy students, locking out the great majority of them—and pushing them down a path toward poverty. It deepens the social divide.

But even those who claw their way into a top college lose out. If you think about it, the college admissions game, while lucrative for some, has virtually no educational value. The complex and fraught production simply re-sorts and reranks the very same pool of eighteen-year-old kids in newfangled ways. They don't master important skills by jumping through many more hoops or writing meticulously targeted college essays under the watchful eye of professional tutors. Others scrounge online for cut-rate versions of those tutors. All of them, from the rich to the working class, are simply being trained to fit into an enormous machine—to satisfy a WMD. And at the end of the ordeal, many of them will be saddled with debt that will take decades to pay off. They're pawns in an arms race, and it's a particularly nasty one.

So is there a fix? During his second term, President Obama suggested coming up with a new college rankings model, one more in tune with national priorities and middle-class means than the *U.S. News* version. His secondary goal was to sap power from for-profit colleges (a money-sucking scourge that we'll discuss in the next chapter). Obama's idea would be to tie a college ranking system to a different set of metrics, including affordability, the percentage of poor and minority students, and postgraduation job placement. Like the *U.S. News* ranking, it would also consider graduation rate. If colleges dipped below the minimums in these categories,

they'd get cut off from the $180 million-per-year federal student loan market (which the for-profit universities have been feasting on).

All of those sound like worthy goals, to be sure, but every ranking system can be gamed. And when that happens, it creates new and different feedback loops and a host of unintended consequences.

It's easy to raise graduation rates, for example, by lowering standards. Many students struggle with math and science prerequisites and foreign languages. Water down those requirements, and more students will graduate. But if one goal of our educational system is to produce more scientists and technologists for a global economy, how smart is that? It would also be a cinch to pump up the income numbers for graduates. All colleges would have to do is shrink their liberal arts programs, and get rid of education departments and social work departments while they're at it, since teachers and social workers make less money than engineers, chemists, and computer scientists. But they're no less valuable to society.

It also wouldn't be too hard to lower costs. One approach already gaining popularity is to lower the percentage of tenured faculty, replacing these expensive professors, as they retire, with cheaper instructors, or adjuncts. For some departments at some universities, this might make sense. But there are costs. Tenured faculty, working with graduate students, power important research and set the standards for their departments, whereas harried adjuncts, who might teach five courses at three colleges just to pay rent, rarely have the time or energy to deliver more than commodity education. Another possible approach, that of removing unnecessary administrative positions, seems all too rare.

The number of "graduates employed nine months after graduation" can be gamed too. A *New York Times* report in 2011 focused on law schools, which are already evaluated by their ability to position their students for careers. Say a newly minted lawyer with $150,000 in student loans is working as a barista. For some unscrupulous law schools investigated by the *Times*, he counted as employed. Some schools went further, hiring their own graduates for hourly temp jobs just as the crucial nine-month period approached. Others sent out surveys to recent alumni and counted all those that didn't respond as "employed."

Perhaps it was just as well that the Obama administration failed to come up with a rejiggered ranking system. The pushback by college presidents was fierce. After all, they had spent decades optimizing themselves to satisfy the *U.S. News* WMD. A new

formula based on graduation rates, class size, alumni employment and income, and other metrics could wreak havoc with their ranking and reputation. No doubt they also made good points about the vulnerabilities of any new model and the new feedback loops it would generate.

So the government capitulated. And the result might be better. Instead of a ranking, the Education Department released loads of data on a website. The result is that students can ask their own questions about the things that matter to them—including class size, graduation rates, and the average debt held by graduating students. They don't need to know anything about statistics or the weighting of variables. The software itself, much like an online travel site, creates individual models for each person. Think of it: transparent, controlled by the user, and personal. You might call it the opposite of a WMD.