

THE NEW SCHOOL

2013 University Commencement Remarks from Nate Silver

Thank you. I'm humbled to be here with you today and to receive this degree. It's an enormous honor and I want to thank President Van Zandt, Provost Marshall, and the rest of The New School community.

But most of all, I want to thank you—the graduates—for having had the fortitude to devote the past several years of your life to your love of learning, and to the pursuit of your dreams and your passions. And I wanted to thank your parents and your teachers for making those opportunities possible. You all ought to be exceptionally proud.

I need to warn the graduates, however, that there are some people out there who don't hold you in the same high esteem that I do. One of them is Joel Stein, a columnist for *Time* Magazine. He calls your generation—the millennial generation—“lazy, entitled, selfish and shallow”.

What should we make of Mr. Stein's claim? Well, there's no doubt that your generation is going to endure some challenges. In fact, college graduates in America today face a future that may be more uncertain than ever. In 1994, according to the Department of Education, 87 percent of students with new bachelors' degrees were working full-time or part-time a year later. Today, that figure is just 73 percent. A college degree is still an incredible advantage—but is no longer a guarantee of a good job or a successful career.

The good news is that none of this is your fault. The bad news is that we'll be counting on you to clean up the mess that the *previous* generation has left behind.

That generation has punted on solving a whole host of problems from a warming planet to a growing national debt. And it's investing less and less into the future. Federal spending on basic research and development will equal only about 0.8 percent of gross domestic product this year, down from 1.2 percent thirty years ago. Education spending is down. Infrastructure spending is down—as a share of G.D.P., projected to be at a 20-year low this year.

So how is it, then, that *your* generation stands accused of being of lazy, entitled, selfish and shallow—when it's your standard of living that's been threatened by the previous generation's mistakes?

But there's more good news. The previous generation has left behind something else in addition to all

its problems: lots and lots of data, data in every imaginable format and every imaginable field. According to IBM, in fact, 90 percent of the data in the world was created within the past two years.

Here's the catch: the previous generation has not done a very good job of transforming all that data into useful knowledge. That's going to be up to you as well.

Instead, the new millennium has been characterized by a series of crises—earthquakes and hurricanes, recessions and financial bubbles, wars and terrorist strikes, you name it. Not all of those things could have been prevented, but they all involved some failure of analysis that magnified the consequences. Many seismologists in Japan, for example, wrongly concluded that an earthquake as large as the magnitude 9 that struck there in 2011 was physically impossible—and so the Fukushima nuclear reactor was only built to withstand a magnitude 8.6 instead.

Let me pause for a moment to relate a little bit from my own experience. In 2012, I published a statistical model, for the *FiveThirtyEight* blog at the *New York Times*, which sought to forecast the outcome of the presidential election. On Election Day last year, it called all 50 states right.

But there was no particular wizardry or genius behind this model. Mostly, we were just taking an average of all publicly-available polls, and letting the data determine the forecast. Lots of our competitors also did very well, calling 48 or 49 or 50 states right, based on variations on the same approach. Forecasting the outcome of a presidential election is a much simpler problem than many of those that your generation will face—and a much less important one.

However, this relatively simple model generated a tremendous amount of controversy. By Election Day last year, more people were conducting Google searches for my name than for Vice President Biden's. The forecasts were lauded by liberals to an extent that may have been unhealthy—I was the subject of a *New Yorker* article that compared me to Justin Bieber. But I was vilified by some Republicans. One of them, for example, called me “a thin and effeminate man with a soft-sounding voice”—as though that would somehow make Mitt Romney win Colorado. Other Republicans alleged that the polls

had been “skewed” by a conspiracy of pollsters. Just prior to Election Day, some prominent Republican columnists predicted not only a Romney win but a Romney landslide.

It wasn’t just Republicans, however, who were giving me a hard time—there was plenty of pushback from mainstream journalists as well. Joe Scarborough, the MSNBC host, insisted that I be kept away from typewriters, computers, laptops, and microphones. A columnist at Politico threatened that I’d be a “one-term celebrity” if I got the prediction wrong.

Just to make myself clear: these are high-class problems. Election forecasting is not among the more important concerns in the world. But it makes for an instructive test case. Political polls are relatively simple and objective facts. That so many commentators and pundits struggled to do so much as average them together does not speak very well to their judgment. No wonder they’ve left your generation with such a mess.

This is the point in the speech at which I’m supposed to blame innumeracy—meaning, a lack of statistical literacy—for all these problems. There’s no doubt that this is a huge issue. Probability and statistics aren’t emphasized enough in most classrooms, and they aren’t always taught very well. There’s a huge demand for analytical talent—which is why the number of people working as statisticians has increased by 43 percent over the past ten years even as overall employment has been stagnant.

But I think that’s letting the political pundits—and the previous generation—off too easily. It’s not just that they don’t know statistics. It’s that they don’t know how much they don’t know—and that they wallow in their ignorance.

Take, for example, the mission statement put out by the publication Politico. “We don’t focus on the masses,” Politico says. “We focus [...] almost exclusively, on an elite audience. The smart set is small.”

The problem with this is that “elite” is not a good synonym for “smart” when it comes to politics. Instead, the way we might learn something from political elites is by figuring out what they do, and doing exactly the opposite.

Consider an experiment performed by Dr. Phil Tetlock, a professor of psychology at The Wharton School. Tetlock spent 20 years studying members of the political elite—from pundits, to journalists, to academics, to people who work for the government. He asked them to make predictions about a number of major political events, from the fall of the Soviet Union to the rate of economic growth.

When he tallied up their scores, Tetlock found that the experts had done barely any better than a set of chimpanzees flinging poop at a dartboard. And he found that the more often a so-called expert went on TV, the worse his predictions tended to be.

Tetlock also found, however, that a certain type of expert did a little better than the others. These were the experts that he classified as “foxes” instead of “hedgehogs” based on their responses to a personality questionnaire. These animal references come from a quote attributed to the Greek poet Archilochus: “the fox knows many little things, but the hedgehog knows one big thing”.

So what does it mean to think and behave like one of those cute and scrappy little foxes?

Actually, being a fox ought to come naturally to most of you. It means applying some of the same values and attitudes that you’ve learned at The New School.

Foxes, for instance, tend to value diversity and independence. They like to consider a wide variety of information, from a people with a wide range of life experiences, before making their decisions.

Foxes understand that we are small creatures in an incredibly large and complex universe. So they think in terms of probabilities, and not in absolutes. Foxes question authority—they’re rightfully distrustful of people who claim to have all the answers, no matter their credentials.

Foxes are *not* Type-A personalities—instead, they’re the artsy, creative types. They know that success results from a combination of skill, luck, and hard work. So they focus on their process more than their results, exuding a Zen-like calm that can mask their inner passion and intensity.

It so happens that these fox-like traits are especially helpful when it comes to mining insight from the vast array of statistical data in the world today. But I suspect that they will be just as helpful in many other areas in the arts and sciences.

Most political pundits, on the other hand, are hedgehogs—full of brash and bold pronouncements that are often wholly disconnected from reality. As for Joel Stein of Time Magazine—it turns out that his critique of millennials resulted from a flawed and lazy type of statistical thinking.

In his article, Stein referenced a study showing that people in their 20s are more narcissistic than people who are a little older. That may be true—but it has everything to do with age, and nothing to do with your generation. The same would have been true of your parents or your grandparents when they were in their 20s.

And sure enough, you can find magazine articles just like Stein's dating back as far as 1907, which invariably accuse the emerging generation of being lazy, entitled, selfish and shallow. Somehow, those selfish and lazy generations managed to defeat the Nazis, to send a man to the moon, to invent everything from the automobile to the iPad, and to bestow great works of art, design and philosophy upon the world.

It's obvious just by looking at you, and by feeling the passion and the energy in this room, that your generation is about to accomplish just as many great things. We may need you to accomplish more than your fair share, in fact.

So don't lose that spark as you move forward in life. Don't lose your independence. Don't lose your creativity. Don't stop being weird. Don't stop being angry. Don't stop questioning authority. And don't stop learning.

Don't do what the previous generation did: do better. Take their laziness and turn it into your opportunity.

Thank you, congratulations, and good luck.