

THE ASPEN INSTITUTE
ASPEN IDEAS FESTIVAL 2018

Psychology and the Good Life

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St. Regis Hotel Ballroom

ASPEN, COLORADO

SPEAKERS:

Laurie Santos

Katie:

Good morning. Welcome everybody. If everyone could please make sure their cell phones are on silent I would appreciate that. My name is Katie [inaudible 00:00:56] I'm a producer for the Aspen Ideas Festival.

Just to give you guys a little bit of a background on our speaker invitation process. So this winter, when I was doing research on who we were going to invite for the Genius of Animals track, which starts today. I found this great talk of Laurie's online about the decision making processes of monkeys and how that sheds light on our own decision making processes.

So I thought, "Okay we have to invite her for the animals track, that's a no-brainer, she's so cool." Then I was doing some more research on her and I found this January New York Times article and the title was Yale's Most Popular Class Ever. I thought, well that's interesting. I learned that 1,200 students at Yale, almost a quarter of the student body, are taking her class called The Psychology of Happiness, Psychology and the Good Life, psychology of happiness. So I thought, "Okay, that's really cool. We have to get Laurie to give an iteration of her happiness talk at the Ideas Festival. And she was game.

We are so lucky that she is here, willing to share some of her findings and insights on happiness. Clearly at a university where stress is abundant, this kind of information has a lot of value for students. So please join me in welcoming psychology professor, Dr. Laurie Santos.

Laurie Santos:

Thank you so much.

Thanks so much. It was fun to get invited here to talk about our animal work. But given that we've been thinking a lot about mental health on college campuses, I was also very excited to be able to talk to you about this course that we've been working on at Yale called Psychology and the Good Life. Which, as you heard, became an incredibly popular class. In fact it was the most popular class in the 300 year history of Yale.

What I'm going to do today is to give you a little bit of a glimpse of this stuff, I'm going to give you a quick introduction to who I am and what I do and why I started this sort of strange new class at Yale. But then in addition I'm gonna give you a kinda quick crash course on psychology and the good life, this super popular class where I'm going to tell you why I developed it, why I thought it was important, but then I'm going to tell you what students learn. And this is the really fun part about coming to a place like the Aspen Ideas Festival, you don't have to pay the Yale tuition, you don't have to get the SAT scores to get into Yale. You just get the crash course for free and it's only 40 minutes long. It's

not 26 lectures and so on. So you'll get the quick crash course on this, which will be fun.

Then I'm going to talk a little bit about how this class is becoming a movement on Yale's campus, to kind of think more about well-being and mental health on college campuses. So what I hope you can take with you is both, what I've learned from teaching this class, what I've learned about what life is like in higher-ed right now, what life is like on college campuses; but also what I hope you'll take with you is what I've learned about trying to build a culture of wellness at Yale.

All of you are coming from all kinds of different places, different institutions, different companies and so on. I think the kinds of problems that we're seeing in our undergraduates can be mirrored in those places too. So I want you to think critically about what you can take from this to bring back to your own organizations, institutions, families and so on.

So just by way of a quick introduction, as you heard, I am a professor at Yale University. I've been teaching there for 15 years, and that means I've seen students in the classroom. I teach classes on evolution and I teach classes on animal cognition. But I started a very different role two years ago when I took on a new position at Yale. Not just kind of being there teaching students, but becoming one of Yale's heads of colleges. For folks that don't know, Yale has these very strange residential colleges it's kind of like Hogwarts in Harry Potter where we have Gryffindor and Slytherin and so on. I am the head of Silliman College, which is the best residential college, obviously look at it, it's got beautiful trees and so on.

In this new role, I do something different, I don't just teach at the front of the classroom. I live with students on campus, I interact with them in their coffee shops, in the dining hall, I sit with them and I get to see their life really up close and personal. I'll be honest that I didn't really like what I was seeing. This is a spot where I need to do a little bit of clarification because I think we have some misnomers when it comes to what college is like. In fact we tend to think that college is like what we see in the shiny admissions packages; college students who are super happy they're hanging out with the president and the then dean of Yale College, they're smiling, they're enjoying time being social, right? This is what the media and movies tell us, this is what a lot of us remember fondly from our own college days.

But the sad thing is this is not what I was seeing on campus as head of college. So just to give you a little glimpse of what this looks like at Yale in particular, I'll give you some anecdotal results of a survey I gave students.

When they started the class I asked them, "What do you think the culture is like at Yale? Are Yale students happy? What are you guys facing?" And here are the kind of things I saw, these are from students words, "As I reflect on my time at Yale so far I realize that I have not been able to get the most out of my

experience largely because of all the stress." And this was echoed in almost all the responses I got. Yale students are incredibly privileged to be at an amazing place like Yale with so many opportunities. But they react to that with anxiety, because they're so stressed they can't make use of all these kinds of good opportunities they have.

So that was something I heard a lot. Here's another one that breaks my little professor heart. So people at Yale are often too stressed to enjoy the small pleasures, for example, "There's little time at Yale to do the things I love, like read a book." Again, my professor heart getting crushed like, no. But this was the kind of thing we hear echoed. Students are overwhelmed and so busy all the time, that they're triaging stuff. They're triaging their work, their triaging the kind of education they would get on the side by reading books for pleasure. They're just super, super busy and stressed all the time.

This stress takes its toll and it takes its toll in ways that students don't, sometimes, want to admit. That's what we get from this last quote here, "There's a sort of social currency to being the busiest, to getting the least sleep, we don't actually talk about the things that are bothering us and it takes a real crisis for any of us to actually admit that something is really wrong."

This is the kind of thing I was seeing at Yale, and some of you might be thinking, "Oh my God, I am not going to send my kids or my grandkids to Yale, what a horrible place." But the sad that this isn't just Yale, and this isn't just elite institutions. In fact, what we're learning is the kind of sentiments we're seeing here at Yale about stress and depression and anxiety, these are the kinds of things we're seeing on college campuses all over.

Just to get a sense of that I'm going to show you some statistics, they're pretty awful statistics, but they're stats on college student mental health. This comes from the National College Health Assessment from 2009, I've recently seen the one from 2017 and as you might guess, these statistics are worse. I'll point out the spots where some of them are worse.

Here's what we see in this survey, what we find is that 40% of college students report more than the average level of stress. That's gone up much more, much, much more since then. We also see that around a third of students report being so depressed quote, "It's difficult to function a lot of the time." That's a third of our students. Those of you who are in the work-force right now, in five years these are gonna be your workers, right? A third of them are too depressed to function. Over 40% say that they feel hopeless a lot of the time. Just under 50% say they experience overwhelming anxiety, this is one that has gone up a lot this is up to 60% in the 2017 survey. Over 50% report feeling very lonely a lot of the time, this one also has gone up in 2017. And over 80% say they feel overwhelmed by all they have to do all the time.

Again this is not elite institutions, this is all of our college aged students from a nationally representative sample. If you're seeing these statistics, you're

probably thinking the same thing I thought which is, "This is really bad." These are our workers in five years, these are our youth that's supposed to fix all the problems that my generation caused. These are the people we want to educate at these elite institutions that we're paying so much money to have these students gain access to a fantastic education and their missing it because they're so stressed out all the time.

The other thing I realized is this is not what college is supposed to be like. I saw this and I just felt so sad that I wanted to help, I wanted to do something, I wanted these students to feel happier. I didn't want them to miss college because they felt overwhelmed all the time. I also wanted to create a better culture because as an educator in some sense I'm responsible for this too. I'm part of the whole system that's creating these kinds of academic stresses and I wanted to find ways to do something a little bit different.

So all of this was very depressing, but the good news is that in some sense I had some hope. I had some hope because I'm an academic psychologist, I study decision making in primates. I study the field of psychology broadly and knowing that I had expertise on the idea that we could do something. There was kind of light bulb moment where I realized that the science of psychology, neuroscience, all of the mind sciences could help us here, that's because we have really great science on what to do to feel less stressed, to feel less depressed and to get more meaning in your life.

This science comes from two different domains. One domain is this domain of positive psychology, a field that literally studies happy people. A lot of the work goes something like this, you find a set of very happy people and you ask, what are they doing? What jobs do they have? Where do they live? How do they spend their time? What is their secret? And after two or so decades of this work, we actually have a lot of insight into what the secret is. What you're going to see is that the secret is sometimes we seek out things that aren't going to work and we don't do the kinds of things regularly that these folks do.

So that was domain number one, using the science of positive psychology to figure out what to do better. But there was a different kind of science I knew we could harness as well, and that's the science of something different, the science of behavior change. The other thing that researchers in psychology and behavioral economics and neuroscience have learned about is how we make choices, how we form habits, how we can behave a little bit better.

And this was important because even if we figured out what happy people do all the time, unless we had ways to change our behavior, to do better ourselves, our students weren't going to learn anything. So this is why we summarize a lot of the work in behavioral economics on behavior change and so on. And just a note to say, this isn't just the kind of thing universities are paying attention to, this is the kind of thing that companies are building into their platforms, these are the kinds of things that governments are paying attention to. This is an old shot from back in the day when Barack Obama was in the White House, where

he had an executive order to try to use these findings in behavioral science in all their policy decisions. So this is the kind of stuff we know works.

So I said, "okay, I'll teach students this stuff, I'm a psychology professor, I'm usually up in the classroom, I'll just make a course on this. I'll make a course that teaches students all this stuff. I'll call it something kind of cool, so Yale students want to take it." So I didn't just call it Science of Positive Psychology, I called it Psychology of the Good Life so students see the course catalog and they're like, "Oooh that's interesting." And the important thing about this class is that it was a course that had two different parts, and the parts were really important and the parts come from the science itself.

One part was kind of what I've just told you, it was all this stuff on the science of the good life, the positive psychology stuff and how to make those changes in your life. We also had a second part, which again comes from the science, that was I wanted to include something on the practice of the good life. What do I mean by this? You can know all of the science of psychology and what you're supposed to do to be happy, but unless you put those practices into your life you're not going to get any happier.

The analogy I tell my students, well I'll get to the analogy in a second, to build this sort of practice of the science of psychology in we had a kind of strange feature of the course. We normally had course requirements like any Yale course, we had a mid-term and a final paper and the normal stuff. But we also built in this funny thing that I called course re-wirements and those were there to re-wire students habits. It was all these practices that we know happy people do, and we literally just stuck them in the syllabus.

They didn't have to do them for a grade, but because it was in there in the syllabus, you know these Yale students who are so good at following what's in the syllabus, they did them all which is great. These were practices I'll talk about in a second. Things like experiencing gratitude, taking time to do that, taking time for social connection, things like taking time to be mindful in that moment through the practice of meditation, taking time for things like exercise, and taking time for things like sleep. Literally these were built into the syllabus, in a very particular way. So I didn't know what was going to happen.

I put all this stuff together, I stuck all this in a syllabus, I sent it to the Yale powers-that-be, there are folks that approve these courses for you. I said, "This is a strange course, let's see what happens." My first indication that something was different was the fact that after I did this, this committee which usually finds very tiny things to come back and get you to change, had no changes to the syllabus. In fact their only comment was, "I hope a lot of Yale students take this." I was like, that's strange. We still don't know, Yale no students pre-register so we have no idea how many students are going to take classes.

So I submitted the syllabus, I waited in December for the new semester to start, and then I started looking at all these websites we have at Yale to see how many

students are interested in our class. These websites give you these little graphs of how many students are looking at your class on their website. Normally the graphs have these scales that go from zero to 100. You can see if there's 30 people shopping your class and so on, but my scale was different it went from zero to 1000. And I was like, "That's strange."

Given that there are only 5000 students at Yale total. What I didn't expect to happen is what you heard at the beginning. It wound up being a class that looked like this. Where in the end, about one out of every four students at Yale took the class. I think they were showing us that there was a need for some of this stuff. There was a need to really think about what the science of psychology looked like.

Now that you get a sense of where the class came from, where the need came from, now I'll do the part where I tell you a little bit about what students learn. Again I can't do the full version with all 26 lectures, we're just doing the short version. But here's the kind of listicle version, I'm gonna give you the top ten insights that my students get from my class. So you'll be able to kind of tick them off one through ten.

So here's how they go, the first insight that we teach students a lot, which comes from the literature on positive psychology is this idea that this enterprise is possible. We don't have to be stuck at whatever well-being level we're at, we can improve it. That comes from this insight that we get from research, that we can control a lot more of our happiness than we think. A lot of this work comes from an idea that we tend to think of people as being kind of a half-glass full type person, or a half-empty kind of person. That's just sort of, you're built that way, right?

Well in class we survey all of the work on heritability of well-being. We say, is it true? Is it kind of determined by our genes? Is this project something that we can have some hope in? And what you find when you do this is, yeah there's a heritable component, just like there's a heritable component to most things. But it's not as big of a heritable component as we think. This comes from some lovely work by the positive psychologist Sonja Lyubomirsky who has tried this kind of possibly impossible scientific project, but her goal is to try to see how much of happiness can we capture by different sorts of factors. For example, how much of our happiness is captured by our genes, by our heritability. What she argues in her book is, there is some there, in fact there is a chunk, it's probably about 50% that's controlled by our genes and you could say, "Oh man that's like half of my happiness that's kind of built in." But you could also say that, "Wait a minute, that means that there's half of it that I can control myself." That's what we teach our students. You have control over the other part.

The problem is, the way we think we control it, isn't right. Some of you might be thinking, "Ah-ha that other 50%, I know how to control it. I know what I can do there, I'm just going to get rid of all of the crappy stuff in my life, I'm going to get rid of it, I'm gonna move to Aspen, I'm gonna quit my job, I'm gonna get rid

of my cranky kids." You know, just get rid of all that bad stuff. That's the intuition, it's an intuition that a lot of us share, but it's yet another misconception that we teach about in our course and it gets us to big insight number two.

Which is that, these things like where we live, and what job we have and our salary and all these things, we think these things matter a lot, we think our life circumstances matter a ton, and they do matter a little bit but not nearly as much as we think. And we know this from work looking at people who are very happy and people who've had different kinds of life circumstances throughout their lives. You can look, for example, to people who've won the lottery and their life circumstances because they literally have won the lottery. You can look to lottery winners and ask, these are folks who are trying to earn a particular kind of income, trying to have a certain amount of money. They've succeeded in a very rare event, have had this amazing windfall, are they happy? And what you find is, yes, on the day that these folks won their whatever it is, million thousand, that was a good day they were happy that day. Six months later, they are statistically indistinguishable from controls.

What we predict is going to make us happy, doesn't make us as happy as we think. That's true for very positive life experiences, but it's also true for very bad life circumstances. Imagine this, imagine you're just so taken by my talk after this you start walking through the streets of Aspen forgetting that there are cars moving around, you get hit by a car and you lose the use of your legs. For those of you who have the use of your legs now. How would you predict this would make you feel? Well at the moment this happens, this is really bad, but what you find is that several months later, individuals who are paraplegic are statistically indistinguishable from those who haven't had that event happen to them.

Again, not what we forecast, but in fact it's what the data really shows. In fact, individuals who've had a catastrophic event like that, sometimes develop more meaning in their life. They see their life as more precious and they kind of wish it had happened earlier so they could live their life to the fullest.

So this is what we don't expect to be happening. We think that the way to control the other 50% of our happiness is to change around all the bad crappy stuff. Build in the good things, get rid of all the bad things. But that's just not what the research shows. If anything, estimates from folks like Sonja Lyubomirsky suggest that, yeah life circumstances matter a teeny-weency bit, but maybe like 10% tops. That's the kind of fluctuation that's going on. It's not the whole picture. What that suggests is that if we want to attack this other 40%, we can do that. We can do that through our own intentional effort. What the research shows is that it's our behaviors that effect the other 40%. We can take control of it.

That gets us to big insight number three which is, that like all good things in life, taking control of it is kind of hard. You can become happier, but it takes a lot of

effort and it takes daily work. For those of us who tend not to be happy, it takes doing the kinds of things that happy people do that might not feel intuitive to you, but if you do them every day you can bump up your own well-being. We get this from a lovely quote from Sonja's book where she kind of explains this quite nicely she says, "It may be obvious that to achieve anything substantial in life, learn a profession, master a sport, raise a child, a good deal of effort is required. Research reveals that if you desire happiness you need to go about it in a similar way. Permanent changes that require effort and commitment every day of your life."

She likens this to kind of doing a ton of exercise all the time, you can't just kind of want to get fit, you have to do it not just once but every morning. This is the kind of thing you're going to see in these practices. You can put them into effect, but you have to do them and it's going to take some work. I use the analogy of exercise in my class because I really want to have students understand this.

A lot of them are taking the class and they think, "I'm just going to get happier." And I say, "Imagine you took a class on exercise and I told you about how to do different squats or how you work your abs or how your muscles work and all that stuff, but you didn't go to the gym." You wouldn't get happier. And I say that the science of psychology and the science of happiness works the same way as that. You can hear all these studies and you can get an A in this class, but unless you put this stuff into practice, it's not gonna help. You have to do the work.

One of the pieces of work gets us to a fallacy that we talk about in class this is the first sort of tip I'll give you-

PART 1 OF 3 ENDS [00:21:04]

Laurie Santos:

... gets us to a fallacy that we talk about in class is the first sort of tip I'll give you, so you're gonna come away with understanding a different cognitive bias. It's a cognitive bias known as the G.I. Joe Fallacy.

Some of you know what G.I. Joe is. You all are kind of my age-ish, people who know G.I. Joe, show of hands? Yes? It is G.I. Joe. Yes, it's the G.I. Joe, the cheesy cartoon from GI Joe.

And those of you who remember G.I. Joe from the '80s remember that it was this cartoon that ended with this public service announcement at the end. And at the end, the kid at the end of this cartoon would say, "Thank you, G.I. Joe. Now I know." And G.I. Joe would say, remember, "Knowing is half the battle." Exactly, right? We all remember ...

These things are built into our brain in a very strange way. But it's a problem that they're built into our brain, because it turns out that scientifically, this idea

that knowing is half the battle, it is a fallacy. It is a fallacy because we think once we know stuff, we're automatically going to put it into practice. But that's just not how our minds work. Knowing is part of the battle, but it's probably not half. And it's not as much as you think.

And that is the fallacy we teach students. If you want to do this stuff, you have to put in the work. And this is why my students with their little hashtagging, students do all this Twitter hashtagging, they hashtag stuff, hashtag the class "Hardest class at Yale." Not because the midterm part was hard, I mean it was like an easy social science class, frankly. But the real work was really hard. The real work required effort every day, and it required going against your intuitions of what would work.

And that gets us to insight number four. One of the hard things you have to do when you begin this enterprise is recognizing that your intuitions don't work. It's recognizing that your mind is lying to you a lot of the time about what it means to be happy.

Now this is going to be a kind of crazy notion, what does it mean for your mind to lie to you? Well if you've looked at kind of kooky things in the field of psychology, you've seen this all the time.

Many of you have seen visual illusions that look something like this. This is a famous one, where in fact those lines are straight. The diagonal lines are straight, but they look like they're kind of curved in. That's just your visual system lying to you, because your visual system is making assumptions about the vertical lines and the horizontal lines and so on. It doesn't look like that, but that's what you see. Your mind's lying to you.

Here's another one that you might experience, where if you're seeing the squares from the front you might see these little gray dots that pop out in the middle of those. Those are just after images. They kind of just pop out. Those aren't really there in the image, but you might experience them. Again, your mind lying to you.

Some of you might have seen the "Yanny Laurel" thing that was going around the internet, right? These are fun, right? We love sharing these with our friends.

It's cute when our mind lies to us about what's true in vision. But it's bad when our mind lies to us about what we want to be happy. And the claim that you get from positive psychology is our mind is doing that to us just as often. There are all these cases where we forecast stuff's going to make us happy, and it doesn't make us as happy as we assume.

What's one of these forecasts that tends to be really off? What are one of these many cases where our mind is lying to us about what makes us happy? A very common one, which you saw a little bit in the example of lottery winners, is

data on salary. We think that that's a thing we should work for. Many of us work really hard. Many of us pick our jobs based on the salary we're going to get. Why? Well, we have some assumptions that we need more money to be happier. Or we need a bigger house to be happier. Or we need all this stuff to be happy. But the research just doesn't bear that out.

In fact, the research shows us how weird our forecasts are, that our minds are kind of lying to us all the time. And here's one, a famous one from the positive psychology literature. How much money do you need, right? Maybe we forecast we need some money, but, what's the cap? What's going to be good, right? When are you going to be satisfied? What's the amount that I could put in that check that would work?

Speaker 1: \$70,000.

Laurie Santos: What? The people are yelling out numbers.

Well here's what people think at different salary levels. If you're currently earning \$30,000, what do you think is the amount that would just be good? Yep, these folks think about \$50,000, right?

And so now we say, okay, well look at the people with \$50,000, they should be good, right? Or well even look at the people with \$100,000, they should be twice as good, right? But those folks aren't like, "Nah, I'm good." Those folks say, "What I really need to be happy is ... "

So two things here, it's going up, but it's going up linearly. It's getting bigger as you get more. And this is what we find for salary, this is what we find for material possessions. Our mind thinks, if we could just get that next thing we'd be good. But we're not. We end up wanting more. And in fact what the research shows, research by folks like Danny Kahneman and his colleagues, is that if you actually plot people's positive emotion, people's life stress and so on, with their salary, it is the case that salary matters a little bit if you're below the poverty line. So a jump from \$10,000 to \$20,000 in the US is very significant, but it levels off very quickly. And what they find is that the amount of money you need to be happy in the US, or not to be happy but to not increase your happiness or lower your stress anymore with more salary, is around \$75,000 in the US.

So when you go from \$75,000 to \$80,000 or \$75,000 to \$100,000, you forecast you're going to get a bump in salary but you're not going to get as much of a bump as you think. And so, it's a forecasting error. Our mind is lying to us. We think, "I just need to go get this stuff." We change our lives to prioritize this stuff and it's not going to work. It's not going to work for money. It's not going to work for material goods, like great houses and new cars and all these things. I'm staying at the Hotel Jerome so I shouldn't be making fun of like great cars, because they're very nice to me, but this is what the research suggests. In fact, people who seek out material aspirations, so the kind of person who sees this

and's like, "Oh that would make me happier," are actually statistically more likely to have lower well-being than people who tend not to seek out material aspirations.

And so, all of this is an important insight that we need to embrace if we're going to embark on what we need to do, which is that those forecasts, those things our minds tell us, are our mind's lying to us. And if you're the kind of person who's having the intuition of his followers, where you're like, "That might be true for those other people, but I really will be happier if I had a house that" I want you to interrogate, maybe that's also your lying mind. Minds lie to us.

It's not going to help us be happy but what can, right? What can we do to bump up happiness? What are those very happy people doing? At that's what the last insights are about. What you can actually do, even though you don't forecast it, to be a little bit happier.

And the first one, the most major finding the field of positive psychology is that very happy people tend to make time for social connection. They tend to prioritize the people that they care about in life. And so we know this from classic work by researchers like Marty Seligman and Ed Diener. They go out and ask very happy people, "How do you spend your time?" And what you find is that very happy people tend to spend more time with others in general, so they spend less time alone. And very happy people tend to spend more time with their friends, family members and loved ones. They just prioritize the stuff that works.

And so here's just the numbers. You can see some of the data on this. So they bring folks in who are very happy, or not so happy, and say, "How do you spend your time?" and here's what folks rate on a 10 point scale. So, how are you spending your time, we're going to compare the unhappy people versus the happy folks. And here's what we get when we look at time spent alone. Unhappy people are spending more time alone than happy folks and here's what we get when we look at time spent with friends and lovers and family members. A bigger effect out of a 10 point scale. People who are happier just spend more time with others.

Now you might say, "Maybe they're happier," you know, "they want to spend more time with others." What direction does the causality go? So can we make people spend more time with other people? And will that bump up their happiness?

Well researchers have done this not even with friends and family members, because maybe your friends and family members are just as busy as you are, right? Maybe they're hard to get in touch with. Researchers have done this with strangers to try to ask, "Can we bump up our well-being merely by trying to spend some time with talking to strangers, making connections with people we don't know?"

And this is some work by Nick Epley and his colleagues at Chicago Business School. They're at Chicago Business School so they go up to people on the L, the train in Chicago, who are on their way to work, say, "Do you want to be in a study?" "Yes." And they put people in one of three conditions. They either put people in a connection condition, where you have to have a conversation with somebody for the whole train ride. You have to try as hard as possible to make a connection with the person next to you. Or you're in the solitude condition. You're meant to keep to yourself for the whole train ride and try to enjoy your solitude. Or you're just in a control because we're scientists, where we just say, "Do whatever you would normally do," which is typically to be by yourself, but you can do whatever you'd normally do.

And then they just measure people's well-being at the end of the train ride and at the end of the day. What did they find? Well they first have people forecast. They say, "What do you predict is going to happen?" And people predict probably what you're predicting, which is the solitude is going to be awesome. A half-hour to enjoy my solitude is going to be great. And in fact, the social connection condition is going to be worse. Not only is it going to not bump up my positivity, it's going to make me go below baseline. And what you find is that the results are just the opposite. People in the connection condition report significantly more positivity and people in the solitude condition go down from baseline. So it's not just that it doesn't bump up your happiness, it actually makes you more sad.

He also finds that it doesn't impact people's productivity. So one of the reasons people forecast it's going to make them more anxious is they say, "I've got to get some work done on the train," and what he finds is that even if you spend the time talking to another person, it doesn't actually decrease your productivity, because what would you do in the solitude condition? Really? If you're being honest? You'd pretend like you're going to get some work done, but then you wouldn't actually get any work done and then you'd be all kind of in a bad mood and still not have any work done.

And so, that's what we're finding, is that if you look ... Oh wait this is just people's predictions ... Is this, what is I just said, but what you would really find is this, which is that the connection condition is better than both the solitude and the control. And so that's what we find, is that making time for social connections is a thing that very happy people do. If you want to get happier, you should just spend your time doing that and it doesn't have to be with people you care about deeply. It could be with another person here at Aspen. It could be with the driver that's driving you. It could be with the barista at the coffee shop. Just connect with other humans, like the primate that you are, and it will bump up your well-being more than you expect. Okay, so that was big insight number five.

Big insight number six is a similar one, one we don't forecast. But it's about helping others. And it's the idea that helping others helps us more than we expect. This gets back to this issue about money and things. We think that we

want to get the money for ourselves. We think if we could only get free time we would use it for ourselves. But researchers said very happy people don't do that. They give their time to others. They spend their money on others. And even though we forecast that that's not going to help, research suggests it's much more powerful than we think.

We know this again from some intervention work. Maybe happy people are just more likely to give to charity because they're happy. What if we made you give something to other people? Would that bump up your happiness? And that's what Elizabeth Dunn and her colleagues did. She did this at the University of British Columbia where she is. She went up to folks on the street and said, "Do you want to be in a study? Great. Can you rate your happiness now? Just rate your well-being on a scale of 1 to 10 and I'm going to give you some money. I'm going to give you either \$5 or \$20 and you have to spend that by the end of today, but in two different ways depending on your condition. You either have to spend the money on yourself, you treat yourself, do something nice for yourself with the \$5 or the \$20, or you have to treat somebody else. Do something nice for somebody else." And at the end of the day, she calls people and asks them to rate their happiness. Does their happiness change? And again, we can look at how the happiness changed and what people's predictions are.

Here's what people predict. People predict that spending the money on themselves is going to be better than spending the money on somebody else, right? Because you're treating yourself, that's the whole point of treating yourself. That's what people predict. Then they also predict that spending the \$20 is going to be better than spending the \$5. In fact they predict it's going to be four times better than spending, because, \$20 right? But interestingly this is not what happens. Here's what happens. Which is that you see significant increases in people's happiness when they spend the money on other people. This is true at the end of the day. But they've also followed up a week later. You see the additional bump in happiness even a week later after this effect. The other thing they find, for those of us that might not have a lot of cash to give to others, is that the amount of money doesn't actually matter. You get the same magnitude of effect for the \$5 and the \$20.

Dunn and colleagues have replicated this effect in a bunch of different spots. You might think \$5, \$20, that's not going to be a big difference. But they've used those same nominal amounts of money in rural Uganda, where \$5 that we would spend on a chai, can buy a family's AIDS medication for a week. So next time you spend your \$5 on a glass of coffee, think about what else you could do with that money. But that's money that might really matter. And what they find is the same set of effects there. There's no difference in the amount of money, and you get more increase in happiness if you spend that really precious amount of money on somebody else than on yourself.

And so, that's the hit. Is that we think we want to treat ourselves by getting stuff for ourselves, that's what we forecast, but it's wrong. If we would just give that

money away, give our time away, we would feel better. And that's big insight number six. Helping others helps us more than we think.

So now we get to big insight number seven. Another thing we forecast might not matter that much but turns out it matters a lot, to being very happy. And that is to make time for gratitude. To make time for gratitude every single day. I mean, it sounds really silly, to be thinking about the things we're grateful for. We don't do that very often. But the simple act of doing it is very powerful. And this is a spot where I personally find my forecasts are really off. When I finally get some time from my busy professor job and I get time to plop down with a friend over a glass of wine, and I want to talk about stuff, what do I talk about? I don't talk about the blessings in my life. I talk about the hassles in my life. I don't talk about the 80% of people at my work who are fantastic. I talk about that 1% of people at work who I can't stand, right? We spend time incubating and thinking about the hassles but research shows that that's just not what very happy people do. They do the opposite. And when they finally get that moment for a glass of wine, they sit and think, "My god, I am so happy, for these people at work who I love so much. They did such a good job." They think about, and focus on, the benefits.

And again you might think that's just what very happy people do. That's just where their mind goes. But you can do that too. Simply by forcing yourself to think about this stuff. And a simple way to do it is through, shown, in a picture that I had up on the screen there a few seconds ago. It's just writing down every day a quick list of the things you're grateful for. You can do this on paper, there's lot of apps where you can do this. But research suggests that just doing this over the course of a week can significantly bump up your well-being over time. And if you want an extra hard way to do this over time, you could express gratitude not just privately, thinking about all of the things that you're grateful for yourself, but you could do it in a way that increases your social connection. And that is to express your gratitude to the people that you are grateful for.

And this is research that folks like Marty Seligman and his colleagues have done. They've had people do this. Literally write a letter of gratitude to someone. Here's the prompt that we showed students in class. We say, "In the next week, you will write a letter of gratitude to someone who has helped you, or has been especially kind to you but has never properly been thanked," then deliver that letter to the person in question. Ideally read it to them. Physically show up and be like, "Wait don't say anything yet, I just have to get through this thing," and just read it to them.

Again, what do we forecast? We forecast this is going to be awkward. This might be some teacher from high school you haven't seen in forever, the person's going to find it super weird or whatever. What actually happens? The person to whom this is read describes this as one of the best experiences in their life. There will almost surely be happy tears when you do this. And you, also will experience an incredible surge of well-being for having done this, for having so positively affected somebody. And Marty Seligman's research shows that that

surge of well-being can last for up to a month. So if you do this gratitude letter intervention, and I survey your happiness at the end of it, a week later, even a month later, I'll see bump ups in happiness. If I told you at the start of this lecture that you could do something in 15 minutes tonight that would bump up your well-being for a whole month, you would either think I was crazy or you would sign up immediately. But the research suggests that this is what you can do. It's just the simple act of sharing your gratitude with somebody else. And so, that's top insight number seven. You should be making time for gratitude every day. And whenever possible try to express that gratitude. Focus on your blessings, not on your hassles.

Insight number eight is another one that's really hard for my Yale students. Which is that healthy practices of the kind that we're supposed to be doing all the time, matter a lot more than we think. What do I mean by healthy practices? I mean the stuff all the platitudes are written about. I mean simple things like exercise. In class, I tell students about studies showing that half-hour of cardio exercise every day is equivalent in randomized control trials to the effect of taking Zoloft, the top anti-depression medication on the market. Just a half-hour a day, right?

We think of exercise as benefiting our physical health, but we forget how much it's important for our mental health. And in fact the research shows that simply doing, not like a marathon every day, but just a simple amount of cardio every day is going to bump up your mood. And in fact, cardio in the morning will bump up your mood for over 24 hours. So just a little bit in the morning, half-hour in the morning, is going to keep you going until the next morning at the same time. So that's exercise.

An even tougher habit for my Yale students is another healthy practice that we forget the importance of, namely sleep. Just as an FYI, current high school students, any guesses about how much they regularly sleep?

Speaker 1: About four hours.

Laurie Santos: Yes. Most public high schools report that their students sleep between four and five hours a night. And the Yale students that's true too. But the research shows, as you might imagine, sleep good for immune function, good for all these healthy things, but it's also incredibly important for mood as well. And in fact there's one study I show my students, by Dingers and colleagues that looked at this, where they intervened and took away people's sleep. And so here's how it works. You bring people in and you test their mood either at the end of the day for two days when they get kind of normal-ish sleep, which is slightly over seven hours of sleep. And then for a week you deprive people of sleep. So you make them, for a whole week, sleep what our high school students are regularly doing for probably eight to 10 years of their life right now. And then because we're not evil experimenters, we give people sleep back, so they go back to the normal levels of sleep.

And here's a mood measure that I'm going to show you. It's just a measure of positive mood but note that the bottom numbers on that mood scale, you're basically hitting levels of clinical depression, where you would need something like Zoloft and so on. And this is a week of the normal amount of restricted sleep that our high school students are chronically getting, during a period of their lives where our brains are still developing. And the students see this and they laugh because they're like, "Oh four hours of sleep is a really good night for me," and I'm like, this is what's happening. I actually think we could solve most of the mental health crisis on campus if we could just get young people to sleep.

And so, I remind you that that is important as well, because some of us need a reminder. Keep track of these healthy practices. We think, "Yes, they're good for our cholesterol," or, "Yes they stop heart disease," but they also bump up our mood, and so increasing them in an attempt to become like very happy people could bump up your well-being more than you forecast. So that top insight number eight is that our healthy practices matter.

Top insight number nine is that something else that matters is taking time to be in the present moment. Again, something that's trickier and tricker for our college students, and trickier for all of us that have things like devices and just stuff going on in the modern day. Most of us have trouble with this because most of us don't spend a lot of time in the present moment. What does that mean? It means just taking time to realize you're here, in this room, with the air temperature of a certain kind, with your bottom feeling a certain way in its seat or your feet on the floor if you're standing up, with my voice resonating in a certain way. The way you're breathing right now, whether you're breathing slowly and quickly or just kind of calmly. That stuff that we tend not to notice is all the stuff.

And we tend not to notice it, as research from Harvard Researcher Dan Gilbert shows, because if you look at how much time people spend outside the present moment, it's about 50% of the time. He does this in a really cute way. He gives people an app on a cellphone where he can ping them and text them and he does this at random times of the day and he says, "What are you doing? Are you paying attention to what you're doing? And what's your mood?" And what he finds is that there's really only one activity where people report being in the present moment and that's during intercourse, which I think is funny because, what, do people get their text and are like, "I am in the present moment, I'm currently in the present moment." Anyway, questionable data there. But that's the one activity where we tend to be in the present moment.

Most of the time we're not paying attention to what we're doing. But this is bad, because Gilbert and colleagues also looked at our mood measures at all these times. And what he finds is that no matter what we're mind wandering to, whether we're mind wandering to negative things, you know, "I have to pay my taxes," or something

Laurie Santos:

... whether we're mind wandering to negative things, you know I have to pay my taxes, or some task you don't wanna do. Whether you're mind wandering to neutral things, like what am I gonna cook for dinner tonight? Or even when you're mind wandering to pleasurable things, like I'm gonna go to Aspen next week and that's gonna be great. All of those cases, your well-being is less good than when you're just in the present moment, no matter what you're doing.

Like if you're dealing with some crappy spreadsheet at work that you don't wanna deal with, just paying attention to that is better than mind wandering off to pleasant things. And it's a problem because we don't spend a lot of time doing this, and it's a lot harder to do this in the modern day, where it's very easy to take your mind off the task by grabbing your cellphone and looking at all kinds of different things.

So it's a chronic problem. What can we do about it? Well the good news is that there are a couple of different techniques we can use. One that we can use in the moment doesn't take much practice, is to use techniques related to savoring. To actually pay attention to our experiences when we're having them. This is particularly useful if you're having some sort of pleasurable experience, like an ice cream cone and so on. This is one that I struggle with a lot. I'll often try to treat myself to something nice, like an ice cream cone, which is already bad, like bracketed, I should treat somebody else to an ice cream cone right? But treating myself to an ice cream cone, and then I don't notice it. I eat it while checking my email.

I do this stuff where I go out of my way to do something nice for myself, and I don't even notice it when it's happening. So notice it. Do these questions. What does it feel like? What's my heartbeat doing right now? How would I describe this experience to somebody else? What's the color like? What's the taste like? How does it feel? Just making yourself be aware of the present moment, causes you to notice the good stuff. Savor the good things in your life.

But you can also take time to do practices that allow you to increase your ability to do this generally, and those are practices like things like meditation. Either paying attention to your breath or paying attention to a mantra, like what's called in love and kindness meditation, where you think compassionately about somebody else, or gratitude meditation and so on.

Simple act of practicing this ten minutes a day can cause brain changes over time, and they're brain changes that reduce the activity in areas of your brain that tend to mind wander. Simple practices, ten minutes a day can slow stuff down.

And so take time to do this. Be in the present moment. Try to make sure you're noticing all the good things in your life. That is top insight number nine, and now we get to finally top insight number ten, which is to become wealthy, but not in the way you think. Not in terms of money, in terms of time. And this is a concept that's very hard for busy people like this in this room, and very hard for

my undergraduates, which researchers refer to as time affluence, being rich in terms of time. It's the opposite of what we experience a lot, which is time famine. Time famine is like when I meet with my friends, they're like "Hey, can we get together for coffee?" And I'm like "No, I'm too ..." Like, "When can we get together for coffee?" "Like how about never, 'cause I'm just never gonna have 20 minutes to do that," right? That's time famine. And that's what we exist in a lot of the time.

But research shows that people who prioritize time affluence over time famine particularly those who will spend money to gain more time affluence, they're happier than the folks that won't. And so here's one study by Ashley Williams and her colleagues, she says "Who are you more like? Are you more like Tina or Maggie? So Maggie values her money more than her time. She's willing to sacrifice her time to get more money. She's gonna work more hours to make more money, but she's gonna have less time. Are you more like Maggie, or are you more like Tina? So Tina values her time more than money. She's willing to sacrifice some money to have some time. In fact, she's willing to work less hours just to have more time for leisure and so on." So are you feeling you're more like Tina or Maggie?

On a short happiness scale, what you find is that research suggests that people who are more like Tina are happier on it, which is a five point happiness scale, so this is a big bump up. Just being the kind of person who prioritizes time over money can increase your well-being. That's what very happy people do. Okay, so that was big insight number ten, become affluent not in wealth, but in time. And just to give a final story from the class, I was gonna teach students about time affluence, but I realized that that's the thing that they're worst at, right? That's the thing that they have the least of, and so it felt ironic to kind of bring them into lecture and make them read some papers on this and so on. And so I said, "I know. I'm gonna gift them some time affluence."

So students came to class, thinking it was gonna be a regular class. And as they walked into class, my teaching fellows handed out a flyer that said today's lecture is on time affluence, and to teach you about it, I'm gonna give you some. There's no class today. But you can't work. You can't spend this surprise hour doing work, you have to do something that's gonna bump up your well-being. Because I knew my overwhelmed students would be so taken aback by this, I gave them a big list. It was like go to the library and read something cool. Like go to the museum, take a walk, have a bubble tea and savor it. It was just like a big list.

Students freaked out. Like eight of them hugged me. One started crying. At the end of this flyer I said, tell me what you did, so I could have a sense of what you spent your time on, and many of them wrote to me and said they went to the art gallery for the first time, or they took a walk for the first time all semester. Some said this was their first hour off they've ever had. A few students went to the recording studio with friends of theirs and jammed, and sent me a little musical thing. Many of them reported that this was an hour they would

remember from their college for their whole life. And the sad thing is that this is where our students are [inaudible 00:47:07].

Okay, so those are top ten insights. Hopefully you can take some with you. And now I wanna end on kind of what this class has done beyond this. You heard what happened at Yale, where we had 1200 students on campus taking the class, but you haven't yet totally heard what happened outside of Yale. And that was the weird thing, which is that people outside of Yale noticed. As Katie mentioned, there was an article in the New York Times about the class. This was in the second week that I was teaching the class, but then the class completely went viral. I was on the Today Show, I was on NBC news, I was on CBS news, I was in Oprah Magazine. National news picked this up. But then international news picked this up. I was talked about in over 28 different languages, all people who were shocked that these Yale students who have their whole lives ahead of them were taking ... one out of four of them needed to take a class on happiness. What did that mean for the rest of us?

And so this caused me to realize that the class was starting this cool, but important viral conversation, and it caused me to realize that we need to think more broadly about changing the culture of stress, not just at places like Yale, but beyond. Like we all need this stuff. We all are not as happy as we can be, and it's in part because the modern environment is not one that's causing us to prioritize all those things I just talked about, that suggested they bump up our well-being.

And so to help with this, to help teach about this, and to help folks change their culture, we did two things. One is that we started a new online version of the class on Coursera.org, it's a free version, slightly shorter, free version of the Yale class that anyone in the world can take for free. In the first month that it launched, we had over 125,000 learners, which makes it the second largest class, I'm told, at Coursera, after data science. So this is something that people need more than data science. It's also very popular across the world. Here's just a list, a graph of the countries where we have at least one learner. It's 168 different countries.

And so all of this goes to say I think we need to think seriously the idea that something is wrong, and we need to do something about it. The cool thing is that we have a way out. We have hope. The science teaches us what we need to do. We just have to do it. We just have to put these things into practice. I hope I've kind of convinced you that it's worthwhile doing this, and that the path is useful, and so thank you as you go out into the world to put these into play.

And I think we maybe have a couple of minutes for questions? I'm looking at Katie to see. Yes, she's saying. We do have time for questions. So they're gonna run with the mic, and they've made me promise not to call on anyone without the mic, otherwise the podcast folks won't be able to hear what you're saying. But the mic runners are coming. I think there's a person in the front. Oh, mic is in the back. Yes, question.

Speaker 2: Hello. You said you spent a lot of time with the students, you know at coffee shops, and study centers, did you spend a lot of time partying with them?

Laurie Santos: No.

Speaker 2: In the correlation of too much alcohol use and night life, not enough sleep. So what did you find there?

Laurie Santos: Yeah so the question is about partying and alcohol use, and so on. So a very strange thing that conflicts with what I was doing when I was in college in the '90s is they don't actually party that much. So one strange thing is there are very incredibly few parties in the dorms. There are parties at the frats, off campus, but it's a very strange thing that nobody throws parties like with their friends anymore. And what happens is that these students are so busy that the typical thing you hear about in college is binge drinking, which you think is like old school '90s binge drinking, at least I did. But here's what binge drinking looks like on Yale's campus right now.

It's, you're so freaked out about your problem set that you need to work on it 'til 2 AM, and then you need to get out because your friends are at the party and you have FOMO, and you've been watching anxiously on Snapchat that they're there, and you down eight shots immediately so that you can run out, right? This is not binging of like oh we're laughing, like which is bad enough as it is. This is like drinking really fast to catch up. It's also a form of, you don't ever allow yourself to take a break. The first hour you've had off at Yale is when I gave you an hour off in my class, and you can't give yourself permission for that?

So the way you give yourself permission to that is to accidentally kind of get so out of control that you can't work the next day. So this is another thing we kind of talk to students about, is to give yourself a break that doesn't have to involve extreme amounts of alcohol. So yeah there's alcohol on college campuses, but I think folks who don't see it in the trenches think of it in a different way. Like what it is often is a coping strategy for this level of anxiety and overwhelm. I don't see it ... I mean there's some like frat parties and stuff like that, but a lot of it's just kind of coping with the fact that 60% of them are so overwhelmed by anxiety that it's hard to function. So yeah, alcohol's a problem, but not 'cause they're partying and drinking, it's 'cause they're using it in this kind of yucky way.

Mic there. Oh, right there maybe?

Speaker 3: I'm from Palo Alto, California, highest suicide rate for high school students. How do we filter this down to a younger age?

Laurie Santos: Yeah. No, it's a fantastic question, and something I'm thinking about a lot because in addition to kind of all this press that I've been getting, I've been

getting lots of emails from concerned parents, some college aged parents, but a lot high school parents, and middle school aged parents, where these trends are worse. Those statistics I gave you about high school sleep rates, those were from a talk I gave at a public school in a major city, that I won't share 'cause then you'll be like "I'm never gonna move my kid to that major city," but that school reported that students get four hours of sleep a night, on average some say that they get two hours of sleep at night, a small percentage. They also in this big packet of information they gave me about student life, said that the students there have five hours of homework a night. And I did the math, and I'm like of course your kids are ... like they're in school from like 7:00 to 3:00 and then they have soccer practice, and then it's 6:00 and they have five hours of homework a night? Like what are they supposed to do?

And so I really think that this stuff needs to filter down a lot. I'm not working with different high school school boards to try to develop version of this class content for high schools. I don't think it's exactly this class, and so because I'm not a high school educator, I'm trying to work with K through 12 to figure out how does this work? But I think this is really important.

If you are the parent of a high school student and you're worried about this stuff, I'd encourage you to do what a lot of parents say they do now, which is to take the Coursera class with your child, right? I mean, it's for Yale students, but it's not like, again, none of this stuff that I just told you is rocket science, right? Like middle school kids can understand this. And it's only like five or six hours worth of lecture total, in small chunks. Like watch it before the dinner table and talk about it. Talk about this stuff.

And often what these parents tell me when they've had these conversations is that they didn't realize the effect that they were having building this anxiety, right? Where the kids will say, "Well you said I have to get good grades," it's like, "No, I wanted you to learn. I didn't want you to be suicidal if you got a B+." There's a difference between that. And then it causes this nice conversation where people realize, parents realize that the kind of motivation they were giving was heard in a different way by students.

Sometimes parents realize that it's not them, it's just the culture. And that's caused parents to think about shifting high schools, or shifting where they take kids, but I think you're on this level of clinical depression. Just the sleep can lead you to a level of mood disorder where suicidality is gonna be a part of it, right? We have a whole generation that's doing that to themselves regularly.

Question. Maybe up here in the front. Oh. I feel bad making these folks run around.

Speaker 4:

We've been focusing on the younger generation, but a lot of surveys indicate that as you get older, you get happier. So are we picking up these terrific insights by observation, or trial and error over decades, and is that why we're getting happier as we age?

Laurie Santos:

Yeah, so it's hard to know. It is true, older individuals are happier, so something to look forward to. One of the few things to look forward to after you get over 60, you get happier. But I think if you think about it, it's just that people who are older because of the way society works, naturally have more of this stuff. Like once you're retired, you get a ton of time affluence. It can make you anxious, but once you get used to it, you're like "Oh my gosh," you're naturally falling into a category of a person who's prioritizing it.

Older individuals tend to have more time for social connection, right? They tend to be connected more, either as part of faith based communities, or different living arrangement communities and so on. And so it's probably more the case that certain constructs of the way society works end up plopping older individuals into the behaviors that just if you do them, will bump up your happiness. And so my guess is that that's what's been happening.

The trend though is less true now than it was back in the day. And I think that's in part because so many aspects of our modern lives kind of butt heads against this, right? Those phones that we take with us everywhere, they're a way to stay out of the present moment. They're this illusion of social connection on things like Facebook, at the opportunity cost of connection with folks in real life. And so I think as more older generations take on the modern technologies and stuff of the younger folks, they're gonna less have the benefits of this stuff that happen naturally.

Maybe up here? Folks in the front. Getting everybody, all the mic people there, exercise to bump up their healthy practices.

Speaker 5:

Thank you. First of all, Martin [inaudible 00:56:36] must be very jealous of you. And second of all, has Yale done anything to change their requirements of study, or given people more free time, or done something in response to what you've discovered?

Laurie Santos:

Yeah, so just a joke, Marty's a great colleague of mine, and did email me when the New York Times' article came out, in part because all these people were going "Who is ...?" And I said, "Marty," you know, and Marty was upset with me because one thing we didn't know to do was to collect data on this. This also breaks my scientist's heart, right? We should've done pre, post measures on all these students, compared them with the other students, looked at mental health usage at Yale's hospital, and all these things. And I was like "Marty, I thought it was gonna be 35 kids." Like I didn't know. And he was like "Alright, true."

But in terms of whether Yale's changing their policies, that's a tricky one, right? And I'm part of this irony, right? Like, I taught this as a class. Students had a midterm. The midterm stressed them out. Some students did worse than they expected. Like my class contributed to the academic stress. And so it's caused me to think carefully about what we should do to restructure higher ed to deal

with this stuff. And I worry a lot about the answer to that question because we're kind of in this strange arms race, where nobody wants to change, right?

Yale doesn't want to make easier, or be less selective because then we'll look less selective. You know, maybe Yale should, to deal with the high school crisis we talked about, maybe Yale should ease its ... like what it expects for SAT, or make it less selective so students don't have to kill themselves, but Yale doesn't wanna do that 'cause then we'll lose out to Harvard and Princeton, and so on, right?

So maybe they should it at the high school level, but high schools don't wanna do that. They're in intense competition for resources over their test scores and so on. And so I'm not sure where it's gonna come from. My hope is that it will come from the young people, particularly, not even the college age kids because they falsely forecasted they've won this sort of academic lottery that they were working so hard for, they can't see it yet. But I think the high school students can. So the high school students I talk to now often get really angry when I talk to them because often these are elite high schools who have paid for this Yale professor to come in. Often at the end of school, I talked to one school on the last day of their school semester, and I told them all the stuff, and they get really angry 'cause they say "You know, it's great that the school paid for you to come out. This is the last freaking day of school."

Like we've had six years where it's been the opposite of this stuff. Like now we've been killing ourselves, and now you're telling me that salary doesn't matter, my grades don't matter, and I don't need a big house, and I'm gonna go to undergrad and it's gonna be horrible? And I think it's funny, but they see it. Like they're being, the whole system they're being sold is not delivering what we promise. And my hope is that they could change things around. I think Yale can't because of the arms race. I think high schools can't because of the arms race. In fact, high schools I talk to say they've been trying to reduce the amount of homework, but parents will complain because parents are afraid that kids won't get into undergrad. Or they're trying to kind of cooperate with other high schools, like school boards will get together and different high schools will say "Alright, we're all gonna decrease it," but then someone will defect, then no one will decrease it.

I think it's gonna be really hard to see change outside of our young people. And as a college ... like seeing these young people and the way they fight for social justice causes, and the way they use their technology to link up, think of things like parkland, and think of things where you're seeing this, I think there's a moment where they could be like this is BS, we are gonna denuclearize, 'cause what we want is well-being. What we want is to be good people, and none of this stuff you're forcing us to do is getting us there. So we'll see. That's my secret hope is high school revolution, but we'll see. Don't tell Yale that.

I think we're out of time for questions. I'll hang out up here in case folks have some, but hope I've taught you well. Go out and be your happiness.

PART 3 OF 3 ENDS [01:00:31]