

Higher Education Panel Surveys the State of American Universities Today

Michael V. Drake, M.D.
President
The Ohio State University

Drew Gilpin Faust
President
Harvard University

Marc Tessier-Lavigne
President
Stanford University

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Excerpts from the Panel Discussion

What is the biggest problem facing American universities?

Dr. Drake: Our universities really are the envy of the world, for good reason.... There are challenges. And I would say that, for me, the balance of access, affordability, and excellence is the nexus of that challenge, that we want to continually be excellent, in searching for the best ideas, the best discoveries, the best teaching. And we want to be broadly accessible to people because this is a great life accelerator for young people in the country. And then we also want to be affordable. It's a real challenge for American families to be able to afford education. I had students at your two institutions at the same time. And I noticed how much it cost. [Laughter.]

Dr. Faust: One of our biggest challenges is to explain who we are and what we do and why it matters. And that will determine whether we're able to pursue these three goals [access, affordability, and excellence], because we need the support of legislators for the publics. We need the support of philanthropy, for both the publics and the privates. And right now, we all are very focused on federal support for scientific research, which is proposed to be cut by very significant amounts. And that is essential to our scientific enterprise at our institutions.

Dr. Tessier-Lavigne: Well, first of all, I agree with Michael and Drew that access and affordability are very important, and explaining the value proposition of the universities, what it is that we contribute to society.

I want to take the third part of that triangle, the excellence part, because I think the exciting challenge is for us to say: How can we make sure that we have the biggest impact possible through our core missions of education and research? Are we doing the most important research today, be it in biomedical science, or in the social sciences, or the humanities? Are we teaching our students as well as we can? And are we making our educational products available to more students than just those who are on campus?

So I'd say the – I wouldn't call it a problem. I'd say it should be our major concern and focus. I agree with the issues of research funding that undermine that, of course, if it's constrained. And I agree that we have to continue to focus on this issue of making college affordable.

What percent of your people are on financial aid?

Dr. Faust: At Harvard, 60 percent of undergraduates receive financial aid. And for any individual who comes from a family with income less than \$65,000 a year, you pay nothing for tuition or room and board. And up to about \$150,000 – unless you have some extraordinary assets that you have declared – you would receive tuition – you would receive financial aid so that you would pay approximately 10 percent – no more than 10 percent of your income. So we are dedicated to making Harvard affordable.

Dr. Tessier-Lavigne: The number we like to mention is that 78 percent of our students graduate without any debt. So we believe in robust financial aid with similar cut offs – 65 percent full ride, \$65,000 for family income, full ride, \$125,000, free tuition, and so forth.

Do you have to spend a lot of time with alums begging for money?

Dr. Drake: We're really actually gratified by the number of people who support us. We just finished a campaign, and we had over 700,000 donors to the campaign. So that made us feel really great. And it was \$2 ½ billion, we raised a little bit over \$3 billion. And we had a room actually about this size of people who had been our most important supporters. And the reason for the evening was to thank them so much for their support.

But I'll say, as I kind of made it around through the crowd that evening, I would go to someone and be saying thank you. And they'd say, no, no, thank you! We really are excited about this university and what it does. And people are very grateful for the ability to be able to help us move forward in some ways. So, to answer your question, it's really the other way around. Our ability to connect with people and to allow them to work with us on something that's so meaningful has been one – is one of the great pleasures of the job.

Science budgets are being cut — are you worried?

Dr. Drake: Lots of things that have happened to and for us that helped our society be better that are discoveries that have come from our universities. It's been the way that we've maintained and improved the quality of life in this country and for people around the world.

It's one of the greatest and most effective things that we've done as a Nation. And to cut back on that I think is always short-sighted and ill-advised.

Dr. Faust: Well, the President's skinny budget proposes significant cuts to science funding. It proposes about an 18 percent cut to NIH funding and significant cuts to other important scientific funding as well – NSF¹, Department of Energy, and so forth. So since January, I've been spending a lot of time meeting – in Washington, meeting with Members of Congress on both sides of the aisle to try to explain what you just said so eloquently, why research support for American universities has been critical to discoveries like how to manage AIDS, how to diagnose a variety of diseases, how to develop the MRI². I mean, there's so many ways in which university science has changed our world – the internet is one of them as well. That's not a health-related one, directly, but just so much we take for granted has come out of university research.

Dr. Tessier-Lavigne: I have been meeting with Members of Congress on both sides of the aisle. The message that we bring, which is the importance of the research enterprise for the well-being

¹ NSF is National Science Foundation.

² MRI is magnetic resonance imaging.

of our Nation, is very well-received. This is a bipartisan issue. People understand the importance of it.... So the vitality of our research enterprise is essential to develop new therapies and cures. It also creates jobs. So it creates cures, it creates jobs, it improves societal welfare – the internet and other discoveries. This is something that I think we've understood well in society, and so it's a message that is well-received.

DAVID M. RUBENSTEIN: [Sounds gavel.] Welcome, everybody, to our ninth event of our 30th season, to this luncheon event of The Economic Club of Washington in the Marquis Ballroom at the Marriott Marquis Washington, DC, Hotel. I am David Rubenstein, president of The Economic Club of Washington.

Today we're very pleased to have a Higher Education Panel featuring Dr. Michael Drake, president of The Ohio State University; Dr. Drew Faust, president of Harvard University; and Dr. Marc Tessier-Lavigne, president of Stanford University.

Dr. Marc Tessier-Lavigne is president of Stanford University, a job he began last September. as the 11th president of Stanford. Prior to that position, he was for five years the president of Rockefeller University. Before that, he was the chief scientist of Genentech. And before that, he taught at Stanford and University of California San Francisco Medical School. And he's also an investigator for the Howard Hughes Medical Institute. He is a native of Ontario. There, he went to McGill University, where he won a Rhodes Scholarship and studied at Oxford, getting degrees in physiology and philosophy. Got his Ph.D. at University College in London in physiology.

Drew Faust is the 28th president of Harvard. She's also the first woman to be the president of Harvard. She assumed that position in 2007. Prior to that she was, for about six years, the president of the Radcliffe Institute for Advanced Study at Harvard. Prior to that, for 25 years, she was a professor at the University of Pennsylvania, where she got her Ph.D. She earned her undergraduate degree from Bryn Mawr. She's a historian, has written six books, and is an expert on the American South in the Civil War. Her most recent book — many of you may be very familiar with — won the Bancroft Prize, *Republic of Suffering*.

Dr. Michael Drake is the 15th president of The Ohio State University. He has been president for about three years. Prior to that, he was the chancellor of the University of California at Irvine for about nine years. And prior to that, he was the vice chancellor for health affairs for the University of California System. He's a medical doctor and ophthalmologist. He's a graduate of Stanford, University of California, San Francisco Medical Complex. And he taught as an ophthalmology professor for about 20 years, at the University of California, San Francisco, before going into academic administration. And most importantly of all of these, he has one distinction that nobody else on the panel has, he is a member of the Rock and Roll Hall of Fame. [Laughter.]

MICHAEL V. DRAKE, M.D.: Asterisk, the board. The board. [Laughter.] Minor difference. [Laughter, applause.] Slight, slight.

MR. RUBENSTEIN: But he aspires to be a member of the Hall of Fame.

DR. DRAKE: I'll take it.

MR. RUBENSTEIN: Because he's actually a guitar player. So you'll get in as a member as well.

DR. DRAKE: One day. We'll look forward to that, yes. [Laughter.]

MR. RUBENSTEIN: OK. I should have also said that he is going to be the new chairman of the American Association of Universities (AAU), which is the main organization for research universities in the United States. He's the vice chairman now and will in October become the chairman of that organization.

So all of you are presidents of great universities. Why did you actually want to be a president of a university? Why wouldn't life be better just being a professor or doing research? If a young person came to you today and said, "I'd like to be a university president," would you recommend that they do that?

DR. DRAKE: You know, it wasn't ever something that I planned on doing at all. The actual story is I had taken a mini-sabbatical. And I was away during my mini-sabbatical. And I was nominated for the job of being chancellor at UC Irvine. And I didn't answer the nomination. But I made it through the first round, nicely. [Laughter.] And then I – and then they asked me again, and I still didn't answer. And they thought I was playing hard to get, I think, but I wasn't reading email on sabbatical. [Laughter.] And then finally, I got a demanding note saying, you know, you're selected as a finalist. The interviews are next week. Are you coming? And I said, to what? [Laughter.] And that's actually true. And then I did the interview

MR. RUBENSTEIN: I'd think about not even responding to the interview, because you were doing so well with not even responding. [Laughter.]

DR. DRAKE: You know, on second thought, that might have been a good approach. You know, honestly, I thought that it would be a fun thing to go through the interview. But I met with the president – the assistant was leading the search. And he was a friend of mine. We had worked together, because I was vice president. And I met with him ahead of time and said: I don't want to actually do this. I want to make sure you'll know, but I'll do it for the fun of just seeing what it feels like to be interviewed for something like this. And, you know, we had a good conversation, and six weeks later there I was.

I'd had other leadership positions, and it was a fun thing to talk about, but it wasn't a career choice until there was this real opportunity. And really in the interview, the discussion we had about things that might happen was intriguing. And we had such a good time that I said: Let's try this. And this is 12 years later.

MR. RUBENSTEIN: So you enjoy being a university president. And would you recommend it to young people?

DR. DRAKE: Yeah, yeah. [Laughter.] Let me – well, hear what my colleagues say. You know, it's a wonderful privilege and opportunity, tremendously. It's a life replacement, though. I mean, it takes up your whole life. So it really came nicely for us at a time when the kids were off in college. And so it's been a great thing for me and for my wife to do together in this phase. It's been incredibly rewarding. It's a lot of work, but it's incredibly rewarding and a real privilege.

MR. RUBENSTEIN: So, Drew, you've been president of Harvard for about 10 years now. Are you happy you took this job, and would you recommend being the president to some young people now, that they should be try to be a president of a university?

DREW GILPIN FAUST: I'm very happy I took the job. It's been just such an extraordinary experience to be part of an institution that supports students and faculty and amazing discoveries, amazing education. I have had my eyes opened to the world and to different fields of endeavor, beyond the historical training I had, in ways that would never have happened otherwise. So it's been extraordinarily rewarding for me.

I notice as you discussed our bios, I think we all came to this late in life, in the sense of having very active commitments as faculty members and with other agendas in mind. And that seems to me, in many ways, to be the right way to come at a university presidency, to be in some sense an accidental president, to start off loving what universities do, loving the research and teaching aspect of it, immersing yourself in it, and then discovering perhaps you can contribute to these institutions that do this extraordinary work in a way that extends beyond your own teaching and your own scholarship.

MR. RUBENSTEIN: So you would recommend this to other people, young people?

DR. FAUST: Sure. Sure.

MR. RUBENSTEIN: OK, all right. Marc, would you?

MARC TESSIER-LAVIGNE: Well, like my colleagues, it was accidental. It wasn't planned. If you told me at the beginning of my career as a scientist running my research lab that, you know, a little over a decade later I'd be a biotechnology executive, I would have laughed. And when I started that job, if you had told me that a little over a decade later I'd be a university president, I would have laughed. It was never planned. But I love the science and the teaching – the research and the teaching in academia.

But I had the opportunity to go apply science in the private sector. And I was excited by that, which I love, the application of science to develop therapies for poorly treated diseases. But in the position I had, which was an executive, I learned that I loved as much working with people and helping them be all that they can be and more. And I think at some point along the way, we each discover that that is as exciting, or as fulfilling, as one's own personal scholarship. And

from then, it was a natural transition when I was asked about Rockefeller and then Stanford, where it is a privilege to have the opportunity to work with such extraordinary people – the faculty, the students, the staff – and really enable them to be all that they can be and more. That’s what it’s about in this job. So, yes, I would.

MR. RUBENSTEIN: But you ran Genentech for a while. And they have stock options and so forth. You don’t have any stock options at Stanford. Have you ever thought about how much money you left on the table? Or you don’t think about that? [Laughter.]

DR. TESSIER-LAVIGNE: It’s really important not to think about that. [Laughter.]

MR. RUBENSTEIN: So today, what is the biggest problem facing American universities? I know there are always criticisms here and there of universities, but what do you think the biggest challenge and biggest problem for American universities are?

DR. DRAKE: Well, first, I think American universities – and I know we all agree – are really one of the brightest lights in the country. I have this thing I think about a lot. And if I think of the things that we really do in this country that are better – where we do it better than anybody else in the world, I think our Constitution is a great Constitution, our system of government. And I think our universities really are the envy of the world, for good reason. So we, I think, all realize that we are in incredible positions of privilege, and that’s great.

There are challenges. And I would say that for me, the balance of access, affordability and excellence is the nexus of that challenge, that we want to continually be excellent, in searching for the best ideas, the best discoveries, the best teaching. And we want to be broadly accessible to people because this is a great life accelerator for young people in the country. And then we also want to be affordable. It’s a real challenge for American families to be able to afford education. I had students at your two institutions at the same time. And I noticed how much it cost. [Laughter.] So –

MR. RUBENSTEIN: So let me ask you, right now – since the year 2000, from 2000 to 2015, state government funding of state universities is down by about 30 percent, it’s gone down. So why are state legislators not happy to give more money to state universities, because they’re producing people who presumably will live in the state and benefit the state?

DR. DRAKE: I’m a strong believer that universities, public and private, public in the case you’re speaking of, are really investments in the future. And I think that the legislatures sometimes look at them as a cost and think about what they can do. And I realize the cost pressures they have on their budgets. And so they’re looking at discretionary income. And we’re squeezed between other things they’re fighting with. So there’s a diminishing pie in many cases. And then health care costs and other things, prison costs, unfortunately, have been rising. And so we get squeezed. And so I think that they are challenged by that. I will say that when I speak with them and their own children are going to school, they’re extraordinarily interested in the best-quality education. They understand, but I think are challenged.

MR. RUBENSTEIN: So what's the biggest challenge American Universities are facing, and particularly the private universities?

DR. FAUST: I'd like to build on what Michael said. He had this wonderful triangle, that I think is critical, of access, affordability, and excellence. And we are dedicated to that, and that's the lifeblood of these institutions, that provides such a leadership role in the world. But we're not communicating that effectively to the wider public. And so I think one of our biggest challenges is to explain who we are and what we do and why it matters. And that will determine whether we're able to pursue these three goals, because we need the support of legislators for the publics. We need the support of philanthropy, for both the publics and the privates. And right now, we all are very focused on federal support for scientific research, which is proposed to be cut by very significant amounts. And that is essential to our scientific enterprise at our institutions.

MR. RUBENSTEIN: Now, you have an endowment that's in the high \$30 billion range or something like that – the highest of any university in the United States. Why do colleges and universities like yours need a big endowment? And what about the idea of just taxing that endowment? If you have a big endowment, why don't we – you know, people in Washington like to tax things. Why not tax the endowments?

DR. FAUST: Well, this is something that we need to explain more broadly is what endowments do. Endowments are working capital that provide every year for Harvard about 35 percent, 36 percent – between 35 and 36 percent of our operating budget. And so the size of that endowment is directly related to the size of the income it generates each year to provide money to support financial aid, to support scientific research, to support professors salaries. If you diminish that endowment, then that has to come from other sources – such as raising tuition, or federal funding, or some other reduction in what we're able to do for our students. So to tax that endowment is just to undermine our ability to fulfill the very mission that I think Congress hopes we'll fill, which is to support students and to support the goals of research and teaching.

MR. RUBENSTEIN: If you're an undergraduate of Harvard, and you come from a not-wealthy family, do you still pay the tuition? Or what percent of your people are on financial aid?

DR. FAUST: At Harvard 60 percent of undergraduates receive financial aid. And for any individual who comes from a family with income less than \$65,000 a year, you pay nothing for tuition or room and board. And up to about \$150,000 – unless you have some extraordinary assets that you have declared – you would receive tuition – you would receive financial aid so that you would pay approximately 10 percent – no more than 10 percent of your income. So we are dedicated to making Harvard affordable.

MR. RUBENSTEIN: And, by the way, when you meet Members of Congress and persuade them of things you're talking about, do they ever say, well, my son really deserves to get into Harvard, or they don't ever do that? [Laughter.] They don't – you get lobbied by people? And when you're shopping, people will come up to you and say: Here's my son's resume? That ever happen or no?

DR. FAUST: Well, I don't think any Member of Congress has done that, but I have had people come up to me when I'm talking a walk and lobby on behalf of their grandchildren or, you know.

MR. RUBENSTEIN: Right, right. OK. [Laughter.] So what do you think the biggest problems are for universities, and challenges, Marc?

DR. TESSIER-LAVIGNE: Well, first of all, I agree with Michael and Drew that access and affordability are very important, and explaining the value proposition of the universities, what it is that we contribute to society.

I want to take the third part of that triangle, the excellence part, because I think the exciting challenge is for us to say: How can we make sure that we have the biggest impact possible through our core missions of education and research? Are we doing the most important research today, be it in biomedical science, or in the social sciences, or the humanities? Are we teaching our students as well as we can? And are we making our educational products available to more students than just those who are on campus?

So I'd say the – I wouldn't call it a problem. I'd say it should be our major concern and focus. I agree with the issues of research funding that undermine that, of course, if it's constrained. And I agree that we have to continue to focus on this issue of making college affordable. We have similar problems to Drew's. You talked about the number of students on financial aid. The number we like to mention is that 78 percent of our students graduate without any debt. And so we believe in robust financial aid with similar cut offs – 65 percent full ride, \$65,000 for family income, full ride, \$125,000, free tuition, and so forth.

MR. RUBENSTEIN: This year you had 44,000 people apply for undergraduate admission. You accepted about 4 ½ percent. So have you thought your contributing to the depression of people because you're getting a lot of people – that 96 percent who aren't getting in, they're very depressed. [Laughter.] And, you know, why is it so hard to get into Stanford? Why don't you expand so you can get more people in? If it's such a great education resource, just let more people in?

DR. TESSIER-LAVIGNE: We've been gradually increasing the size of the undergraduate population, but over the past decade the number of applications has gone through the roof.

MR. RUBENSTEIN: So why are there so many applications these days, compared to when the Baby Boomers were applying?

DR. TESSIER-LAVIGNE: Well, part of it is that it's much easier to apply through online mechanisms, the Common App and things like that. You know, we're a residential university. So we're constrained by how many residences we have for our university. We really believe in that. We don't want to deviate from that. We have been increasing the undergraduate population gradually. We were at 1,500 per year. Now we're at 1,700 per year, under the previous president, John Hennessy. We're going to be evaluating that. We'd love – there certainly are more – many more students who are qualified than we can accept, because of that constraint. And we'd love to accept more. It's something we're going to be evaluating.

MR. RUBENSTEIN: OK. So let's talk about fundraising, which is really – I've often thought that when you get a Ph.D., instead of learning two languages, you should learn how to get – do fundraising. Because people have Ph.D.s and become academics, they spend a lot of their time fundraising. So do you have to spend a lot of time with alums begging for money, or you don't do that so much?

DR. DRAKE: We're really actually gratified by the number of people who support us. We just finished a campaign, and we had over 700,000 donors to the campaign. So that made us feel really great. And it was \$2 ½ billion, we raised a little bit over \$3 billion. And we had a room actually about this size of people who had been our most important supporters. And the reason for the evening was to thank them so much for their support.

But I'll say, as I kind of made it around through the crowd that evening, I would go to someone and say – and be saying thank you. And they'd say, no, no, no, thank you. We really are excited about this university and what it does. And people are very grateful for the ability to be able to help us move forward in some ways. So, to answer your question, it's really the other way around. Our ability to connect with people and to allow them to work with us on something that's so meaningful has been one – is one of the great pleasures of the job.

MR. RUBENSTEIN: So, if it's so pleasurable, how much more time do you want to spend in that area? But do you just do –

DR. DRAKE: This looks like a good crowd. [Laughter.] No, I –

MR. RUBENSTEIN: So tell me, what's the most effective way to raise money from a wealthy alum? What – is a long process? Or you just call them up? Or you send them a letter? You invite them over for dinner? What works the best?

DR. DRAKE: You know, I think that we do all those things to connect with people. And I think that the people who I see most are -- generally all of us will see the more significant donors. And they're really making an investment in the institution and really an investment in the future or their community and their society. So it's actually a great process. And let me just say that when I first took my job, Ralph Cicerone, who some of you knew, was my predecessor in California. And we were meeting right before I was going to do the job. And he said, you know, the donor community are going to become your best friends. And I thought, great, you know? Fine. OK. And then after several years, I realized that the people who were the most supportive of the university, who were out there in the world, who had been successful, became great supporters and friends, and it really was true. So it really is one of the great pleasures of the job.

MR. RUBENSTEIN: Drew, you're in the middle of a capital campaign now. I think it's going to be the largest capital campaign in American university history. And somebody gave a \$400 million gift to Harvard. How long did it take to persuade that person to do that? Was that just one call or did it take a couple of lunches or dinners, or whatever?

DR. FAUST: This was a gift – this is – what David is describing is a gift from John Paulson to name and endow our School of Engineering, which became a school – it had existed as a division – but it became a school in 2007, but really didn't have the financial foundation to achieve the goals it hoped to achieve. John Paulson was a graduate of the Business School. He's been loyal and generous to the Business School. But he thought he could make a bigger difference and have a more important impact for the Business School and the university as a whole by making a gift of the kind that he chose to do.

So the dean of the Business School had met with him over a number of years, just talking about what was primary in this mind, what he thought would most help the Business School. And I met with him a number of times. So it was over several years. And I think what was key is John Paulson saw he could do two things at once. One was be loyal to an institution that he felt enormously grateful for, but also give a gift that would have a very significant impact in changing the direction of a part of that university that he felt was extraordinarily important.

MR. RUBENSTEIN: So does anybody ever call you up and say: By the way, you didn't call me, but I'm calling you. I'm going to give you \$100 million or something? Or that doesn't happen very often? People call out of the blue with \$100 million or something?

DR. FAUST: People have called to say they want to give a gift, but it's not usual at that level right off the phone. [Laughter.]

MR. RUBENSTEIN: OK. OK.

DR. FAUST: I would never turn off my cell phone if that were the case.

MR. RUBENSTEIN: So, Marc, at your school – you have a school that's very well-known for having entrepreneurs and creating a lot of entrepreneurs. Why should somebody want to get a degree from Stanford, because the people who drop out seem to do better than the people who actually get degrees. [Laughter, applause.] So have you – have you thought about just having a non-degree kind of thing, and just – [laughter] –

DR. TESSIER-LAVIGNE: It's true, there are examples of individuals who have done better by dropping out. I think in general, you'll find that people have done, in the aggregate, better by getting their college degree and finishing it. [Laughter.] So we certainly celebrate those individuals, and – but we don't think that it's necessarily the right route for everybody. And most students agree.

MR. RUBENSTEIN: OK. Let's talk about –

DR. FAUST: Can I say something about that? We have some of those folks too.

MR. RUBENSTEIN: You have two famous dropouts too.

DR. FAUST: Yes, Mark Zuckerberg, Bill Gates. [Laughter.] I think you have to remember that they had Harvard to drop out of. And that's an important thing. They came, they met people,

they invented Facebook in their dormitory with their friends, who became the original launchers of Facebook. So even these individuals who haven't had a complete career at our schools, nevertheless bring much of our institutions with them, and are the products of those institutions even if they don't actually have –

MR. RUBENSTEIN: Well, in Bill Gates' case, he didn't get his degree, and ultimately you gave him an honorary degree, and the same this year with Mark Zuckerberg. Was it hard to convince the faculty to give these people honorary degrees when they couldn't –

DR. FAUST: Maybe this is the wrong incentives, do you think? [Laughter.]

MR. RUBENSTEIN: So let's talk about student life for a moment. Students for the last thousand years or so seem to like to drink alcohol. And roughly every – you know, every student I think in the last thousand years seems to be spending a lot of time on alcohol – not every student, but a lot of them. Right now, the drinking age in our country is set at the age of 21. When I was in college, it was 18. Do you think the drinking age is too high, and forces people to go into drinking ways that they shouldn't, or should it be changed? And is there any chance of changing it, or do you not think it should be changed?

DR. DRAKE: It's not one of the things I worry about. I worry about the – we all worry about substance abuse. And we – particularly the popular pastime of binge drinking, which is so prevalent on college campuses, we think about, and how to do what we can to make the students safe. You know, I don't think much about changing the age as a way to do that. I don't know – we've – this last year – I will say, this last year we've begun selling beer in our football stadium rather than not, which would have been the case. And we found that the number of incidents that we had in the stadium was about a third of the number that we'd had years before, because people would drink very heavily in line, or would sequester alcohol in different parts of their clothing to get in, very inventively, I would say. But so we did have that positive experience. But we've really thought more about educating and supporting our students than about changing the law.

MR. RUBENSTEIN: Well, what about drinking – is drinking a problem at Harvard, or not really?

DR. FAUST: I think drinking's a problem in all of our colleges and universities, that students come often quite inexperienced in alcohol. The biggest focus of danger is among the first-year students in the first weeks of school. But binge drinking continues to be an issue, and is one that all of us talk a lot about today, and worry about. So, yes.

MR. RUBENSTEIN: What about at Stanford, they have any drinking there?

DR. TESSIER-LAVIGNE: We have the same issues as our colleagues. Again, it's binge drinking of hard liquor shots that really is the thing that we've been most worried about and we've attended to. We've put in new regulations last summer. We've seen a drop, in fact, in the statistics related to that, such as alcohol transports. So it's something that we worry about. It's

really about education – relentless education, messaging, and especially focusing, as Drew said, on that incoming freshman class.

MR. RUBENSTEIN: OK. Now, let's talk about another sin, which is drugs. When I was in college, marijuana was a favorite drug. Now it seems to be unfortunately heroin, cocaine, and opioids. So how serious a problem is this for undergraduates and graduates at your university?

DR. DRAKE: Well, it's a very serious problem, I'll say, for Ohio. More than specifically an issue for the university, it's really a problem for the state of Ohio, which has the dubious distinction of the highest rate of these fatalities nationally. And particularly in rural areas of the state, it's been – it's really taken hold. So we have a variety of – first, we have education, as my colleagues were mentioning, that we do for all of our students, and much support for them. We also have a research institute that's looking at addiction and different types of drug addiction to try to get ahead of this. And I know that our scientists are working on things like non-addictive pain medication so that you can stop this progression. So we think of this more as a broad societal problem than a specific problem for the campus, but included in the education.

MR. RUBENSTEIN: Is it getting worse or getting better?

DR. DRAKE: Well, I think over the last several years it's gotten – there's been a spike in particularly opioid deaths. And so it's gotten a lot worse. And we haven't seen a turnaround yet. And so we're really trying to focus –

MR. RUBENSTEIN: Have you ever had to call parents and say their child died because of a drug problem? Or that hasn't happened for you?

DR. DRAKE: We have a large – we have 60,000 undergraduates. And so, unpleasantly, every month or few weeks I have a conversation with a parent about one or another reason that they've lost their child. They're the hardest things that I do. It's a range of things.

MR. RUBENSTEIN: Do you have any drug problems at Harvard, or Harvard is drug-free?

DR. FAUST: It certainly isn't drug free, but I would describe it much as Michael has, that the state of Massachusetts is facing an opioid problem and there's a lot of attention to it across the state. And we have some drug presence on our campus, but it's a far-less pressing concern for the community than the drinking issues.

MR. RUBENSTEIN: And what about drugs – do you have drugs in California?

DR. TESSIER-LAVIGNE: Similar picture as what Drew just described. What I will add is that I think all of our institutions also have spent considerable resources supporting students who develop addictions or use the drugs and come for help.

MR. RUBENSTEIN: Now let's talk about athletics for a moment. Stanford is having Division 1 athletics and very good academics as well, a private university. Do you think that your Division 1 scholarship athletes should be paid by Stanford because you're getting a lot of revenue at your

football games, for example, from these people who are just getting a scholarship? Do you think they should get more than a scholarship?

DR. TESSIER-LAVIGNE: We really believe in the student athlete model. Stanford's been – we've been very fortunate. We have extraordinary athletes – you know, what is it, 21 out of 22 Directors Cups for the NCAA³ in the last 22 years. But we set very high standards. We cut no corners. There's no lowering of the bar for those students. They perform at the same levels as other students, if you look at the majors they take, their graduation rates, their GPA⁴s. They're just extraordinary individuals. They do both. We believe in the student athlete and so we don't want to deviate from that. So, no, we wouldn't – we think that paying them would get in the way of them being students first and foremost, athletes second.

MR. RUBENSTEIN: Harvard has – you know, generally is not a scholarship – athletic scholarship place. Ivy League does not. But recently you've been competing with Duke for some basketball players. And how do you find it, you know, to be at Harvard now, where you're actually getting some athletes who are really nationally prominent? Is that changing your admission standards in any way or not?

DR. FAUST: We have very strict admissions standards in the Ivy League. And we, as Ivy League participants, all police one another to look at the credentials of our athletes to make sure that nobody's bringing in superstar athletes who don't have the academic credentials. So that is a baseline to which we all have to adhere. And the standard you have to uphold is the relationship of your academic credentials of your athletes in comparison with the rest of your student body. So it varies from school to school in the Ivy League, but we're all held to those high standards.

We've been very fortunate to compete with Duke, unfortunately not successfully this year for one particular candidate whom I'm sure you, as a Duke booster, know a great deal about. [Laughter.] But I think our secret weapon there is our extraordinary coach, Tommy Amaker, our basketball coach, who believes he is first and foremost a teacher, and provides his students, not just his team members, not just with knowledge about how to play basketball, but with a much broader kind of context for their educational experience. And it's very appealing to many students.

MR. RUBENSTEIN: Well, in schools like Ohio State, you have the second-largest athletic budget in the entire country – I think second to the University of Texas. And I assume, but I didn't check – but I assume that the football coach is the highest paid person in the university.

DR. DRAKE: Yes.

MR. RUBENSTEIN: So does that strike you that, you know, it's – the values are wrong, when the football coach is being paid more than the university president?

³ NCAA is National Collegiate Athletic Association.

⁴ GPA is Grade Point Average.

DR. DRAKE: So – [laughter] – I’m sorry, I’m going to have to have you repeat the question. I was getting some interference. [Laughter.] So I’ll say that – to echo what Marc said – that we really enjoy the student athlete experience. We have 1,000 student athletes on our campus. So some of them most people here see on TV on weekends, and that’s great. We have 900 others in a variety of sports. And in fact our last two national championships that we celebrated recently were in pistol and synchronized swimming.

So they’re wonderful student athletes. And actually, the football team when it wins goes to the White House. The other teams come to our house. And so we get a chance to meet these wonderful young men and women. And they’re incredible. They’re dedicated. They’re focused. They’re really our pride. And we like them a lot. Football is a big – college football is very popular nationally, again. And we have, we believe, the best coach in the country, and really are happy to have him.

MR. RUBENSTEIN: So today, the science budgets are being cut by – the budget from the President hasn’t come out officially, but it seems as if there’d be some cutbacks in maybe NSF⁵ funding, NIH⁶ funding, and so forth. Are you worried that we will cutting research money away from universities, and what are you trying to do about it, if you are worried about it?

DR. DRAKE: Well, I began by saying that I thought our Constitution is something that’s really been a model for the world. And our research universities – our universities broadly, and our research universities in specific have been a real model. And particularly since the Second World War there’s been a great partnership between the federal government and our universities that have led to incredible discoveries. I was watching – there was the march this weekend, that all of you know. And I was looking at different cleverly written signs. And one that caught my eye said: Got polio? Me neither. Thank you, science. And I think that there’s lots of things that have happened to and for us that helped our society be better that are discoveries that have come from our universities. And so it’s been the way that we’ve maintained and improved the quality of life in this country and for people around the world.

Marc and I were both on the faculty at UCSF⁷ a few years ago. And I remember being there, in ophthalmology and first noticing patients I was seeing – I was the consult doctor for the hospital – and I was noticing patients who had a strange candida infection of their eye. And then they’d get a cytomegalovirus retinitis, an unusual thing, and then they’d die very quickly. And we learned in the weeks and the months later, this was what turned out to be AIDS⁸, and learned more and more about it, an incurable disease. And then through work done by lots of people, Marc’s colleagues and others, we were able to get to things that actually were – maybe not cure it, but to treat these diseases, so people now live for many, many decades.

So seeing all that happen and knowing that it happened from this partnership means that it’s one of the greatest and most effective things that we’ve done as a Nation. And to cut back on that I think is always short-sighted and ill-advised.

⁵ NSF is National Science Foundation.

⁶ NIH is National Institutes of Health.

⁷ UCSF is University of California, San Francisco.

⁸ AIDS is acquired immune deficiency syndrome.

MR. RUBENSTEIN: While I have you, as an ophthalmologist, is Lasik surgery a good thing to do, or? [Laughter.]

DR. DRAKE: How many people in the audience have had Lasik surgery? Well, let's ask them, how – no, I don't mean to – I'm teasing.

MR. RUBENSTEIN: How many people are happy with it?

DR. DRAKE: A good number. And I will say that it works – you know, patients are the best people to ask. It works well for many, many people, so.

MR. RUBENSTEIN: I notice you're wearing glasses, as I am. You don't use contacts – are glasses better than contacts?

DR. DRAKE: You know, I did notice that a lot of my colleagues who were doing the surgery were doing glasses. So I took that as a, well, never mind. [Laughter.] Let me do this – let me just pass the question onto Drew, I think. [Laughter, applause.]

MR. RUBENSTEIN: OK. Drew, Harvard is a big recipient of federal scientific research dollars, particularly from NIH⁹, among other places. So how are you convincing this Administration that they should keep funding at these NIH levels?

DR. FAUST: Well, the President's skinny budget proposes significant cuts to science funding. It proposes about an 18 percent cut to NIH funding and significant cuts to other important scientific funding as well – NSF¹⁰, Department of Energy, and so forth. So since January, I've been spending a lot of time meeting – in Washington, meeting with Members of Congress on both sides of the aisle to try to explain what you just said so eloquently, why research support for American universities has been critical to discoveries like how to manage AIDS, how to diagnose a variety of diseases, how to develop the MRI¹¹. I mean, there's so many ways in which university science has changed our world – the internet is one of them as well. That's not a health-related one, directly, but just so much we take for granted has come out of university research.

So I've been trying to make the case to Congress people, and also invited a number of them to come see our scientists working in their laboratories, and understand firsthand. And a lot of people in Congress are very eager to do that, because they want stories to tell. It's the stories of the discoveries, not some abstract statistic, that really has the impact that they think can give them the ground to stand on as they vote for these kinds of measures.

MR. RUBENSTEIN: So when you go talk to – I assume it's not hard for the president of Harvard to get a meeting with a Member of Congress. Probably you can see anybody you want, I guess?

⁹ NHI is National Institutes of Health.

¹⁰ NSF is National Science Foundation.

¹¹ MRI is magnetic resonance imaging.

DR. FAUST: I've been pretty welcomed. I mean, sometimes there are scheduling conflicts and so forth, but I've –

MR. RUBENSTEIN: But when you have meetings, do you want to talk about this issue, which they understand, but do they often give you their pet theories of education, of how universities could be run better? Do they ever do that?

DR. FAUST: Well, they sometimes communicate to me concerns they have about higher education, as they listen to my concerns about the legislative agenda.

MR. RUBENSTEIN: Marc, you're a scientist, so you have a lot of credibility talking about this with Members of Congress, the Administration. Have you met with people in the Administration yet, the President or other people, and talk about the importance of science funding?

DR. TESSIER-LAVIGNE: I have been meeting with Members of Congress on both sides of the aisle. The message that we bring, which is the importance of the research enterprise for the well-being of our Nation, is very well-received. This is a bipartisan issue. People understand the importance of it, that – just to take two examples – build on Michael's example. You know, polio – there was a time when people thought that iron lungs – expenditures on iron lungs would bankrupt the Nation. With HIV¹², we predicted that every bed in the Nation would be occupied with HIV patients. And each case, you know, polio, a vaccine. Many young people haven't even heard of what an iron lung, I bet you in the audience here. HIV, triple combination therapy, you know, which controls the disease. It's not yet a cure, we really still need a vaccine or a cure.

We have other impending threats. With the aging of the population, Alzheimer's, currently 5 million people in our country are afflicted with Alzheimer's. By 2050 it's predicted to be 13 million people. Think of the human suffering of them, their families. The economic cost also is supposed to balloon – is predicted to balloon from \$180 billion a year to a trillion dollars a year just to take care of those people. So we desperately need cures – therapies and cures. And that will only come through research. So the vitality of our research enterprise is essential to develop those new therapies and cures. It also creates jobs. So it creates cures, it creates jobs, it improves societal welfare – the internet and other discoveries. This is something that I think we've understood well in society, and so it's a message that is well-received.

MR. RUBENSTEIN: Let's talk about a problem on college campuses, which is sexual violence. Today there's more incidents of sexual violence. Do you think is because people are reporting more – better than they did before? Or are there are just more examples of it? Or conduct has just changed? What would you say is the reason there is much more incidence of sexual violence or reported sexual violence?

DR. DRAKE: Well, let me try something here. How many people in the audience know of someone who was a victim of a sexual assault or a sexual violence while he or she was in college? This would be – not through your professional lives, but just in your personal lives, you know somebody who was a victim. Raise your hands high enough so we can see them. So, if

¹² HIV is human immunodeficiency virus.

we look at the audience, that's a fair – roughly about half the audience of people actually know somebody who had this happen. So it's not a new – and then most of you have not been in college for a while.

MR. RUBENSTEIN: For a long time, it looks like. [Laughter.]

DR. DRAKE: I'm a guest. So it's not a new phenomenon. We think that the AAU¹³, the organization that we all belong to, did an exhaustive study, largest study of its kind, across the country – large, small, public, private universities, north, south – and found that there was an incidence of roughly 20 percent of people said that they had been a victim of one or another type of sexual assault during the time that they were in college.

And so I think that the numbers are not so different than they might have been a few years ago. I think that we've done a good job of bringing this to conversation. Our students are much more active in thinking about learning ways that they can intervene or prevent this from happening when this happens, or deal with it appropriately when it does. We hope that that leads to a decrease in the incidents and then a better handling of the cases when they – when they come along.

MR. RUBENSTEIN: What about at Harvard?

DR. FAUST: We were part of this survey, and had statistics that were equivalent to most of our peers. It's been a matter of deep concern for me, on a variety of levels. I think a lot of the public attention has been on how do we adjudicate these and how do we manage complainants and respondents and those kinds of adjudications. But for me, it seems like the most important thing to do is, of course, handle that well, but prevent it from happening in the first place, and understand what the circumstances are, what the conditions are, what the knowledge of individuals needs to be in order to reduce this scourge on our campuses.

So we've spent a lot of time trying to figure out what are the best preventative measures, and also – how can we encourage people to go for help? So I think the kinds of realities that you were describing, in which people did not recognize how widespread it was, because people were shamed and didn't think they should talk about it, and therefore didn't ask for help. And so as we see more people asking for help, it looks like our statistics are going up, but actually that's misleading. I think it's because more people are saying: 'This has happened. And I want to confront it. And I need help.'

MR. RUBENSTEIN: You think the conduct is largely the same as it was 20 or 30 years ago? People are reporting it more than it was? Or do you think conduct has changed really than it was 30 or 40 years ago, or it's just reporting is better?

DR. FAUST: Well, one thing I found striking as we were addressing these issues in a very robust way at Harvard over the last number of years is numbers of women alums from preceding generations who graduated in the '50's, graduated in the '60's, came to me and said: This kind of stuff was going on all over the place when I was in college, but no one dared talk about it. So I

¹³ AAU is Association of American Universities.

don't have any absolute fact or survey or statistics to say things have not – that this was always there. But it was such a powerful message that was delivered to me by numbers of alums about their experience.

MR. RUBENSTEIN: At Stanford you have this problem?

DR. TESSIER-LAVIGNE: Very similar to our peers as well. And I will say, if you look back in time, it's sort of shocking that we didn't address this until the late 2000s, 2009, 2010, when nationally people start to shine a spotlight on the issue in college campuses. And that led to a number of taskforces, the initiatives, the study by the AAU that was just mentioned. So there's just – there's been an acceleration of focus on the problem. And I just want to echo what Drew said: The single most important thing, of course, is prevention. And education of our students when they arrive on campus is a focus for us, as I know it is for all of our peers. We are constantly trying to innovate on that front. Our students actually are some of our best partners. They come up with new programs to help students understand about consent, understand about appropriate behavior.

MR. RUBENSTEIN: So all of you are focused on immigration. So let's talk about that for a moment. Right now, all of your schools have people from overseas coming for undergraduate study and graduate study. Why should we in effect allow these students to come, because why shouldn't we have these places available only for American students? What's the advantage to America or to your universities to having foreign students come?

DR. TESSIER-LAVIGNE: Well, as an immigrant who came here on a J-1¹⁴ Visa for postdoctoral work, so to get further training after I received all of my education outside of this country, I'm still trying to make something of myself, but I hope that you think that it wasn't too bad that you let me into the country.

MR. RUBENSTEIN: Well, you might be the exception, but, OK, yes. [Laughter.]

DR. TESSIER-LAVIGNE: Seriously, we've been very fortunate in this country to be able to be a magnet for extraordinary talent from abroad. People have brought their ideas, their capabilities, and they've enriched our country. Fifty-one percent of start-up companies with market capital over \$1 billion were started by immigrants who have come to this country. It creates wealth for the whole country, and for everybody here.

It's also important at the undergraduate level. We have about 10 percent of our students are international students. I believe among our peers it's typically 10 to 15 percent. We think it's very important because it enriches the education of our American students. It's important for them to interact with people from other nations, other cultures. We're living in a global world. Every one of our students today, first of all, they will have extraordinary long careers because, you know, life span continues to increase. They'll probably be active into their 70's. They'll have 50 years of active work. And they will be global citizens. They will have to interact with people from every country. It's important that we expose them to that at the same time. So both

¹⁴ J-1 Visa is an Exchange Visitors Program.

in terms of enriching our educational officers to our students and also in terms of having talent come here to improve our society, it's been the American way and I think it's served us well.

MR. RUBENSTEIN: OK. If these students are so valuable to have, why don't we keep them here? So when they graduate sometimes they have to leave the country. So why don't we just say if they're so great, let's find out ways to keep them? Why don't we do that?

DR. FAUST: I think that's another issue that universities have been very supportive of, which is H-1B visas, and allowing the students that we've invested in and who want to return their talents to this country, to make them able to undertake that. I think that openness to international students and faculty and talent is not incidental to who we are, it's fundamental to who we are. And we see it as an essential part of attracting the excellence that we were talking about at the very beginning of our conversation.

MR. RUBENSTEIN: Parents who send their children to college, university, often want their children to get a job after they graduate, if – once they get their graduate degree, if they get that. But you'd think that the parents are obsessing over – students are obsessing over STEM¹⁵ education, because they think they can get a job if they have science, technology, engineering or math. Do you think there's an overemphasis on that? And what happens to the philosophy majors and poetry students? Are they going to get no jobs?

DR. DRAKE: What we find is – I used to be – when I worked at UCSF, I was the dean of admissions. So I looked at people applying to medical school. And they would often say, what's the best major for me to have as an undergraduate if I want to apply to your competitive medical school? And I said that the best major is something that excites you, something that you're passionate about, something you can do well in and can help you prepare for your future. But I never thought that there was a specific course of study that was better or worse. And one of the great things about the liberal arts basis of our universities is that there are a wide range of courses of study that people can take to expand their minds and do their best to fulfill their human potential broadly. So I wouldn't limit them or guide them toward any –

MR. RUBENSTEIN: And you have two children, is that –

DR. DRAKE: I have two children, yes.

MR. RUBENSTEIN: If they came to you and said, I'd like to major in philosophy, what would you have said?

DR. DRAKE: I would have said, great. I wanted them to be successful. I want them to be happy. You know? And so I would want them to get a job, you know, when they were done, but I still think that wherever they focus is that we wanted to stimulate people to use their minds to create a future.

I want to say one thing, though, you mentioned about students coming from different places and about the diversity of our student bodies and what that does – how that enriches the

¹⁵ STEM is a curriculum based on Science, Technology, Engineering, and Mathematics.

educational environment that all of us live in. And I have a class I teach for undergraduates, for freshmen. It's a seminar and it's on the Supreme Court, civil rights, and the music of the civil rights era. And so we have a great time sitting and talking about things broadly.

And one of the sessions – I've been doing this for several years – one of the sessions I remember actually had to do with the Civil War a bit. We talk a little bit about the 19th century to kind of roll us up to the present day. And we were chatting about things. And we were talking about the Civil War. And one of the students said: Well, you know, the American Civil War – and then went on with their sentence. And it really caught me that she said the American Civil War. She was from the Middle East, and actually was in a country where civil war was actually happening at the time we were speaking. And it caused me to take a step back and rethink about what I was saying and kind of broaden my perspective.

And there are small things like that that happen in conversations, in classrooms, or in dorms or in hallways, where people come together from different points of view that makes such a difference. And so I think it's really important for the quality of our education that we have people from the world working with us.

MR. RUBENSTEIN: Drew, when you meet prospective parents, do they say: What should my child major in if he or she wants to get a job? Or what do you tell them if they ask that?

DR. FAUST: I do get asked that. And what I'll say is we're trying to educate your child for the second job and the third job and the fifth job, not just for the first job. So we want to give your child certain habits of mind, certain ways of asking questions, of sorting fact from fiction, of analyzing information and data that can be adapted to jobs that we don't even know exist yet. And so how do you get that complex of skills? It can be in a variety of different majors or concentrations. And so –

MR. RUBENSTEIN: Do parents ever say, my child would like to go into private equity, what is the best thing to major in? [Laughter.] They don't ask that? Nobody asks that?

DR. FAUST: Usually they don't tell me that.

MR. RUBENSTEIN: They don't ask that? OK. So, Marc, your children, were they majoring in science as well?

DR. TESSIER-LAVIGNE: My children majored in computer science, but with – also, one of them, with neuroscience. The other one is now computer science with some humanities. Maybe I can make a few points. First, on the shift towards STEM, you know, 20 years ago we were concerned that we didn't have enough STEM students. So it's actually been important for our student body to become more educated in the STEM subjects.

Secondly, we still have a lot of progress that's needed. If you look, for example, in STEM subjects in terms of women and minorities in STEM subjects, we don't have enough. We're very happy that at Stanford last year 25 percent of the – if you look at women seniors – 25

percent of them were engineering majors, which is terrific – a massive increase over the past few years, which is terrific for a field that’s typically male-dominated.

Now, as students focus on STEM, we have the same message as Drew and Michael, which is you want to prepare yourself for a life of change. And we want our education to make our students – sure, we want them to be job ready. More importantly, we want them to be future ready. The world is going to change. We know they’re going to change jobs. The first job is not going to be their job for long. And it’s important for them to have all those other skills that will enable them – critical thinking, the ability to deal with ambiguity, moral and ethical reasoning, and so forth – that will enable them to adapt to a changing job market and changing interests of their own.

And then – so for the STEM students, we want that breadth. Certainly, for the students who study philosophy or the social sciences, we think it’s important for them to be exposed to the sciences as well. We believe in a broad education for all our students. And I might add that if we look at our graduating majors, whatever the subject, they all get jobs. They all get jobs pretty rapidly after leaving Stanford. So it’s not a detriment to them to –

MR. RUBENSTEIN: You don’t have a lot of kids that are unemployed after –

DR. TESSIER-LAVIGNE: Correct.

MR. RUBENSTEIN: And what’s the best way to get into Stanford, really? [Laughter.] Perfect SATs¹⁶? First of your class? All-American football player? What’s the best way, would you say, to get in?

DR. TESSIER-LAVIGNE: You know, the advice to any student is, you know, follow your passion. The most important thing is to really be passionate about something and go for it. Beyond that, it’s very hard to be prescriptive.

MR. RUBENSTEIN: And do any of you think – American universities are the finest in the world. I think generally people can see that. But do you think it’s inevitable that we’ll be the finest in the world in 10 or 20 years? Do you think that’s inevitable in our lifetime, or you think it’s not?

DR. DRAKE: I think it’s – you know, there are – the competition for the best ideas around the world in every minute of every day. And I think that the way that we got to be where we are is by working hard and focusing. And I think the way that we’ll stay where we are is by doing that. If I can – I have a picture in the back of my desk – a painting of Willie Mays, who was a childhood hero, and I got to meet a little later on in life. And I was talking with him once about how he felt after he made the catch in the ’54 Series against Cleveland. And what did it feel like to make a really great play like that? And he said some things that were profound, and I’ll share with you next time I speak with you – [laughter] – but

MR. RUBENSTEIN: Like Fermat’s Theorem, we’re going to have to wait –

¹⁶ SAT is a trademark for a set of standardized college entrance examinations.

DR. DRAKE: I said, but how'd you feel about that? And he said, well, that was pretty good, you know. And it was a good play. And my job was to come out there the next day and try to do something a little bit better. And what it made me think is that, you know, you work hard to make yourself the best you can be, but the way you stay there is try to improve that tomorrow. And I think we have to continue to do that with higher education.

MR. RUBENSTEIN: So, do you think Harvard will be in the same standing in the world 20 years from now?

DR. FAUST: I think a lot depends on what we do every day. I think a lot depends on whether we can sustain the research excellence that all of us have been talking about, whether we can continue to be the magnet for talent that people wish to come to and think that they can be welcomed and be included in the pursuit of knowledge and learning. So I think it's contingent, and depends on the work we do, depends on the kinds of support we're given more broadly, and on our ability to sustain the message that's so important of free expression and pursuit of learning.

MR. RUBENSTEIN: Suppose I had a child who got into both Harvard and Stanford, where should that child go? [Laughter.]

DR. FAUST: Ohio State.

MR. RUBENSTEIN: Ohio State. [Laughter, applause.] OK. All right.

DR. DRAKE: That's a very good answer. Good answer.

MR. RUBENSTEIN: So I want to thank you much for the conversation – very interesting conversation. I have a gift for you, a copy of the first map of Washington D.C., from 1892. And let me present it to each of you.

DR. FAUST: Wow. Fabulous.

DR. DRAKE: Thank you very much.

MR. RUBENSTEIN: And one for you.

DR. TESSIER-LAVIGNE: Fantastic.

MR. RUBENSTEIN: Thank you all for a very interesting conversation.

THE ECONOMIC CLUB

O F W A S H I N G T O N , D . C .



Michael V. Drake, M.D.
President, The Ohio State University

15th president (June 30, 2014 – present)

Dr. Michael V. Drake's service in higher education spans nearly four decades and includes senior leadership roles at universities and national organizations dedicated to advancing education. He became the 15th president of The Ohio State University on June 30, 2014.

His vision for the university's future focuses on access, affordability, and excellence, with an emphasis on groundbreaking research and modern and effective teaching. Other focus areas include deepening the university's community engagement and advancing inclusive excellence and diversity.

As evidence of his steadfast commitment to access and affordability, Dr. Drake directed the university to identify \$400 million by 2020 to lower the cost and improve the value of students' Ohio State education. At least \$200 million will be generated through administrative efficiencies, and another \$200 million will be developed from innovative financing strategies.

In June 2015, the university instituted a comprehensive freeze on costs for in-state undergraduate students for the first time in at least 40 years. The comprehensive freeze was extended to 2016-17. In addition, the university launched the President's Affordability Grant program, which provided \$15 million in need-based grants to more than 12,000 low- and middle-income students. In 2016-17, the program expanded to direct \$20 million in grants to 15,700 undergraduates, bringing the total investment in the program over two years to \$35 million. Dr. Drake is committed to increasing need-based scholarship support by \$100 million by 2020.

From July 2005 to June 2014, Dr. Drake served as chancellor of the University of California, Irvine. He also served as a Distinguished Professor of Ophthalmology (School of Medicine) and Education (School of Education). As chancellor, Dr. Drake played a crucial role in advancing the university's sustainability efforts and increasing minority enrollment. In 2014, UC Irvine ranked No. 1 nationally on *Sierra Magazine's* list of the "Ten Coolest Schools" for improving its energy efficiency and sustainability.

In his last five years at UC Irvine, the number of undergraduate students from underrepresented minority groups increased by nearly 60 percent. Additionally, in 2014, more than 60 percent of entering freshmen were first-generation students, and more than 40 percent came from lower-income families. Both percentages are among the highest in the nation.

Prior to serving as UC Irvine chancellor, Dr. Drake served for five years as vice president for health affairs for the University of California system, overseeing academic program policy at the system's 15 health sciences schools, located on seven campuses. He also spent more than two decades on the faculty of the UC San Francisco School of Medicine, ultimately becoming the Steven P. Shearing Professor of Ophthalmology and senior associate dean.

Dr. Drake is an alumnus of Stanford University (BA) and UC San Francisco (MD), and holds three honorary degrees. He is an elected member of both the National Academy of Medicine and the American Academy of Arts and Sciences. He has received numerous honors and awards for teaching, public service and research, including the Burbridge Award for Public Service, the Asbury Award (clinical science) and the Michael J. Hogan Award (laboratory science). In 2014, he became the 27th person to be awarded the University of California Presidential Medal, in recognition of his exemplary career of service to the university.

Dr. Drake has served as trustee and national president of the Alpha Omega Alpha Honor Medical Society and as chair of the board of trustees of the Association of Academic Health Centers. He has been named vice chair of the Association of American Universities for 2016-17 and will serve as chair for 2017-18. He currently serves on the AAU Membership Committee and is completing a three-year term on the board of directors. He also serves in leadership roles for the American Talent Initiative, University Innovation Alliance, National Collegiate Athletic Association and B1G 10 and as chair of the Council of Presidents of the Association of Public and Land-grant Universities.

In 2015, Dr. Drake was appointed to the board of the Rock and Roll Hall of Fame and Museum, Inc. He has had a lifelong interest in music (notably rock and jazz), plays guitar, and teaches courses on the music of the civil rights movement.

A New York City native, Dr. Drake has always maintained a fondness for Ohio, as his mother grew up and graduated from high school in Youngstown. Now, he and his wife, Brenda, live in Columbus. They have two grown sons and four grandchildren.

THE ECONOMIC CLUB

OF WASHINGTON, D. C.



Drew Gilpin Faust, Ph.D.
President, Harvard University

Dr. Drew Gilpin Faust is the 28th president of Harvard University and the Lincoln Professor of History in Harvard's Faculty of Arts and Sciences.

As president of Harvard, Dr. Faust has expanded financial aid to improve access to Harvard College for students of all economic backgrounds and advocated for increased federal funding for scientific research. She has

broadened the University's international reach, raised the profile of the arts on campus, embraced sustainability, launched edX, the online learning partnership with MIT, and promoted collaboration across academic disciplines and administrative units as she guided the University through a period of significant financial challenges.

An historian of the Civil War and the American South, Dr. Faust was the founding dean of the Radcliffe Institute for Advanced Study at Harvard, guiding its transformation from a college into a wide-ranging institute for scholarly and creative enterprise, distinctive for its multidisciplinary focus and the exploration of new knowledge at the crossroads of traditional fields.

Previously, Dr. Faust served as the Annenberg Professor of History at the University of Pennsylvania, where she was a member of the faculty for 25 years.

Raised in Virginia's Shenandoah Valley, Dr. Faust went on to attend Concord Academy in Massachusetts. She received her bachelor's degree from Bryn Mawr College in 1968, *magna cum laude* with honors in history, and her master's degree (1971) and doctoral degree (1975) in American civilization from the University of Pennsylvania.

She is the author of six books, including "Mothers of Invention: Women of the Slaveholding South in the American Civil War" (University of North Carolina Press, 1996), for which she won the Francis Parkman Prize in 1997. Her most recent book, "This Republic of Suffering: Death and the American Civil War" (Alfred A. Knopf, 2008), looks at the impact of the Civil War's enormous death toll on the lives of 19th-century Americans. It won the Bancroft Prize in 2009, was a finalist for both a National Book Award and a Pulitzer Prize, and was named by *The New York Times* one of the "10 Best Books of 2008." "This Republic of Suffering" is the basis for a 2012 Emmy-nominated episode of the PBS American Experience documentaries titled "Death and the Civil War," directed by Ric Burns.

Dr. Faust has been a trustee of Bryn Mawr College, the Andrew Mellon Foundation, and the National Humanities Center, and she serves on the educational advisory board of the Guggenheim Foundation. She has served as president of the Southern Historical Association, vice president of the American Historical Association, and executive board member of the Organization of American Historians and the Society of American Historians. Dr. Faust has also served on numerous editorial boards and selection committees, including the Pulitzer Prize history jury in 1986, 1990, and 2004.

Her honors include awards in 1982 and 1996 for distinguished teaching at the University of Pennsylvania. She was elected to the Society of American Historians in 1993, the American Academy of Arts and Sciences in 1994, and the American Philosophical Society in 2004.

Dr. Faust is married to Charles Rosenberg, one of the Nation's leading historians of medicine and science, who is the Ernest E. Monrad Research Professor of the Social Sciences at Harvard. Drs. Faust and Rosenberg have two daughters, Jessica Rosenberg, a 2004 *summa cum laude* graduate of Harvard College, and Leah Rosenberg, Dr. Faust's stepdaughter, a scholar of Caribbean literature.

THE ECONOMIC CLUB

O F W A S H I N G T O N , D . C .



Marc Tessier-Lavigne, Ph.D.
President, Stanford University

Pioneering neuroscientist, biotechnology executive and academic leader, Dr. Marc Tessier-Lavigne was named Stanford University's eleventh president in February 2016 and assumed the role on September 1, 2016.

From 2011 – 2016, he served as President of The Rockefeller University, a leading biomedical research university in New York City.

Dr. Tessier-Lavigne was born in Trenton, Ontario, Canada. He received undergraduate degrees in physics from McGill University and in philosophy and physiology from Oxford University, where he was a Rhodes Scholar. He earned a Ph.D. in physiology from University College London (UCL) and performed postdoctoral work at UCL and at Columbia University. He then held faculty positions at the University of California, San Francisco (UCSF) and subsequently at Stanford University, where he was the Susan B. Ford Professor in the School of Humanities and Sciences. While at UCSF and Stanford he was also an investigator with the Howard Hughes Medical Institute.

Dr. Tessier-Lavigne and his colleagues pioneered the identification of molecules that direct the formation of connections among nerve cells to establish circuits in the developing brain and spinal cord. Defects in these mechanisms lead to neurological disorders. These mechanisms also provide targets to assist regeneration of nerve connections after trauma. His contributions have been recognized by numerous prizes and honors, including his election as a Member of the National Academy of Sciences and the National Academy of Medicine (USA), and a Fellow of the Royal Society (UK), the Royal Society of Canada, the Academy of Medical Sciences (UK), the American Association for the Advancement of Science, and the American Academy of Arts and Sciences.

In 2003, Dr. Tessier-Lavigne was recruited to Genentech, a leading biotechnology company, where he became Executive Vice President for Research and Chief Scientific Officer, directing 1,400 scientists in disease research and drug discovery for cancer, immune disorders, infectious diseases, and neurodegenerative diseases, while maintaining an active research laboratory. In 2011, Dr. Tessier-Lavigne became President of The Rockefeller University, where he was also active in graduate training and in research on brain development and degeneration.

As President of The Rockefeller University, Dr. Tessier-Lavigne worked with faculty, students, staff and trustees to develop and execute a nine-year strategic plan focused on junior and mid-career faculty recruitment; enhancement of graduate and postdoctoral education; establishment of interdisciplinary research programs and acquisition of advanced research

instruments; expansion of the university's translational medical infrastructure; and a \$500 million / 2 acre campus expansion project in the heart of Manhattan that broke ground in 2015. He also focused on operational excellence in administration and communications, and on budgetary and fiscal stability. The success of his initial fundraising efforts, including raising more in his first four years than was raised in the university's previous eight-year campaign, led to expansion of the strategic plan's scope and fundraising target.

Dr. Tessier-Lavigne has also been an active and visible leader in growing the New York bioscience community, partnering with other local academic institutions (for instance, to help establish the New York Genome Center, which serves twelve institutions), and working with city government and the private sector to stimulate development of the city's still nascent biopharmaceutical sector. At a national and international level, Dr. Tessier-Lavigne has been an active spokesperson for societal support of science, through editorials, advocacy and congressional testimony.

Dr. Tessier-Lavigne serves on several scientific advisory, non-profit, and corporate boards, including the Board of the Federal Reserve Bank of New York. He has also cofounded two start-up companies targeting neurological disease (Renovis) and neurodegenerative disease (Denali).