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Panelists:

ISABEL SAWHILL, Co-Director, Center for Children and Families
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P R O C E E D I N G S

MR. WHITEHURST: Good afternoon. I'm pleased to welcome you to Brookings and to another public event sponsored by the Brown Center on Education Policy. We have an opportunity today to talk about what I think will be one of the most influential books on higher-education policy of at least the last decade.

I will tell you some things that you know already. What we've seen in the U.S. over the last 15 or 20 years is an increasing divide among those who have a good education and those who do not. That divide is reflected in employment, income and all the other dimensions on which we measure success in this economy. We had the President of the United States in February in a joint address to Congress establish a new national goal of regaining the world's lead in college attainment by 2020, and I like I suppose many policy wonks went straight to the "OECD Education at a Glance" publication and looked at what the rates were and tried to figure out is it doable and how much progress would we need to show in order to meet the President's goal. It's a nice goal in that it's got no annual achievable objectives, so if we're talking about 4-year graduation rates, we've got to increase our attainment rates about 1 percent a year between now and 2020 just to get even with the leading nation now, and if we're including associate degrees, it's got to be about 1-1/2 percent a year. It's an audacious goal. The question is, is it obtainable?

One of the things we're going to learn today is that a lot of the action is going to have to be in college completion. We've seen healthy increases and trend lines in terms of the rates of college enrollment over the last 20 years. They were at a little less than percent now, but college completion rates have stagnated at under 60 percent. So we've got lots of students who have been convinced that it's good to go to college and who enter the college door but don't manage to make it to the finish line. Figuring out who those students are, what institutions can do to encourage them to finish, institutions and government, and how to test those policy prescriptions will be very important.

Our authors today are distinguished. You know who they are, and their bios are in the announcement. Bill Bowen is President Emeritus of Princeton and former President of the Mellon Foundation, and not only a leading educator, but a leading researcher on higher education. Matt Chingos is a researcher whose graduate work was done at Harvard and who has been working at Mellon I expect on all of the data crunching that was necessary for this impressive book. And Mike McPherson is a former university president and current President of the Spencer Foundation. We're very pleased to have two distinguished consultants. Actually, everybody except Matt and me you're going to hear from today is an economist, so I'm here to represent all the rest of the world who does not happen to have a doctorate or Ph.D. in economics. Belle Sawhill is my colleague here at Brookings, the Co-Director of the Center for Children

and Families, and she and our colleague Ron Haskins have recently published a book that touches on themes that overlap with those that we're going to be talking about today, *Crossing the Finish Lines: Creating an Opportunity Society*, and it's available outside if you'd like to take a look at it. Molly Corbett Broad is the President of the American Council on Education. She is a very experienced administrator in higher education, having served at both private universities, Syracuse, and in public systems, California State University, Arizona, and most recently as President of the University of North Carolina System.

The sequence of events will be that the authors in turn will present data from their book with discussants in turn, we'll spend about 5 minutes each, talking about the presentations. We'll all come to the stage and talk to ourselves about what we've just heard, and then we'll open up the floor to questions and comments from the audience.

Let me ask Bill Bowen to join us and talk to us about the book. Bill?

MR. BOWEN: Thank you, Russ. I am technically challenged always, and so whether I can manage this wonderful device or not remains to be seen, but I will try. And I will also try and be crisp because what I think we're all most interested in is a conversation and responding to what is on your minds rather than simply holding forth.

The basic data that are gathered together in this data-rich, data-intensive study come from 21 flagship universities, and then also all

of the public universities in four state systems. The four state systems and their participating universities are here. All of this information is of course in the book.

I should say at the outset that this project would have been impossible had it not been for the really strong and enthusiastic support of the leaders of these universities who let me say are able, hard-working people, and I do not see this conversation as a blame game in any way. What I see it as is an effort to work together to find ways to improve what is already a good record of educational achievement in the United States.

What is the problem? As Russ has already suggested and as President Obama has told us, the steady growth in educational attainment over so many hundreds of years essentially came to a halt or largely in around 1970 when we had this plateau since then which is a very worrying thing in terms of competitiveness, among other concerns. The related problem is, again as Russ said, that the disparities and outcomes are truly enormous. Here I show the extremes. In the far left-hand corner you see that of students who come from families with neither parent graduating from college and in the bottom income quartile, 9 percent earn B.A.'s by age 26. The top line up here, those with a parent who graduated from college, top income quartile, 68 percent. Those are simply enormous disparities, and one of the themes of the book is that you can't fix one of these problems without fixing the other. There is no way to get the overall level of educational attainment up where it ought to be

without doing a better job with those groups whose attainment rates today are not very high.

I also want to emphasize as part of this set of issue time to degree which doesn't always get as much attention as it should. Long time to degree is a huge problem in America because it consumes resources, it deprives people of opportunity, and we find in this study that only around 60 percent of those in the flagships who graduate and get B.A.s do so in 4 years; only 60 percent do so in 4 years. One anecdote that's been told repeatedly and I think really says a lot is that a graduate student at one of the leading flagship universities we studied when queried about time to degree said, "Graduating in 4 years would be like leaving the party at 10:30." That kind of mindset is not healthy.

The last point I would make in my little recitation of problems is that attrition, dropouts and withdrawals from the system do not occur only in the first 2 years as is often thought or often assumed. You see these curves which show dropouts semester by semester, these data that we were able to assemble are so rich that we could literally look semester by semester at any subgroup one wants to look at, and what you see is that withdrawals continue in quite steady basis, and in fact, almost half of them occur after the second year. So important as it is to try to get everybody off to a good start, that alone is not going to do the job.

What can be done to improve these situations? Let me first say just a word about the undermatching problem, and then I'm going to

hand the pointer over to Matt who will talk about institutional selectivity. Our data suggest to us that there is in all likelihood, and more work needs to be done to confirm this, a huge undermatched problem in America. Let me say that the individual who pioneered the match concept is Melissa Roderick in Chicago who has done all the Chicago Public School studies and who deserves much more credit than she's gotten for advancing this conversation.

What is the concept of match? It is simply the notion that we ought to look at the qualifications of an individual student compare with the qualifications of the institution which the student attends. What we find is that astonishingly large numbers of students undermatch, that is, they either go to less-selective 4-year institutions than the ones for which they're presumptively qualified, they go to 2-year institutions, or they go no place. I think I have here a slide which shows in North Carolina among let me say only those students who took the SAT, so this is the proverbial tip of the iceberg, data which show the extent of undermatching by income quartile, 59 percent undermatch in the bottom quartile, versus 27 in the top. Look at the power of socioeconomic status. Sixty-four with no college degree on the part of a parent, 31 a graduate degree. What does undermatching matter? Let me quickly add that the Chicago data are astonishingly consistent, the Chicago Public Schools, with what we have shown here, and Melissa Roderick who knows more about all of this in the

fine grain detail than anybody has exactly the same perception of all this that we do.

What does this matter? It matters because contrary to what we might think intuitively, students who go to institutions that are not as challenging relative to what they could have done are much less likely to graduate, look at the left-hand side of this picture, and much less likely to graduate in 4 years. Students who match have much higher graduation rates and much higher 4-year graduation rates. Matt will speak in just a moment about what the factors are that drive a relentless consistency across every kind of subgroup, every kind of set of institutions you can imagine, between institutional selectivity and graduation rates.

I should add one last thing, that the undermatching problem applies not only to choices within the 4-year sector, but within choices between starting at a 4-year institution or starting at a 2-year institution, and this is the last figure I'm going to show you. What we see here is the probability of getting a B.A. degree for equivalent students, that's what the propensity categories measure, similar students, between those who start at a 4-year school, the high line, and those who start at a 2 year. The penalty if you want to get a B.A. of starting out at a 2-year institution is like 30 points, very substantial. Matt, over to you.

MR. CHINGOS: As Bill just told us, the reason that undermatching is so consequential is that there is this really powerful relationship between the selectivity of the university attended and the

student's probability of graduating. So I'm going to show just a few more figures showing data from a wider group of universities than just the North Carolina data that Bill showed us.

This is a table that appeared in the "New York Times" last week, and what it does is it asks, For students with similar high school credentials, SAT or ACT scores and high school GPA, what was their 6-year graduation rate if they went to different categories of colleges? If you look at the top line, these are students who had at least a 3.5 GPA in high school and at least a 1200 on the SAT or ACT. At the most selective schools, 89 percent graduated, and at the least selective schools, 59 percent graduated, and for every group of students categorized in this way, we find exactly the same thing.

A finer-grained way of doing, and obviously these categories are pretty loose, is we can create this selectivity index which looks at the average SAT score and average high school GPA of the university, instead of just having these big more or less selective categories, then look at the 6-year graduation rates, and there is this tremendously strong relationship. They all lie right along that line. But of course this doesn't do what the first chart does of adjusting for the students' entering credentials so that we redo the graduation rates adjusting those differences so that we're comparing observationally equivalent students. Then we do the same thing looking at the flagships and more selective universities from

those four state systems Bill mentioned separately from the less selective ones, but in both cases you really see the same consistent relationship.

One big question is why do we observe these patterns?

This isn't nailed down perfectly and a lot more research needs to be done, and clearly there are many factors, but a couple that we think are important, one is pure facts and expectations. If you go to a place where students are all strong students and they're all likely to graduate, it makes you more likely to graduate. If it's expected at this college the graduation rate is 90 percent, if you don't graduate, you're sort of weird, there is something wrong with you. Whereas if you go somewhere, you're the same person, where only half the kids are graduating, then it's not so strange to not finish in 4 years and maybe even not to finish at all.

Another possible explanation is resources. More selective universities tend to have more resources, and financial aid is an important part of that, and Mike is going to tell us more about that in a little bit.

One final point to acknowledge is there are certainly some selection effects on what we call unobservable characteristics. When we've compared students with the same high school GPA and the same SAT or ACT scores, but even those similar students from what we can observe are probably different in ways that we can't observe. We just think that it's highly unlikely that these strong relationships that we observe for all these students across this wide range of universities would be entirely explained by that selection of unobservables. So we think it

explains part of the relationship, but mostly not all of it, although once again, more research certainly couldn't hurt.

One thing to emphasize next and it's a point that Bill made is these relationships we find for all groups of students. I showed you different groups of students defined in terms of their credentials in high school, but one common hypothesis that's advanced is this mismatch theory, that certain groups of students, either low-income students or minority students, are not going to benefit from going to a more selective university, in fact, they might be harmed by it. So in terms of graduation rates, we find that really not to be the case. Here we're looking at black men separately. I should add, I could make this figure, and we have more figures in the book for all sorts of different groups of students, for low-income students, for high-income students, for well-prepared students, for poorly prepared students, for Hispanic students, for white students, and you see the same relationship for everyone. The more selective university you go to, the higher are your 6-year graduation rates even comparing students with similar credentials. Here we do it by high school GPA, and elsewhere in the book we use regressions to adjust in a more fine-grained manner and find essentially the same findings. So it's important to emphasize that the selectivity relationship holds for everyone and that it's not just for certain groups of students.

In terms of the sorting process by which students decide on what college to go to and colleges decide what students to take, there are

obviously two parts of that. The undermatching part emphasizes the choices that students and their families make in terms of where we go to college, but there's a flip side to it which is the decisions that universities make in terms of who to admit. The common factors that they use in deciding who to admit are standardized test scores, SAT and ACT scores, and high school grades. We have some new evidence from the 21 flagships and four-state about the predictive power of those two measures used in the admissions process on graduation rates. This figure shows for a similar difference in SAT scores or high school GPA, holding the other one constant, how much they predict graduation rates. If we look for example at the Select B bar, Select B's are typical state universities that are the types of institutions attended by many students across the country. If you look at this bar, what this says is look at two kids with the same high school GPA but one of them has a SAT or ACT score that's a standard deviation higher. The kid with the higher score is 1 percentage point more likely to graduate. So instead of being 50 percent likely to graduate, their graduation rate is 51 percent. Now compare two kids with the same test score where one has a higher high school GPA by a standard deviation, and the difference between those kids is huge. It's 12 percentage points. So it drives home the point that particularly at the less-selective places SAT and ACT scores have essentially no predictive power when it comes to predicting 6-year graduation rates, whereas high school GPA is much more predictive.

It's important to emphasize that we're not against testing. We don't think testing in and of itself is a bad thing. But especially at these less-selective places where graduation are so low, in the range of 50 percent or lower, we think that shifting the weight that the admissions committees put on these different measures away from the test scores toward high school GPA could both improve graduation rates which is what this shows, but also improve socioeconomic diversity because high school grades are much less strongly correlated with socioeconomic status than are SAT or ACT scores.

One reason that we think that this is the case, that high school GPA is a much better predictor of graduation rates, is that it doesn't just measure cognitive ability, it's not just whether you know something or you don't know something, high school grades measure did you show up every day in high school and hand in your assignments and do your homework and persevere, are you motivated, so we think that that's why it has this really strong relationship with graduation rates because the same sorts of qualities that leads to having a high high school GPA also are important for success in college.

Then just one final point, and this goes back to this idea that we're not against testing in general, it's that we find that achievement tests, particularly advanced placement test scores, are much better predictors of graduation rates than are the traditional SAT or ACT scores. They're still not as strong as high school GPA, but we think that they could

be an important part of the admissions process going forward because they also send a strong signal to high schools about what's important for students to do, not to take some abstract reasoning test, but to actually master content that would be important in college. Now I'll turn to over to Mike.

MR. MCPHERSON: I'm going to say a little bit about how money in the form of pricing and financial aid figures into this picture.

We've gone actually quite a long time without talking about money, and the first Web comment on the piece that we wrote for the chronicle giving an overview of our book observed that the three of us were idiots because we didn't realize that the only thing that actually matters to explain these things is money. We don't quite believe that, but we do think that financial aid and pricing are important in this context.

It's clear throughout the book that people who grow up in low-income families have quite different educational trajectories than those who grow up in affluence, and it's also clear that those difference emerge well before college because of differential opportunities. By the end of high school, students from lower economic circumstances have on average lower qualifications and credentials for college and those factors have a big impact on their likelihood of attending college and their likelihood of graduating. But we found as have others that even after you control very carefully for these differences in the long-run impacts of family background like controlling for test scores and high school grades and

parental education and so on, there is still an effect of family income on likelihood of graduation from college.

We think this persisting effect of money on graduation and on time to degree comes about for two kinds of reasons. One is there simply are some low- and moderate-income families that can't access enough financial help to pay for the colleges that would give their children the best chance of graduating, or for adults, give themselves the best chance of graduating in a reasonable way, so that a genuine lack of money is a factor. But another important factor is that families miss out on opportunities for financial help that they could have gotten just because the system of paying for college is so complicated and unpredictable. We think this is one of the factors that figures into the undermatch phenomenon, that people may believe a college that has lower standards is actually a cheaper place because it has a lower sticker price or as once aid is taken into account it may well be that a more demanding place would turn out to cost a low-income family less. So more money could matter, simpler delivery of money could matter.

But another factor is where that money is targeted. Who does financial aid turn out to help? For our set of flagship institutions, we took a look at what we called the net price, that is, the price faced by students after allowing for student aid grants. We looked at the prices faced by students for their in-state public university depending on what state they grew up in. It's apparent that that can make a big difference,

that if you go to a state that has a lot of financial aid, you may get a much better opportunity than if you go to one that has less financial aid. What we were able to do is compare the graduation rates for students with different income levels attending their in-state flagship institutions in low-price, net-price states and high-net-price states. It turns out as you can see here, this is in this case 4-year graduation rates by net price for these in-state public institutions. Here we focus on low-income families and on the net prices facing low-income families, and it turns out that if a state institution presents its students with a higher net price, they are less likely to graduate in 4 years than if it presents their students with a lower net price. In other words, we found that what it costs for low-income families to go to these places matters not just to going in the first place, but to succeeding after they're there.

The effect is present for the 6-year graduation rate too, but the biggest effect is on the 4-year graduation rate, which is not surprising when you think about how a disruption in your finances can detail you and slow you down if you're from a family without means.

SPEAKER: (inaudible)

MR. MCPHERSON: Minus \$1,000 means that people get a total amount of grant aid that exceeds the tuition as most people do so that it helps to pay for the living costs.

What about higher-income students? We looked separately at the net prices faced by higher-income students and we looked there to

see if we found a relationship between the net price these more affluent families faced and their graduation likelihood. There was no relationship at all that we could find for the 4-year graduation rate or for the 6-year graduation rate. So the lesson is if you want to deploy financial aid at flagship universities to increase graduation probabilities, aiming at lower-income families has an impact, aiming at higher-income families does not.

We're going to turn to our panelists in just a second, but I'd like to conclude on behalf of the three of us with some brief remarks on the policy environment and prospects for change looking ahead.

There are two central developments that I want to identify that will help shape events for the foreseeable future. One, as Russ mentioned and as Bill mentioned as well, is the nation really does seem to have awakened to the fact that increasing student success in college, crossing that finish line, is a major national priority that's vital to our economy and to our society. The President is on board with that. The Lumina Foundation here, Jim Applegate is present, the Gates Foundation, there is a real movement in this country to make something happen on this front.

But at the same time, this ambition for improvement in public higher-education graduation rates is going to run smack into conditions of fiscal stringency that are not going to go away when the recession goes away. It in all likelihood is going to be very tough to finance public higher education for some years to come. We're not going to address these

problems about improving graduation rates simply by throwing money at them, as important as it is to invest in higher education. So the implication we draw is that universities, including public universities, aren't going to be able to stick to business as usual if they're going to deliver on these demands that are being placed on them. It's going to be a tough job. They're going to have to make tough choices. They're going to have to innovate. They're going to have to look hard at evidence for answers about how to improve. We hope that the work that we have just done and that we hope to continue to do will contribute to that cause. Thank you.

MR. BOWEN: While we're all getting mic'ed up, let me say one important thing that I failed to say. I think you can hear me can't you even without the mikes? The undermatch phenomena is concentrated in the application stage, the application stage. What is so striking about the data we have is that kids particularly from modest circumstances with very good preparation don't apply. If they do apply, they often get in, generally get in, if they get in they generally go, if they generally go they do okay when they're there. The problem is focused at the application stage of the process, and I apologize for not having made that clear earlier.

MR. WHITEHURST: Thank you. It's now time to hear from our discussants. Just to my left is Molly Broad who was president of one of the systems that is profiled in the book. I thought a really reasonable question to Molly would be, what would you have done differently if you had read this book then?

MS. BROAD: That's a great question, knowing what you know now, what might you have done differently.

First let me offer congratulations to the authors of this book. A reporter from one of the major national newspapers called me up and said, "Is this book a big deal or not?" My response was, this is a really big deal, and it is an especially big deal because of the comments that have been made about the awakening of policymakers and business leaders as to how important rising educational attainment is to the restoration of our economy, for sustaining prosperity, for improving productivity and to compete effectively in the context of the global economy. It also is probably going to lead to rising expectations about the performance of institutions in relationship to students.

Those of us in this business have been talking about the label access and success for decades, and my guess is on reflection that this was a kind of 80/20 rule, that if we put 80 percent of our efforts into the access part of it, the success part would largely take care of itself, the persistence and completion, and of course that has not turned out to be true. One of the first things I would do differently would be to shift the balance and to add more in the policy arena and the commitments of the institution on the success part of that.

I arrived at the University of North Carolina system in 1997 and here was the situation. There was no need-based financial aid program in the state, none. There was poor or very inadequate guidance

counseling in the high schools, and it was even worse in the rural parts of North Carolina and in some of the urban centers. Enrollment in the university was low relative to the population, so Chapel Hill is the only public university in America and enjoys a well-earned reputation for excellence, but a very small portion of the college-age population in North Carolina are admitted to Chapel Hill, and in indeed, our college-going rate in North Carolina was well below the national average and had never in the history of the university reached the national average. That was 1997, and the data on which this analysis is based for North Carolina is from 1999 which was the year in which we were successful in implementing a needs-based financial aid program and it got phased in one class at a time, freshmen, sophomore, et cetera.

We launched programs under the federal outreach and early intervention called Gear Up and that was extraordinarily successful, and we launched a Web-based portal that addressed kids in the eighth grade who were trying to figure out what they were going to do when they grew up and would learn what courses they needed to take, and it was to help them with admissions, financial aid, loans, a savings account, a complete soup to nuts, which was smashingly successful all of them. In fact, the portal now has been replicated in 21 states.

I rehearse this because the net of this was that by 2006, the rate of growth of students of color in the University of North Carolina grew at three times the rate of growth of white kids, and the total enrollment had

grown by more than a third, so a huge increase, and we then became among the states with the highest college-going rates. I wish I could see what this analysis would look like if we were to look at the 2008-2009 data.

What would I do differently? I think the honest truth is we are just beginning to get our arms around the kinds of practices and policies that are most likely to improve persistence and retention. One of those things that I think we've learned in the last few years is how important it is to permit and enable kids to make assessments while they are still in high school about how ready they are and where they would be placed if they were going to college, and then the placement tests. All of those efforts have been in institutions that have used them very valuable in enhancing retention and persistence. There is no question that needs-based financial aid is absolutely essential, and as suggested by Mike, a simplification of the student aid application process is absolutely critical. A lot of the undermatch at least in Chicago in the explanation is that the kids and their families just didn't know how to complete this very complicated student aid application form. In fact, interestingly today, Congressman George Miller will put a bill on the floor of the House that includes among its provisions the simplification of the student financial aid form.

What else would I have done? A simple point of contact, mentoring and advising, to identify an adviser, preferably a faculty member at the time of entrance that would stay with the student throughout their entire undergraduate experience, and something called

the first-year experience where colleges and universities provide an intensive introduction to college work, how to study, how to use the library resources, developing skills in writing and study. One of the other practices that has shown to be very successful in improving retention is the kind of one-stop shopping so that you are getting counseling on not only your academic program but on financial aid and on personal counseling on registration advisement, et cetera, all in one place.

Early warning systems, and those are just beginning to evolve unless it's the individual faculty member who is given a number of early assignments, makes assessments very early on that a student before the midterm is in trouble and engages that student in tutoring. One of the interesting strategies that has evolved, Russ, in very recent times and is still not perfected and it's more a data-mining strategy is to take all the evidence you have about a student from the time they applied for admission through each of the courses that they take, do an assessment on the entire university over a long period of time, identify what are the parameters, what are the variables that are most likely to result in students who do not persist and who drop out of college, and use these analytics in ways that will give a faculty member a heads up about students who are in his classes or her classes and what to look out for that would help them to do some intervention. A lot more research has to be done about what are the techniques. We're beginning to appreciate what high-impact practices are in the classroom and in enhancing learning outcomes. We believe

that improved learning outcomes will also increase the likelihood that students will stay in college and will graduate.

MR. WHITEHURST: Thank you. You didn't address the issue of what you would have done differently with regard to undermatch, so we'll come back to that in our discussion period. It's one of the most interesting policy implications of the book and I think it deserves a thorough discussion.

My colleague Belle Sawhill was an associate director of OMB so she certainly understands government policy, and my question to her is how do you think policy ought to change as a result of the findings of the book?

MS. SAWHILL: I think it should change in a lot of ways that have already been mentioned and that are really spelled out in the book or at least the background facts that you need to know and the evidence that you need to know to decide what needs to be done is all there. It's really a very, very impressive book and I really want to congratulate the authors and **If there are images in this attachment, they will not be displayed.** [Download the original attachment](#)

-- commended to all of you who are here and to others.

Russ was kind enough to hold up my new book with Ron Haskins, *Creating an Opportunity Society*, and I have to say that I'm a little intimidated by the fact that I think the book we're here to discuss today,

Crossing the Finish Line, is better than our book. That's a terrible thing for an author to have to say.

But, we do have three chapters on education, or three big sections on education I should say, and I want to point out that we do have very strong and very specific recommendations that track very well with what is in the book we're here to discuss today.

Like today's authors, we emphasize very heavily -- it's really the whole theme of our book -- that the route to upward mobility in our society is through the schoolhouse door. I think we all know that, but I mean we have just reams and reams of data and research that show that.

We also, like the current authors, emphasize the large and, to some extent, growing disparities in educational attainment.

Now the exact reasons for those disparities and for this leveling-off or plateauing that Bill Bowen mentioned at the beginning aren't entirely clear, but I think if we were thinking about what's involved, first of all, inadequate preparation at the elementary/secondary level, going back to the very earliest years. I don't think we can blame this just on high schools.

And, secondly, affordability, as Mike suggested, the affordability of going to college and the complexity of the financial aid system -- like these authors, we have a great deal to say about the Christmas tree that is the current financial aid system, and it is just unbelievable. When I was in OMB, I had to try to learn all the acronyms for all these different grant and

loan and tax credit programs, and I still can't remember them all. But, I'm glad that George Miller is dealing with this as Molly said, and maybe we can get some simplification.

Then I think lack of good counseling or other supportive efforts either in the pre-collegiate careers of students, going back very early -- I mean I think you said eighth grade is not too soon to start -- and continuing in college as you also emphasized, whether it's early warning systems or better one-stop counseling or whatever.

We also talked about all of that. We actually looked to some of the programs, the federally-funded programs that have been out there to either help more disadvantaged students get to college, things like GEAR UP and Project GRAD and those kinds of programs, and also some of the programs that have been tried to increase retention and persistence in graduation in the college themselves. We didn't find a lot of rigorous evidence suggesting that a lot of that money is being well spent. So I don't want to tar with too broad a brush all of those programs, but I do think we need better research, we need better evidence, and we need to think about whether some of that money couldn't be spent a little bit better.

We do come to the conclusion, and I want to ask the current authors whether they would agree with this, that probably inadequate preparation is the biggest factor here. That wasn't the subject of your book, but it is something that we deal with in our book. And, we say: We can't just focus on the post-secondary world. We have to improve education at all

levels before people get to the post-secondary point, going all the way back to more preschool for disadvantaged kids and so forth.

One of our strongest recommendations, as I mentioned, is to simplify the financial aid system. Mike mentioned that we're in a fiscally stringent period now, and we're not going to be able to just add more money, in my view. So I think we need to reallocate existing funds.

One of the most interesting findings in the book is the one that he alluded to. I think in the book you say for the bottom half of the income distribution, financial aid has no effect on graduation rates.

MR. BOWEN: The other way.

MR. MCPHERSON: The top half. The top half.

MS. SAWHILL: I'm sorry. Excuse me. I said it backwards.

I think that's very instructive, and that points the finger towards the need to do some reallocation. That will not be easy politically. There's nothing more popular than various kinds of tuition assistance programs for the middle class. We've all heard that in political campaigns.

Well, I think I'm going on too long here. I do want to get to the issue of the undermatching and talk about that a little bit. Do you want me to start now or shall get some other people in first?

MR. WHITEHURST: Go ahead.

MS. SAWHILL: Okay. I thought this was the most distinctive and interesting and, to me, surprising finding in the book. I would have hypothesized that there was overmatching rather than undermatching. I

think that sort of notion has been out there, that one of the reasons that less advantaged students don't persist and graduate from college is because they're a little over their head, out of their depth or being overly challenged. It's too tough for them. And, this book is saying just the opposite.

Now I think there are, as has already been brought out by both the authors and others, that there are issues in the research here about sorting out what's causation, what's correlation, are there some unobservables that we haven't been able to control well for. Matt mentioned that, and I'm still a little skeptical. So I'd like to see more research to confirm what is really a very new finding, at least to me.

I think the other thing that bothers me has to do with goals here. I can imagine that within the higher education world everything that this book recommends is right. In other words, let's put a little more emphasis on GPAs, a little less emphasis on the SAT or other standardized tests of general ability.

But, I can imagine going way too far in that direction and it having some social consequences that nobody should want. It could be that you send a signal back down to the secondary level that GPA is what matters. The grading system is inflated. The meaning of grades is diluted. And, you end up getting people a shorter time to their degree, but the degree means less.

You really want to focus, I think, as a society on time not to degree but time to competency, time to having learned something valuable in the wider world. I was, in that context, glad to see the discussion of the importance of content-based tests like the advanced placement tests.

MR. BOWEN: Right. That's the thing to do.

MS. SAWHILL: But, I am interested that GPA is a better predictor than even AP tests, if I understand your research correctly.

MR. BOWEN: Right.

MS. SAWHILL: If that finding holds and if all of your colleagues, Molly, start using GPAs a lot more, we could have down the road, over time, some feedback effects here that might not be beneficial.

I thought the movie, which I happened to see this weekend on PBS, Stand and Deliver -- I'm sure many of you have seen it -- about Jaime Escalante and the work that he did in an inner city school in Los Angeles with Hispanic kids and getting so many of them to pass the AP test in calculus, is a wonderful example of what I'm talking about here.

I'm also told there's a program in Texas where they actually pay both the teachers and the kids to do well on AP tests, and this was disadvantaged minority kids, and they had some very excellent results from doing that.

So I think where I'm coming out here is let's not get too excited about GPAs and forget about content-based learning.

MR. WHITEHURST: Thank you.

Let's linger a little bit longer on the phenomenon of undermatch. I wonder if the authors would suggest what they think the interventions are to address to undermatch. Is it counseling? Is it better information? What is it?

I was an undermatch in the University of North Carolina system, and I'm not sure what intervention would have convinced me to go to Chapel Hill when my girlfriend was still in high school 20 miles away from where I was going to college. So there are complications here.

MR. MCPHERSON: That's the next book.

MR. BOWEN: Well, fortunately, there are always outliers. I'm sure, Russ, you were an outlier then. You're an outlier today.

Let me say a couple of things quickly on the undermatch phenomenon, which I do think surprised us every bit as much as you, in which the more we've studied it and the more we've gone back over the Chicago work of Roderick and her colleague, which I would urge any you interested in this subject to do -- read very carefully, line for line, what those folks have found and done -- the more we're convinced this is a real thing.

First of all, Roderick and her troops in Chicago insist that it is an urban myth to believe that in these urban schools, like those in Chicago, kids that don't really know anything or do anything get As anyway. She points out very convincingly the grading standards in Chicago and the

number of kids who are given poor grades because that's what they deserved.

Now that's not to say that down the road you couldn't have the kind of feedback effects you suggest. You obviously could. And, that's why our recommendation is for a judicious combination of emphasis on grades which do measure, as Matt said, things that matter -- coping skills, time management skills, hey, let's get it done -- with achievement tests of one kind or another as a way of calibrating what the school system is doing. I just have to say we were stunned by the power of the grades.

Now, as to what interventions make sense, this is where we're heading next because we agree with Russ and with many others, that what would be most valuable, if it could somehow be brought off, would be a very careful and sophisticated study of interventions that on a randomized basis would give us real evidence as to what changes behavior -- what changes behavior.

What our intuition is that simplifying the financial aid process and getting waivers from colleges and universities so that the prospect of just paying the fees to apply isn't a barrier. It shouldn't be a barrier, and we ought to be able to do that.

Then careful coaching targeted, and this may be controversial -- I'm sure it will be -- targeted at those high school students who have demonstrated that they have done the preparation that's necessary to qualify for a good school because that's where the undermatching is

occurring among kids who have really gone the last mile, and that's what is so frustrating to the people in Chicago, that so many of these students have done very well only on the last mile not to proceed.

And so, our inclination is to focus careful coaching beyond the kind of general guidance counseling that we're used to on that target population, and to help them not only deal with the financial aid but to help them understand the kinds of schools for which they're really eligible and that would love to have them, and then how to complete, how to navigate the application process which, as I say, is where they're lost. They're lost at the application process, and that's going to take more than just a kind of conventional advising.

So that's what we would like to try to do. It would be expensive and challenging from a research standpoint, but that's where we're headed.

Could I say one last thing to answer your question, Belle, about the elementary school preparation versus what happens in college?

I'm a great believer in the metaphor of the two hands. You have two hands, and so you can work both at the elementary and secondary levels, where you certainly should and where it's very important that we work.

But you have another hand, and, with the other hand, you can work hard at the higher education level because -- and then I'm done -- another finding of the book, powerful finding of the book, is that so many well-prepared kids, who were not short-changed at the elementary and

secondary school levels, fall off the bus at college, either don't go to a demanding place or, if they do go, don't graduate or it takes forever.

To assume, and Molly put it very well, to assume that just getting these folks in is all you have to do is just wrong, and I think that's certainly one, for me, of the wakeup calls of the research that we did.

MS. SAWHILL: Can I ask a follow-up here, Russ?

On the application form, I think that that is a huge bottleneck, and everybody seems to agree about that now. Arne Duncan was here for lunch one day and talked about how they were changing it. There have been individuals and groups who have suggested going all the way to just using adjusted gross income and family size, just a few variables to determine. What do you all think of that?

MR. MCPHERSON: I am, in fact, one of those individuals. I was the co-chair, along with Sandy Baum who is also here, of a study group on rethinking student aid.

Sue Dynarski, who has been a major force behind the simplification idea, really persuaded group, and it was not an easily persuadable group, that going very far in that direction toward AGI and family size as the key indicators and toward a very simple formula which would make it easy for somebody to understand what their Pell Grant would be. That's also very important so that people can plan around that.

MS. SAWHILL: Right, right.

MR. MCPHERSON: Inevitably, you sacrifice some precision in order to get simplification. Everybody worries about the person who manages to jiggle their tax form so that they get a Pell Grant they didn't deserve, but, believe me, that happens now. That will happen in any universe where we don't have a financial aid officer living in every home.

So you need to deal with these tradeoffs, but we have the needle so far over in the wrong direction. I think pushing, and I think it's actually beginning to happen. There is real commitment in the administration, and there is openness on the Hill to pushing a lot harder in this direction, and folks have tried to do this for a long time.

MS. BROAD: I'd like to offer a couple of quick thoughts about both undermatch and the underpreparation.

The undermatch is a stunning surprise because it is so contrary to the conventional wisdom that American higher education is accessible to you regardless of family circumstance, and in earlier generations a lot of us were the great beneficiaries of an opportunity to gain a university education even when our families didn't have a prayer of paying the cost.

So it makes it, I think, all the more important that we figure out what it means and how to solve it. The first step, I think, is simplification of the student financial aid form. For families where this is a first-generation college attending child, where there is no experience, where there is reluctance to take on loans, it just makes it that much more difficult.

On the underpreparation issue, there is bubbling up very rapidly now, probably thanks to the Race to the Top money, that Arne Duncan now has \$4 billion in his possession that he needs to spend by the end of September next year.

For those of you that followed the American Diploma Project and Achieve there was very slow progress in raising high school graduation standards, state by state. All of a sudden, because that's a prerequisite to be eligible for Race to the Top money, we now have 48 governors who have all signed onto a common core of academic work in math and in language arts. Their new draft or their final draft or next to the final draft will come out tomorrow.

The American Council on Education has been asked by the chief state school officers and the governors if we would put together panels of university faculty in math and in English and evaluate those standards and offer recommendations for improvements.

Now, having standards and implementing and achieving those levels are two different things. They are easy to talk about. They are very difficult to do. But it is a very promising avenue if we have the courage and the capacity to really move ahead to implement much higher standards for high school graduation.

MR. WHITEHURST: Thank you.

I'd like to open the floor to questions and comments from the audience. If you would raise your hand, I'll call on you, and a microphone

will appear. You will tell us who you are and then ask your question.

Please try to be as brief as possible.

QUESTIONER: Hi. Richard Collinburg with the Century Foundation.

Bill Bowen, given your finding that there is this sudden, you said, a 30-point penalty to attending community college, what does that say about the big emphasis now under the Obama Administration investing more in community colleges or is this a place where two hands can be working at once?

MR. BOWEN: Yes, or more. Or more.

We are in no way, shape or form opposed to putting more resources into community colleges. I think that's a very good thing to do, and it's probably later in the game than it should be. But we also think it's important not to be unrealistic in what you think that will do.

And, it would be unfair to the community colleges to all of a sudden say: Here, we've given you some resources. Now let's get the four-year B.A. rate up.

What the data you cite show is that if you know as a student that you want a B.A., a four-year B.A., and if you have the qualifications to be admitted, and can afford it, to a four-year program right away, you're well advised to do that because your probability, just given frictions and transitions and everything else, of crossing the finish line is higher than if you start at a two-year program.

Now I should have said one other thing. Again, I'm guilty of not telling you as much as I should have. We also find that among those graduates of two-year programs who did transfer into the four-year flagships in our study, they did very well. They did very well. So that's fine, and there's a real case for trying to create more spaces for those people in the four-year programs if that can be done.

I think the reason for their success is very similar to the reason why high school grades are so important. What success at the community college level does is provide another indicator of who can manage time, who has coping skills, who is going to get it done. If they got it done at the community college level, just as those who got it done at the high school level, they're very much more likely to get it done in a four-year program.

QUESTIONER: Peggy Orchowski, I'm a Congressional correspondent with the Hispanic Outlook on Higher Education.

I wanted to also ask about community colleges but also articulation of courses. I know a lot of boys are dropping out. My son was one of them, 12 years to get a B.A., because he dropped out. He was in engineering. He switched from civil engineering to electrical, and that cost him a year, almost two years more of courses.

MR. BOWEN: A big problem.

QUESTIONER: I mean there is some disingenuousness also among the colleges, that you switch majors within the same field and it's going to cost you another year.

Have you look at that, the dropout rate of kids who come back, who maybe end up going to a night school or something because they just can't pay for 12 years of college because they've changed their major slightly?

MR. CHINGOS: It's a good question, and I think that is something, the specific question of an extended time degree because people are switching majors. I mean that could very well be the case, something we haven't looked at. But given the fine-grain nature of it, it's something we could look at. So I think it's fertile ground for future research.

We do find one question that's been raised about extended time degrees is that people just taking a semester off here and there, which could be fine. Right? If you're not enrolled, it's not costing the system anything.

But we actually find in most cases it's people are enrolled for the additional time, something like two-thirds of the additional time that it takes them to earn the degree is actually spent enrolled. So it's not people just taking a semester off here and there.

MR. MCPHERSON: Could I add two points related to that?

One is it seems very likely that in addition to perhaps streamlining curricula, better advising for students in college. We put a lot of emphasis on better counseling in high schools as well, but making sure that students are making the choices that will help them progress toward degrees. Often, these choices can be kind of a maze.

The other thing I think related to the community college matter is that the quality of articulation agreements and the ease with which you can make the move from a community college into a four-year institution is also a variable that needs to be looked at. Some students are going to take that route, and, if they take that route, we should make it as smooth a transition as we can.

MR. BOWEN: Could I just add one quick comment? I think also there is a good deal of evidence that not all colleges and universities put as much emphasis as they should on a speedy and smooth movement through the system. And, in fact, there is even some evidence that contrary incentives are created.

Well, I think, Molly, that's one of the things that's going to change because I think the pressure now to use resources more effectively and more consistently is going to be there.

MS. BROAD: That would be a good thing.

MR. BOWEN: Yes.

MS. BROAD: In some states, we thought we had articulation issues addressed 15 years ago, and they have just continued to unravel.

MR. WHITEHURST: I have clearly lost control of the panel, not the audience thankfully.

QUESTIONER: That's a good thing.

Jim Albert with the Limida Foundation.

I had the privilege of reading a pre-publication copy of your book. So I'm recalling some of this from memory, but I think one of the things that this book does is it helps us to shed the Teflon coating of higher education around student success and failure.

I was a professor for 20 years. Everybody up here has a lot of higher education experience. The tendency has been to say, well, if students fail, it's the students' fault. They weren't prepared enough. They didn't work hard enough. They didn't have the study skills, et cetera.

I think when you look at just three data points in your book, one where you start controlling for preparation and then you look at all the impacts on students, controlling for preparation, you begin to see dramatic differences.

The other, your point that almost half the students drop out in the junior and senior year --well, what is that all about? They made it two years into our system. This is why we have tens of millions of adults with some college and no degree, which I thought was interesting in your book. When you looked at the impact of that parental experience on the next generation, there was none. If you didn't get the degree and credential, you didn't get the positive effect.

MR. BOWEN: Useful and important point.

QUESTIONER: Yes. Finally, we bring students underprepared and we spend, some estimates I've seen have said eight to ten billion dollars on developmental education to help students catch up so that we can

make them eight times less likely to get a degree. So that doesn't seem to be working.

Also, I want to flip the undermatching point and go the other direction. How in the world can the less selective, tier two or tier three down, where most of our students go -- they don't go to the flagships. How can they get students that are overqualified for their institution by certain numbers and still not get them to degree?

I mean it seems to me that's an indictment of the culture, of the support services, of the focus, and I think some of that goes back to what was just said. The incentives for student completion are not great in most states for public institutions. Your public dollars are driven by how many students are sitting in a seat on a census date, and whether they're there the next census date, that particular student, doesn't matter to your funding. All that matters is that you've got a student to replace the one that you lost.

One more last comment on the need-based aid piece, the impact of targeting, the impact is on low income students. Yet, we see several years ago in Ed Trust Engines of Equality Study, and there will be new data coming out that suggest nothing has changed, that in fact in higher ed we're seeing a drift among institutions just in the opposite direction. More of the institutional aid is going to wealthier students. Not only do we have issues at the federal aid level. We've got issues at the institutional aid level.

So these all point -- I didn't mean this to sound like quite such a slam on higher ed as it came out sounding, but I do think we need to begin to take responsibility for the students we admit. There's a number of things that this book suggests that need to be done for us to take that responsibility and do the right thing.

MR. WHITEHURST: On the aisle here.

QUESTIONER: My name is Marisa Hugos.

I wanted to know if you have done the same analysis by gender to see whether the effects of the variables are the same for male and females?

At the University of Puerto Rico, more, many, the higher percentage of women, they graduate at a shorter period of time. That happens not only in undergraduate, but it also happens in med school and law school. It's in higher education for women. They enter the labor force in higher numbers and earn less for the same degree, as a footnote.

MR. WHITEHURST: Do you want to say something about that, Matt?

MR. CHINGOS: Sure. We looked pretty extensively because we had this big database of all these universities, that we can compare. We also looked at the intersection of race, ethnicity and gender. So we find across all racial and ethnic groups, there are big gaps in success in college, in graduation rates and in lots of other outcomes like grades.

MR. BOWEN: Women doing better.

QUESTIONER: (Inaudible.)

MR. CHINGOS: Yes, looking at the same racial/ethnic group and then looking between men and women, and women do a lot better. This is particularly pronounced in the African American population and the Hispanic population.

The minority males, men, do particularly poorly even looking at people, once again controlling for how they did in high school, looking at people with the same GPAs and SAT scores.

QUESTIONER: So the same variables are important, but the effect sizes are higher for men than for women?

MR. CHINGOS: Well, what we're saying is there are differences between men and women in terms of their outcomes.

In terms of what variables are important, I mean in some places we do. For example, in the material on the predictive power of test scores and grades, we find for all these groups defined in terms of race, ethnicity and gender, the same finding that I put up on the slide before of high school grades being a more powerful predictor.

I'm not sure we do every single thing broken down that way, but we do find that women are much more successful in college than men.

MR. BOWEN: One quick qualification: That is right. The women, however, particularly Hispanic women undermatch more than the men. That is an important thing to think about, and it's a subject of great interest

to the folks in Chicago. One of the big questions is to what extent this is a cultural phenomenon, that we all need to ponder.

That's a small footnote. He made the important point.

MR. WHITEHURST: I'm going to call on the gentlemen in the back row just to have some geographical diversity in the room.

QUESTIONER: Thanks. I'm Kevin Kerry from Education Sector.

President Broad mentioned the Race to the Top funds, that Congress had carved off some of the stimulus money for K-12 to create that.

There is no Race to the Top fund for higher education. If there were one, and President Duncan could pick, say --

MR. WHITEHURST: President Duncan?

QUESTIONER: I'm sorry. If Secretary Duncan could pick, say, three issues where he could use that money to leverage recalcitrant states into making changes that, for political reasons, they've been unable to make, what changes would you want those to be?

MR. MCPHERSON: Well, in fact, I think there is, although it's not called Race to the Top. In the President's budget, there is envisioned an access and completion fund which would provide funds to states on a competitive basis, according to their plans, to test good ideas for improving persistence to graduation.

Now this is all caught up in the maelstrom of Washington right now, and we don't know really what we'll wind up with, but that is a very good

idea. Testing these ideas in a systematic way and requiring states to have a credible evaluation plan up-front is a good idea.

One simple idea that I think we're attracted to is this straightforward thing of giving colleges and universities material incentives for performing better on helping lower income students graduate. You could create a thing that would be driven by students who qualify for Pell Grants, and you could give them -- this particular proposal is not in our book. But you could then give institutions a bonus on the Pell Grant for students moving forward toward their degrees or, in the case of two-year colleges, moving forward toward Associate's degrees.

There are other good ideas out there, and they all need testing, but we're excited about the prospect of having that kind of programmatic, systemic evidence-based efforts at innovation.

MS. BROAD: We don't have enough research, Kevin, about what works best. We have some research, and the notion of a challenge grant is an amazing incentive in institutions of higher education.

MR. BOWEN: Right.

MS. BROAD: When they sit down to plan to submit a proposal, even if they don't get the grant, they have undertaken some efforts to plan that will bear fruit. So it's a great idea.

MS. SAWHILL: If I could just add, we have a very specific proposal in our book that calls for there to be a federal pot of money to incentivize

states to give more attention to the less advantaged in state institutions, public institutions.

MR. WHITEHURST: The gentleman in the yellow shirt here in the fourth row.

QUESTIONER: John Depreux from the Economic Policy Institute at Georgetown University.

I have a quick comment about undermatching and then a quick question.

So the comment comes from the fact that in Texas they had a program called the Texas Top 10, and everybody who sort of like ranked in the top 10 of their class could go to a university of their choice, and they were granted automatic admission to even the flagship universities.

But there was an interesting paper by Lisa Dixon, I think, and she showed that there were significant gaps, there were significant differences in the colleges that the whites and the blacks chose. The whites overwhelmingly chose Texas-Austin and Texas A&M, but many of the blacks, they chose some of the strictly black colleges and universities, even though they were eligible for the Texas A&M and Texas-Houston. Because this was a very well-publicized program, it was more or less obvious that everybody knew that they were eligible for Texas A&M and Texas-Austin. So that's the comment.

The question is did you compare like in-state students and out-of-state students in the same universities?

I was wondering because the students face difference in prices. The tuition price is significantly higher for the out-of-state students. What's the effect on their graduation rates?

MR. CHINGOS: The differences between in-state and out-of-state?

QUESTIONER: Yes, at the same university, like say Eastern Michigan. Like, what happens to in-state students who get significant discounts on their tuition compared to students who are coming from outside?

I'm not sure how many students come from out of state to these selective colleges, but I was just wondering.

MR. CHINGOS: Yes, a lot of these places, the out-of-state population is on the smaller side. In some places, it's statutorily restricted as it is in North Carolina. Obviously, at the more selective places that don't have those restrictions, you get a few more out-of-state students.

I don't think we ever report this in the book. We know whether the student is in-state or not, and we often use it as a control variable when we're comparing students from different groups. But, if I recall correctly, I think the differences are pretty small in terms of their graduation rates. The in-state students might actually have a small, small advantage, something on the order of five points, but I don't remember exactly what we found.

I think one other thing that you brought out in your questions is the question about historically black colleges and universities, and that is

something that we do have some data on. So one thing we were able to look at is to compare the observational equivalent of black students who went to a historically black college or to predominantly white college of a similar selectivity. Most historical black colleges, at least the public ones in our data, are not particularly select.

We find that there aren't big differences in their graduation rates. On average, there doesn't seem to be a benefit one way or the other.

But it's also worth noting that partly because the historically black colleges are not particularly selective they provide opportunities to start out at a four-year college to students, predominantly to, obviously, African American students, that might not be available to them if those colleges didn't exist. So, to the extent that starting at a four-year is better than starting at a two-year, they're playing an important role.

MR. WHITEHURST: Front row, here.

QUESTIONER: Thank you. My name is Greg Sheckman, and I'm a member of the Education Commission of the States. I'm also a community college board member and a university administrator.

The one thing I'm still trying to wrap my head around is this idea that we're going to increase graduation rates in college at the same time, as President Broad talked about we have the American Diploma Project, we're trying to up the standards so that we require less remediation once students enter college.

We have a high school dropout problem now. Ostensibly, if you raise the standards by which you have to achieve a high school diploma, one might think that the high school dropout rates are going to increase, not decrease. So, perhaps your remediation rates might go down, but the number of students entering the pipeline may also go down as well.

So my question is how do we increase the standards for high school graduates so that they align with what is college-ready by today's definition and still reach this goal that President Obama has set out for 2020?

MS. BROAD: So one analogue to, I think, the intuitive response that you have is the expectation that when colleges raise the courses that are required for admission -- more math, more lab science -- the response is that is going to have a negative impact on poor kids and kids of color. In fact, the evidence is exactly the opposite, that the likelihood of going to college is enhanced, the likelihood of retention is enhanced.

I don't think we know about the high school dropout rate or what are all of the causes of the high school dropout rate. But, if the increase in standards for high school graduation is accompanied by serious work with the teachers to make sure that the teachers are prepared to teach to those higher standards, we might be able to reduce the high school dropout rate, which has remained stubbornly resistant to improvement for decades, as you know.

MR. MCPHERSON: Could I add that there may be some suggestive evidence in this undermatch phenomenon that we see? The intuition that if you want to be sure you're going to graduate you should go to a place that's easy appears to be incorrect. If you want to have a better shot at graduating, go to a place where you'll be challenged.

So I don't want to oversell this, and it's obviously a real possibility that if you raise standards for high school graduation and you don't support people to be able to meet those standards, you're going to raise the dropout rate.

I have a hunch that people drop out partly because they're bored, and the stuff is not interesting, and they don't think it's taking them anywhere. I'm not entirely convinced that asking more of people may not sometimes be the best thing to do to inspire them.

I don't want to be Pollyannish about this. It's a very tough standard, you know. As George Herbert Walker Bush said after he lost the New Hampshire primary, nobody said this would be easy, and nobody was right.

MS. SAWMILL: I still feel on this same topic, if I may jump in here, that I'm feeling uncomfortable about what happens to the value of a degree. I mean clearly the value of a college degree from a very selective institution is higher than the value of the degree from a much less selective institution, and we've seen the value of a high school degree decline.

I can imagine that all we're doing is kind of kicking the can up the ladder. In other words, that people who used to think that they needed a college degree in order to be successful in the economy, for example, are now saying: Well, that doesn't work anymore. I've got to have a graduate degree.

So I'm a little bothered by so much emphasis on degrees as opposed to competencies.

MR. MCPHERSON: Let me offer two thoughts, I think legitimate worries that you express. One is there's a real policy concern that if you tell presidents of institutions, deliver more degrees, they may deliver them in ways we won't be happy about.

MS. SAWMILL: Exactly.

MR. MCPHERSON: And, we have to worry about measuring the quality of those degrees. That's absolutely right.

At the same time, I think that Larry Katz's and Claudia Goldin's evidence that every time we have extended the educational ladder it has had genuine economic payoffs for over 100 years, it's not clear that extending the ladder is necessarily a bad thing, provided they're really learning.

MS. SAWMILL: But the cost-to-value proposition may have shifted as we've extended those.

MR. MCPHERSON: I don't know. Larry and Claudia claim that the demand curve for this stuff keeps shifting out just as fast as the supply grows.

MS. SAWMILL: Yes, your response is a good one.

QUESTIONER: This is Tom Hilliard from CLASP.

I have kind of a broad question here. I see two large policy imperatives coming out of this. One is to reduce undermatching among these students so that they really go to the colleges that will give them the best outcomes, and, second, it would be great to improve the graduation rate at less selective colleges.

Now it so happens that you collected a remarkable data set, thanks to the generosity of the colleges that you worked with. If that data were available for every college or let's just say every public university in the country, we would be able to then identify the individual colleges that were doing the best job at improving their graduation rates and other indicators that we wanted. Well, right now, presumably, we don't have that.

What do you think would make the biggest difference? What is the information that we're not now collecting or tracking nationally at an institutional level that would be the most valuable?

Then, Ms. Broad, what would ACE support? Would they support collecting and tracking it?

MR. BOWEN: Let me offer a response to the question of what we're not collecting that may surprise some of you. I think the biggest void

in the whole machinery of data collection related to college outcomes is jobs and work.

MR. MCPHERSON: You're talking while in school.

MR. BOWEN: While in school.

We were told over and over again as we talked to thoughtful, competent leaders of these institutions that a big, big problem and a big contributor to long time to degree and to lower completion rates is reluctance by so many students to defer gratification. I want stuff now. I want a flat screen TV now. And so, if the student aid budget that I have isn't going to allow me to do that, I'm going to go across town and find an off-campus job that I can earn, that will pay me well, and I'll get the stuff, even though that slows me down or stops me from graduating eventually at all.

Great concern on the part of the people with whom we spoke about that problem but no data, no evidence. I mean we know next to nothing about what people do, and their own deans don't know what they do off campus and how that affects the outcomes for them. That would be a serious research project. I mentioned this to Russ before, I think it's a real void.

MS. BROAD: Graduation rates, if I might just quickly respond, seem like a simple thing, and they are not. There are many different definitions to what the graduation rate is. NCAA does one thing and so forth.

We actually are, at ACE, doing some work on graduation rates and rely very heavily on the clearinghouse which has in excess of 90 percent of all institutions provide the information about their students in a way that makes it possible to track a student from one institution or one state to another.

MR. WHITEHURST: One final question, my colleague in the sixth row, second seat in.

QUESTIONER: I'm Ben Wildavsky with the Kauffman Foundation and Brookings.

Just a quick question, I know we're wrapping up. I'd like to return to the overmatch question, and I wonder whether graduation rate may be something of a blunt instrument to measure what I've always understood is the mismatch hypothesis that people like Tom Sole and others have talked about. I've understood it to mean not whether or not you make it through but whether or not you thrive academically at an institution.

So, for example, the example might be the kid who perhaps would be well qualified for San Francisco State, ends up struggling at UC-Berkeley. That may not mean the kid doesn't graduate. It may mean the kid really wanted to be pre-med but ends up, forgive me, in American studies, say.

So I'd like your response to that and to see whether it's possible that you simply weren't measuring the right thing to really refute what you, I think, end up saying that you refuted.

MR. BOWEN: May I answer that? What you really need to deal with that question definitively is survey data that tracks what happens to people after college. One of the great advantages of the database that Derek Bok and I built when we did *The Shape of the River* was that it included survey data that were elaborate and that were based on very high response rates.

If you go back and look at the findings in *The Shape of the River*, you will find that the minority students admitted under affirmative action programs not only graduated at very good rates if they went to very strong places but thrived afterwards. And, they thrived not just personally and in a material way, though they did, but their civic contributions were remarkable and far out-showed the civic contributions of their classmates and out-showed the civic contributions of comparable student who went to less demanding institutions.

That's the only set of serious data that I know about that really deal directly with this question, but they do deal directly with it, and they give a very emphatic answer.

I would just say one last thing. A number of the people who propound the mismatch hypothesis are talking about people dropping out. If you read what the actual language, not of Sole but of a lot of people, you will see these kids are going to be intimidated, overwhelmed, depressed. They're going to go nowhere.

Well, that's just not true. I think the graduation rates, albeit a partial indicator, do tell us that that kind of wastage is not occurring, that, on the contrary, rather than aiming too high, many of these students are not aiming high enough.

MR. WHITEHURST: Thank you to the authors of this wonderful book.

I've said I think it's the most important on higher education policy in the last decade. I recommend it to you, if you haven't read it already. It's available for sale out front.

I thank our discussants for a wonderful contribution.

For me, this has been an object lesson in how the availability of data and its careful analysis can inform a public policy debate. We need more of that data. We need more careful analysis of it. And, we need policymakers who look to that kind of analysis to support their policymaking.

Thank you for coming today.

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CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

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