

College Teaching-John Merrow Podcast #5
Interview with Lee Shulman, President of the Carnegie Foundation for the Advancement of Teaching.

JOHN MERROW: I'M JOHN MERROW. TODAY'S PODCAST IS MY CONVERSATION WITH LEE SHULMAN, THE 8TH PRESIDENT OF THE CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING, WHICH IS ON THE CAMPUS OF STANFORD UNIVERSITY. LEE SHULMAN KNOWS AS MUCH ABOUT TEACHING AS ANYONE I HAVE MET IN 30 YEARS OF REPORTING. HE'S ALSO A BRILLIANT TEACHER HIMSELF, ACCORDING TO EVERYONE I HAVE TALKED TO WHO HAS SEEN HIM IN THE CLASSROOM. WHEN WE BEGAN THE RESEARCH FOR OUR PBS DOCUMENTARY ABOUT HIGHER EDUCATION, WE HAD SOME IMPORTANT QUESTIONS ABOUT COLLEGE TEACHING. HOW GOOD IS IT? ARE COLLEGE PROFESSORS ACTUALLY TRAINED TO TEACH, OR DO THEY GET HIRED BY COLLEGES AND UNIVERSITIES BECAUSE THEY KNOW A LOT ABOUT SOME SUBJECT? ARE MOST LECTURE CLASSES BORING? WHO BETTER TO PUT THOSE QUESTIONS, AND OTHERS LIKE THEM TO THAN LEE SHULMAN?

JOHN MERROW Are most college and university teachers trained to teach?

LEE SHULMAN No. No. They uh, that's another one of our big problems. The PhD, which is the key to becoming a college or university faculty member, is a degree that prepares people to do research and scholarship. It's incredibly valuable. This would e a very, very sad and dull country, if it were not filled with people doing original research, having original ideas, preparing beautiful objects for us to enjoy and learn from. But there is, with the exception of some small number of programs, nearly no preparation for teaching as part of the PhD experience.

JOHN MERROW On-the-job training?

LEE SHULMAN On-the-job experience. Training suggests that you then go and then you are mentored on the job by a senior person who watches you teach, who videotapes you, gives you feedback, who helps hone the skills. Uh, doesn't happen. It doesn't happen. When I arrived ... and now this is 40 years ago... at my first university position, the first advice I got ...

and I was teaching 1000 students a day ... 500 in the morning, and 500 in the afternoon. The first advice I got from an older faculty member was "Don't delay too long in preparing your first research proposal to the appropriate government agency, because you've got to get your research going." No reference at all to the thousand students I was teaching. And that's the norm. That's the norm.

JOHN MERROW That's scary. (Laughs) I mean, one of the ... one of the brilliant teachers we watched...a small liberal arts college ... said his first couple of years he was a terrible teacher. And he kind of became aware of that. He said he started out teaching as if these students were going to be like him. And it was only after he saw blank faces for a couple of years ... and so maybe ... maybe not every faculty member comes to that realization. I mean is there ... is there a ... uh, "I taught it and they didn't learn it" mental- ...

LEE SHULMAN I don't think faculty are crass. I mean it's ... you've got some sense of when a class goes well, and it feels a lot better than when it goes badly. There's something inherent about teaching well that is satisfying. Uh, the late Al Shanker used to tell a story, which I'll tell you, even though it's too long for the tape. (Laughs) But Shanker believed it was important to raise salaries and create incentives for people to teach, and go into teaching. He was talking about school teaching now. But Al didn't believe that merit pay, where you paid teachers more based on their students' test scores really was a way to improve teaching. And Al said, people misunderstand, and they think teaching is like selling encyclopedias, where the commission is what keeps you going. And so if you gave teachers a commission for every kid that learned more, they'd work harder. He said, you know, teaching is a lot more like lion taming. He said when you're in the cage with the cats, you're intrinsically motivated to have them paying attention and engaging with you. And you're not going to work harder just because you're calculating how many bucks an hour you're making. I ... I think a lot of the problem that our college faculty have with teaching is an absence of opportunity to get better. And uh ... and an absence of an incentive system that makes it worth their while to do so. And it ... I know I make it sound very simple, but here is a professional who has not been trained to do this job, except on rare occasions, who is not being rewarded for doing that part of the job well, and therefore is not seeking out

mentoring and training to hone his skills. Why should we be surprised if the quality of the teaching isn't any more widespread than it is? Maybe the surprise would be that there's as much good teaching as there is.

JOHN MERROW What's your reaction? "These kids can't write, so I don't give them work that requires writing."

LEE SHULMAN I think again, if I can draw on the medical analogy, um, it would be like saying to your internist, uh, you knew that the patient that you were treating had badly infected tonsils. Why didn't you take them out? Clearly it was needed! And I think your internist's response has to be, "I don't know how to do that, and it wouldn't be safe for me to do it." Although people may believe that just because you're a professor of something that involves you writing, you therefore can teach writing. You and I both know that just because you're a teacher of something that you teach in English, doesn't mean that you can teach the language English to non-speakers of English. I mean it's a technically demanding job. Compare it to engineering schools for a moment. Engineering schools have decided two things. One, every engineer has to learn to write. Because writing is extremely important in the world of engineering. You have to communicate your ideas clearly, cogently, persuasively. They also have come to a second conclusion. Engineers don't know how to teach writing. Therefore, they want ... because they want engineers to learn to write, they hire writing faculty, they give technical writing courses, every course in the engineering curriculum gets two grades. A grade for the quality of the engineering and mathematical analysis, and another grade for the quality of the communication and the writing. And both are of equal weight. If this institution cared about the writing, don't ask this political scientist, who's grading 140 blue books-to not only judge the quality of the thinking politically, but also correct their fractured grammar and usage.

JOHN MERROW: BEFORE THE INTERVIEW I SHOWED LEE A VIDEO CLIP OF AN ASTRONOMY TEACHER AT THE UNIVERSITY OF ARIZONA. HIS NAME IS TOM FLEMING – TOM'S FOUND A WAY TO USE TECHNOLOGY TO MAKE HIS LARGE LECTURE CLASS FEEL LIKE AN ENGAGING SMALL SEMINAR.

JOHN MERROW You saw Tom.

LEE SHULMAN I did.

JOHN MERROW Tell me ... tell me your ...

LEE SHULMAN The great enemy of learning, and of course learning is what we teachers are trying to support, I think, is anonymity and invisibility. People who are invisible don't learn. Because in no sense are they accountable, in no sense are they responsible. What you saw Tom do systematically was remove the cloak of invisibility from the 130 students in his class. Each one has a little device that looked like a remote control, but every one of those devices was personally coded with the identity of the student. So that every time a student voted on a question that Tom put on the board, he personally and accountably was offering his hypothesis about what was going on. Step one in removing invisibility. Step two was the students talk to one another, again and again and again. Invisibility, step two, reads, you're now visible to two or three of your neighbors. Carl Wyman, a physicist at Colorado who does this, has experimented with seating students in different configurations, so it isn't random. And he's discovered that in a 450 student lecture, who you're seated with makes a big difference in how much you learn, because what kind of stimulation you get from the discussion. Three, you get a chance to respond a second time. Well, okay. Now there are variations on that method. Uh, some faculty will uh, look at their board and say "Okay, John. You opted for option B, along with about 35 percent of the class. Would you mind standing up. Help us understand your reasoning. Why did you go for B? Thank you, John. Ellen, you opted for C. Hi, Ellen, how are you? Uh, would you first reiterate John's logic. You know, what was his argument? And then explain what your argument is."

JOHN MERROW But then it's not a lecture course.

LEE SHULMAN That's right. On the other hand, at the end of some of those exchanges, Tom or I or you could step back and say, "Let me tell you what I think is going on here." And for five minutes ... for ten minutes, give a coherent kind of account ...pulling together the strands of what's been said, in a lovely, powerful, efficient lecture format.

JOHN MERROW This sounds like much harder work.

LEE SHULMAN You bet it is. You bet it is. It's hard to teach well, John. It's not easy work.

JOHN MERROW And what about the idea that "Hey, folks, the ... you know, the secret's out. This is possible." I mean is that ... talk to me a little bit about that concept. (Laughs) I know you've touched on it slightly.

LEE SHULMAN He was exhilarating. He was exhilarating. And what I found exciting about Tom is that what he provided to us was a vision of the possible. A vision of the possible that was so concrete and palpable, that I could say to you there is no reason that I can think of why most of the faculty teaching undergraduates in lecture settings in that university couldn't be as effective as Tom. He is not inherently charismatic. I mean he's a very friendly guy. So you know, Tom is not a ... an Olivier. He doesn't have this immediate stage presence as it were. Here's a person who has figured out how to marshal not only the technological resources, but the teaching resources, to transform a sleepy ... potentially sleepy, disengaged, uninterested group of 130 students into an active ... almost an active seminar, that you wouldn't think could occur with more than 15 or 20. And that's ... like I say, what is so encouraging about Tom, is it's not like Oz. It's not done behind the curtain. It's not done with smoke and mirrors. You can see what he's doing and you look at it, and you say, "I could do that!"

JOHN MERROW Will America's professors say, "I could do that?"

LEE SHULMAN If they are challenged to do so, if it's made quite clear that it's not a bait and switch, that the same leaders of the Academy who want them to take their teaching as seriously as Tom does, and to do it as well as Tom does, are then going to recognize and reward them for doing so ... I think the answer's yes. I think they will. I mean part of the problem that they're facing, and this is why ... this is a bigger problem than just the ... part of the problem is guys like you and me who in spite of all the pious things we say about the importance of teaching, continue to take things like the US News rankings very, very seriously. Now the single biggest factor in those rankings is the reputation and prestige of the institution. We know that. We've looked at those rankings. Where do institutions get their prestige? They get it from the prestige of the faculty in the institution, whether those faculty are teaching undergraduates or not. And yet we sit there,

and we talk about the top ten, and the top 20 universities, as if these statements really mean something for teaching, when in fact we don't know anything about the quality of teaching. What we know is the amount and visibility of the publication, and funded research, that lent prestige to those institutions. As long as we, you and I, continue doing that, and I'd like to believe you do it more than I do, but I don't think that's true, we create a terrible barrier for the leaders of the institutions to do what you and I know they ought to do about teaching.

JOHN MERROW Are you saying rankings like US News and World Report area problem? An obstacles?

LEE SHULMAN Yes, absolutely. Absolutely. Because they are ranking the institutions on the basis of characteristics that are either irrelevant to the quality of teaching, or in some cases directly competing with the quality of teaching.

JOHN MERROW Tom's university, large public uni- ... the University of Arizona ... offered teacher training. Taught him how to use technology. How rare is it that an institution says, "We want to make you a better teacher. Here. We'll teach you."

LEE SHULMAN That's not rare at all. In other words, I think there are a growing number of centers for teaching of learning, some at the at the department level, that offer and make available those kinds of services to faculty. Uh, they don't foist it on the faculty. Rarely is it mandated for a faculty member unless they're in deep trouble, and I come to you and say "Oh, John, if you don't shape up your teaching, there's no chance of your getting promoted. So you'd better go to the Center for Teaching and Learning." In other words it ... it ... I would say by now most reasonable sized institutions provide the opportunity for teacher training.

JOHN MERROW Tom said that not many of his colleagues took advantage of it. And very few of the older faculty members took advantage of it. So what to do? Should ... should people who teach in college be trained to teach?

LEE SHULMAN Well, the answer to that is obviously yes. And although I'm overworking the surgery analogy, uh, how many hospitals would stand for a situation in which the younger surgeons are learning the new approaches that actually make surgery safer and more effective for patients, but the older ones just

aren't interested. I mean it's unimaginable. It's unimaginable. And yet in my... I've lived in universities all my life ... well, all my adult life ... it's too painfully imaginable. And uh, that's one of our major challenges. We've got to figure out how this ... and let's take the sort of things that Tom does ... can become ... and I'm not going to say something that they're accountable for, but become part of the set of values and the culture that drives the behavior of college and university professionals. And I'm saying it that way because the reason surgeons learn new techniques, the reason they stay up to date, is not because there's an outside accountability function, forcing them to do it. It's built into the culture of surgery. Other surgeons begin talking about you if you're still doing things the old way. Uh, pretty soon, for certain kinds of procedures, if most surgeons are taking out that gall bladder laproscopically, and you're still creating, you know, the seven by seven scar, you know, people will start ... will stop referring patients to you. They'll ... you know, there are a whole variety of mechanisms of influence, persuasion, control, inside the professional community.

JOHN MERROW And in higher education?

LEE SHULMAN In higher education, they are very uneven. And they tend to work much more effectively at the research end, not at the teaching end.

JOHN MERROW Um, student rankings, on almost every campus, are they a force for better teaching? Just talk to me a little bit about the student rankings.

LEE SHULMAN Um, they tend ... first of all, in spite of the fact that students will often complain about the quality of teaching, in my experience, they are remarkably kind when they do their evaluations. Uh, and so the only faculty who create a kind of red flag are faculty whose ratings of the students are consistently abysmally low. If faculty kind of get into that middle ground, then not much is made of the quality of their teaching, as long as their scholarship is good. I mean the way I would put it, John, is that with regard to the quality of research, we tend to evaluate faculty the way the Michelin guide evaluates restaurants. We ask, "How high is the quality of this cuisine relative to the genre of food. The French, the Italian, the Chinese. How excellent is it?" With regard to teaching, the evaluation is done more in the style

of the Board of Health. The question is, "Is it safe to eat here?" And as long as it's safe, most institutions neither reward, nor punish average teaching, in ways that they would pedestrian scholarship. If on the other hand, the teaching falls below a certain threshold, that's when you get the marshalling of attention. "You better go to the Center for Teaching and Learning and get videotaped." Things like that. There isn't the same ... there isn't the same imperative for excellence, for constant improvement and stretch.

JOHN MERROW The vocabulary. I keep ... I hear people talking about their teaching load. You know, where I come from that's ... that's not a positive. "teaching load?"

LEE SHULMAN Yeah, yeah. Well, that's the usage. I don't think it has all the negative connotation that people want to give to it. Um, the difference between your teaching load and your research load ... although we tend not to use "load" for research ... is that with regard for scholarship, you have much more autonomy in deciding when to do it, with whom to do it, when you're going to go out very, very intensively doing in, when you're going to ease off, when you're going to be gathering data, and when you're going to be writing. Teaching is much more a scheduled. It feels more like a job in the old fashioned sense. I think in that sense, there's a load. When I was actively teaching ... I loved teaching, I thought I did it rather well ... but I'll tell you, the end of the term, you get 100 blue books, or whatever it is, or papers to read, that feels like a load, John. I mean it really does. So yes, people use that term. Uh, I think it describes the feeling of being weighted down and having a heavy lifting. It is hard work. Very hard work.

JOHN MERROW It seems to me in K-12 teachers talk about their "students." In higher ed, professors talk about their "load." Should I read a lot into that?

LEE SHULMAN Well, I think one of the things you can read into it is that first of all, K-12 teachers have an unbelievably difficult job to do. But by and large, they don't get mixed messages. They are recognized and rewarded for how well they teach. Uh ...

JOHN MERROW And higher ed, it's not.

LEE SHULMAN That's right. In higher ed, as I say, it's this mixed business. I mean I think the miracle of higher ed in some ways, which

may or may not show up in this program, is how much good teaching there is. Uh, a lot of it does not occur in large lectures. Large lectures are probably ... if I had to design a setting that was almost designed to make really good teaching extraordinarily difficult, I would design lectures to large groups of students who found it very easy to be invisible.

JOHN MERROW Somebody said ... maybe it was you ... you know, "Distance learning begins in the ... after the fifth row ... "or the tenth row. Or something like that.

LEE SHULMAN Well, I'll tell you. It can begin in the first row too. It's very hard as you get older to focus on those students very close to you.

JOHN MERROW (Laughs) Would you ... would you ban lectures?

LEE SHULMAN No, you couldn't... you can't ban lectures. Lectures are an extraordinarily efficient way of teaching a lot to a lot of students.

JOHN MERROW He said, "When I do it this way, I cover 20 percent less material." Is that a fair trade off?

LEE SHULMAN I wish he were covering 50 percent less material. Yes, it's a fair trade off. Most of our courses define themselves initially by coverage. And then apologize if they cut back. That's nonsense. They should define themselves by what the students will know six months after the class has been completed. Which is sometimes negatively related to how much they tried to cover. I'll bet Tom's students retain, value and use much more of the ... let's take his figures ... 80 percent of what he should or ought to have been teaching, than students in another class that relentlessly cover the entire 100 percent.

JOHN MERROW He said, "I still fail about the same amount of students. 12 percent or so. I still give about 12 percent A's. The difference is, the D's have become C's. The C's have become B's." Surprise you? Why?

LEE SHULMAN No, no, we've seen that in other places as well. Chemistry teaching at Notre Dame. Uh, brilliant chemist taught chemistry at Notre Dame, and essentially was seeing that well, his chemistry course was doing what chem courses

were supposed to do. Flunking about 40 percent of the students who came in. Giving D's or F's. Notre Dame admits students only with very, very high SATs and GPAs. It's a very selective place. And one day he realized that he was failing an awful lot of students who could make real contributions in the health fields, and in ... who would never get that chance because they weren't passing the ... and he had this moment of insight, and said, "Maybe it's me and not them." And he began systematically modifying the course. He added more kinds of technology that create better opportunities for students by analogies and models and metaphors to understand these tough concepts. He created much more in the way of small groups where students tutored one another and helped each other understand.

JOHN MERROW And what happened?

LEE SHULMAN The failure rate, in his case, dropped dramatically and once again, the B's and the high C's went up dramatically. I think his A's, I think, did too but I'd have to go back and look at his web site. Of ... the difference was dramatic.

JOHN MERROW Um, the talk about the importance of the freshman year and yet what we see are freshmen classes that are huge lectures or are taught by TAs while the most senior and theoretically the best professors are off somewhere else. Um, you used the word "hypocrisy" earlier, but if freshman year is so important, why are so many freshman classes, large lectures or ... taught by TAs?

LEE SHULMAN Well first of all, side aside the size for a moment. Because as I said before, size is not the issue as much as the quality of the teaching. Uh, it is just as easy to do a lousy job at teaching a small seminar as it is to teach a large lecture. And in fact, it's harder work in many ways, skillfully, to teach a seminar with 20 or 25 students than to teach a lecture course, even with some of the new technologies. Two hundred and 30. So let's ... let's not talk about lecture. Let's talk about large group instruction.

JOHN MERROW Well, just talk about ... of the ... of the talk about the importance of the freshman year ... and the apparent ...

LEE SHULMAN If it were up to me, I would treat the first year of college very much the way law schools treat the first year of law school.

First of all, there are a set of core courses that everybody takes. They are taught, by and large, by senior members of the faculty who really know those fields. They are taught very interactively, almost frighteningly so, but the way those courses are taught, even when there are a 100 students in the class, it makes it very difficult to be invisible 'cause the teaching method, even without technology, is highly interactive. And then, you let me get some of Tom's technology into the hands of the lawyers teaching contracts, torts are Constitutional, and that teaching will get even better than it is now. And by the way, the senior members of the faculty don't complain about having to teach the first-year course of the contracts.

JOHN MERROW Why don't senior faculty teach freshmen at so many of America's colleges and universities?

LEE SHULMAN Tough question. Um, in some cases, it's because in order to move their own scholarship ahead, they prefer to teach courses much closer to their specialization. It helps them move ahead in their research to be interacting with students around the ... the Civil War, which is their area, or the Industrial Revolution or Women's Suffrage or something like that, and it also gives more access to the students who are more advanced to those faculty if you teach them in smaller groups. Um, I mean, that's one of the main reasons, preferences. Um, I think another reason is that in some places - not all - it's part of the culture. Uh, because there are universities and colleges where the introductory courses are always taught by the most famous people on the faculty. And again, they don't complain. These are courses that become legendary in the institution. Um, and I don't fully understand why the cultures of some institutions develop one way and others another way.

JOHN MERROW I mean, I know there's all this talk about value-added...

LEE SHULMAN Sure we know. We know a great deal. We know, for example, that students who are put in positions where they have to be active in order to learn something, are much more likely to learn it, when they're ... when they're permitted to be passive. We ... we ... we ... we, pretty much know that. We pretty much know that when dealing with ... that all challenging material, uh, most students do better when they're working with other students and can try out their ideas on each other and ask each other questions and help

each other over rough spots. That's not always the same student helping the same student over the rough spot. They ... they switch roles very often, th- ... better learning takes place. But, I mean, that we know a great deal about learning. Uh, we also recognize that to put all of those into practice makes teaching much more skilled and challenging than it is if you feel that you can define teaching as just telling.

JOHN MERROW Teaching is not telling?

LEE SHULMAN No. No. As Deborah Meier said, "When you really come to understand it, teaching is mainly about listening. Learning is mostly about telling." I mean, it's ... again, it's counterintuitive, but you think about it. Again, let's go back to your doctor's office. In order to make you well, the doctor has to shut up and hear you describe what's going on inside of you. Teaching is like that.

JOHN MERROW I ... I ... I keep hearing the expression "deep learning." Deep learning. To learn something deeply is to have it connect with stuff you already know so that new ideas are formed that weren't there before. Does that happen often?

LEE SHULMAN Does it happen often? No, even under the best conditions it's fairly rare, which is why it's so precious.

JOHN MERROW Somebody said, "The key is engagement." You know, if the teacher's just telling you don't engage, but the key is engagement, whether it's working on the newspaper ... but, that's its connecting I guess, maybe that was...

LEE SHULMAN It's connecting. But, you know, an engaged students can ... can move from superficial to deeper understanding in the middle of a lecture or demonstration. I once had a student who had a master's degree in engineering from MIT and had come back and I was teaching him to be a high school teacher. And I was giving a demonstration of the way of thinking about the quadratic formula that somebody had developed for teaching third grade kids. And during the break this young man came to me and said, "Doctor Shulman, for the first time in my life I understand the quadratic formula." All kinds of stuff that was disconnected - - I knew these calculations, I had this medal in ... it all came together when you explained it that way. I was lecturing. But the timing was such that it all came together. So that's

what you mean by deep learning. It's learning that begins to organize and make coherent lots of other stuff that you've learned in other ways.

JOHN MERROW Our question was, "What happens between admission and graduation?" And ... and I think our answer is "Not enough -- not enough is happening." Um, that doesn't mean it can't happen but from what we see not enough has gone on. Um, and a couple of people have said, "There's a kind of non-aggression, mutual non-aggression pact."

LEE SHULMAN "Don't bother me, I won't bother you."

JOHN MERROW I mean, is that true? Is that ... is there ...

LEE SHULMAN It's true to some extent all through the educational system. It's not just in universities and colleges. There has been a fair amount of research that's show that, uh ... that teachers will lower expectations for the students in return for implicitly the students making fewer demands on the teachers. Uh, again, a perfectly understandable bargain, but not one that contributes to the quality of education.

JOHN MERROW Is it actually spoken?

LEE SHULMAN It's not spoken. Uh, but where you see it, where you see it most vividly, is let's say you've got the case of an English teacher. I've seen it more with high school English teachers. Thirty-five kids in a class, five or six classes a day -- you were an English teacher -- and they're told you've got to have the students do more writing. They're only gonna learn to write by writing. Which means that if you have 'em do a lot of writing, you ask them for a three-page or four -page essay, once a week. You do the arithmetic. Well, are you gonna be able to set the bar as high as you'd like to if you're getting 200 papers a week to grade, and you still would like to be able to get some sleep and interact with your family, uh, read a little bit on the side, you know, I mean, just ... and so what ends up happening is, you end up asking less from your students, and they in turn expect less in the way of feedback, correction, help with style, et cetera. Now, who do we blame for that? Do we say the students and the faculty are evil because they've struck this bargain, or do we ask the question, Who was responsible for setting up the circumstances that made it necessary for this English teacher to be reading 200 papers every week?

JOHN MERROW So ... you say who is at fault here? Is it the faculty or ... and the students, or it something else?

LEE SHULMAN I think it's a corrupting system that gets permitted to fester in part because off society, we set no limits on what we invest in healthcare, heavy limits on what we invest in education, and then wonder why our expectations for education are more often disappointed.

JOHN MERROW Are we a nation at risk?

LEE SHULMAN I don't think we're a nation at risk. I think that on balance there is more good-to-decent education going on in the higher education system than there is absolutely horrible education going on. Uh, so are we a nation at risk, uh, I think only in a certain small number of selected areas, and those are ones where it's the entire education system that's put us into this position, not just higher ed. And the one that comes to mind most vividly is in mathematics and science. Where we have I think systematically failed to teach well ...

JOHN MERROW Always

LEE SHULMAN ... from first grade all the way through. One of the reasons we teach badly in first grade is 'cause the first grade teachers are the ones who are being taught at the university-I mean, it ... it ... well, it's a vicious circle. I don't think that's true in a lot of other fields. I think a lot of other fields we're still doing a reasonably good job.

JOHN MERROW We- ... well, what's the ... you know, I ... I said ear- ... when we just started, I said, "You know for me in a sense the takeaway from watching Tom is, "Hey do I see folks? No more excuses."... and so put yourself in the position of saying, "Okay, uh, what's the ... what's the takeaway for the public, who ... who've watched this thing

LEE SHULMAN The takeaway for the public is this. The public through its representatives, whether they are boards of regents in universities, or publicly elected ... whatever they are, or ... or ... or boards of private universities and colleges.

JOHN MERROW The public...

LEE SHULMAN The public have to convey a very straight-forward message to the leadership of higher education.

JOHN MERROW Which is?

LEE SHULMAN You must do everything you already know how to do to bring the quality of teaching and learning in these institutions up to the level of the scholarship that's already being done in those institutions, even if for awhile it means less of that scholarship's gonna go on. You know it's a zero-sum game. You can't simply get more blood out of this turnip. But we as a society will no longer tolerate having the Tom's be an anomaly and an exception. We insist that Tom be the norm and Paulette be the tragic exception that we know how to do something about. And we're gonna start doing it now. That's the message that the public would have to deliver.

JOHN MERROW Thank you.

JOHN MERROW THAT WAS LEE SHULMAN, PRESIDENT OF CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING. OUR DOCUMENTARY, DECLINING BY DEGREES, WILL BE REBROADCAST BY MANY PBS STATIONS THIS FALL. CHECK OUR WEBSITE, WWW.PBS.ORG/MERROW (SPELL IT) FOR DETAILS. THIS PODCAST WAS PRODUCED BY JOHN HEUS AND VALERIE VISCONTI. I'M JOHN MERROW. THANKS FOR LISTENING.