

MIT 150 | Tribute Banquet in Honor of Jerome Wiesner's Retirement (1980)

HILL: Ladies and gentlemen, may we start. Before I start the printed program, I should like to introduce a few people at the head table who will not be on the program. At my--

MALE SPEAKER: They're telling me they can't hear you.

HILL: Wait a minute. How is it now? Better. All right. I shall start by introducing the non-participants at the head table. On my extreme left, your right, Professor William Widnall-- and will you please stand and remain standing until I've introduced you all and then we can recognize them-- Judy Rosenblith, Betty Johnson, Ida Green, Priscilla Gray, and the other name, right on the tip of my tongue, oh, Ruth Hill.

Traditional and considered quite complimentary to state, behind every great man stands a very great woman. I don't think I agree with this statement. And I think it is at best trite and at worst insulting. I ask you, why is Laya standing behind Jerry? She's been in front of him for all the years I've known them.

[LAUGHTER AND APPLAUSE]

More somberly, I do feel that Laya's patience, love, and understanding over the years have contributed in no small measure to Jerry's success and have helped him over the bad times, which any man with such an outstanding record has had many of perforce. I got that perforce in so I wouldn't end a sentence with a proposition. I therefore state unequivocally, thank heaven for Laya Wiesner.

[APPLAUSE]

HILL: I believe as toastmaster my job should be confined to introducing speakers and not joining them in remarks about the guest of honor. But I'm going to violate my recently established principle because I found I get no unanimity of opinion of how Wiesner got to MIT in the first place. The three people who should know are Jerrold Zacharias and Louis Smullen, who are both here, and Wheeler Loomis, who has unfortunately left us.

But Jerry and Louis claim they don't remember exactly. So I will tell you the exact truth. In early '42, both Smullen and I worked for Gerald in the radio frequency components group of the radiation lab. And we were very short of good talent. And Louis remembered that he had a schoolmate at Ann Arbor named Jerry Wiesner, who was working at the Library of Congress.

And he came to both Loomis and Zach and said, look, he won't last there very long. Grab him. Well, we grabbed him. And offers were made and accepted. And Jerry told me just the other day that after he had gone past guards and been fingerprinted, photographed, x-rayed, interrogated, and all that, put on the payroll, that he was brought to my office and someone said, here's your new staff member, Dr. Wiesner.

Well, nobody had warned me about this. I said, this is wonderful. We have lots for you to do. And I showed him around our group and the lab a little. And then I said, look, we have a mere 12 important but unsolved problems. Take your pick. Well, he took his pick and went to work and hasn't escaped us.

Now, let me get back to being toastmaster. Our first speaker is Mr. Anthony Lewis, who you all know is a columnist for the *New York Times*. He got to know Jerry during the years of 1961 to '64, when Jerry was special assistant to President Kennedy and Anthony Lewis was a member of the *New York Times* Washington news bureau.

This friendship was no doubt deepened by the fact that they both spend summers on Martha's Vineyard, where there are two closely knit classes of people-- islanders, the year-round residents, and off-islanders, who spend their summers there. It's interesting to note that though a columnist for the *New York Times*, Mr. Lewis lives in greater Cambridge and works out of the Boston office. This perhaps tells us something about his relationship with our guest of honor. Mr. Lewis.

[APPLAUSE]

HILL: Thank you, Professor Hill. That you asked me to be with you this evening is an honor I greatly value. Unlike so many of you, I have not had a professional connection with Jerry Wiesner at the Institute or in science generally. My wife and I have known Jerry and Laya as friends, with deep feelings for them, in two places-- the ones mentioned just now by Professor Hill, here in Cambridge and especially on Martha's Vineyard. They live on a different pond but in the same world.

I want to talk about Jerry as a citizen, a public citizen of this country and the world. Devotion to principle and to the facts come first with him. He stood on that ground in office and out with friends and opponents. Another thing-- he is an optimist. When others deplore what is happening but feel useless about changing it, Jerry acts for change. Perhaps most important, to the world of ideas, where so many of us live in abstractions, he brings an almost homespun concreteness, an understanding of the forces of nature, rain, and fallout.

In preparing these few remarks, I naturally talked to people who had seen Jerry at work over the years. They mentioned his dedication, his optimism, his humanity, his sense of the humor and quirkiness in life. And they said some other things I want to pass on. One mentioned his ability to deal on an equitable basis, free of animosity, with those of different views. In working on arms control, he never looked on the military as the enemy.

This person also spoke of Jerry as that rarity-- a combined engineer-thinker, the sort of man who will talk in large terms about communication satellites and then start working out the size of antennae on the back of an envelope. An architect said Jerry is a poet as well as a scientist. As a client, there was always that conflict in him between poetry and practicality.

And what's marvelous is the slow way when he talks that he lets you talk. Then there's a half reply that encourages you to continue. He is a humanist, one who, as he said this afternoon, thinks science is fundamentally a humanistic activity.

And then there was Mrs. Wheeler Loomis. Our chairman mentioned Wheeler Loomis' name, to my surprise. I spoke to her. They once lived in the Martha's Vineyard house now owned by the Wiesners. And Jerry worked 40 years ago with Wheeler Loomis. Mrs. Loomis said, he's a terribly sweet person. Yes, he is.

One old friend remembered in a speech of Jerry's a line that he interjected in a soft voice. Many missed it then, so I want to end by quoting that line. He was talking then-- as he and John Hersey were again today-- about CP Snow's idea of the two cultures that do not communicate. Then he said, well, better two cultures than none.

It is a good thing that our civilization has had Jerry Wiesner's voice of reason and sweetness to educate it and still will have. We need him more than ever. It is not a time when optimists abound. In terms of weapons, it is an age of threatening unreason. Professor Drell described that threat in his powerful speech this afternoon.

But I think there is still in this country a yearning for peace and reason that will respond to leadership as John Kennedy discovered it would respond in 1963. Now as then, we count on Jerry Wiesner. Thank you.

[APPLAUSE]

HILL: You know, when you got a job like being master of ceremonies, you have to do a little homework. And you start out with reference books like *Who's Who*. So I looked up Cecil Green, and I discovered at once that he was a master of linguistics. Because to my surprise, Cecil was born in Manchester, England and did his early undergraduate work at the University of British Columbia. And yet, he speaks perfect Texan.

[LAUGHTER]

He took his bachelor's degree in electrical engineering at MIT in 1923 and his master's the next year. We all know he has been a loyal and distinguished alumnus ever since. Occasionally, I question this loyalty because almost every time I visit such places as Pasadena or La Jolla, I catch Cecil there, too. I think this really exemplifies his great interest in education at first-rate institutions.

As a co-founder of Texas Instruments, Cecil has had a profound influence not only on geophysical exploration, oceanography, and the like, but also on education. I venture to say that the next generation of American students will learn nothing of arithmetic because of the great work of Texas Instruments in making very inexpensive hand computers.

Now, I wrote these words yesterday. This morning, I thought maybe I was being too optimistic about the next generation. I heard a very distinguished computer scientist divide \$20 by \$0.20 and reach a factor of 10. There was no inflation involved.

Cecil and his wife, Ida, have been extraordinarily generous to MIT in a number of ways. And both are great friends of our honored guest. Mr. Green.

[APPLAUSE]

IDA GREEN: Now, just give your speech and don't get off on anything.

CECIL GREEN: I don't know. You put Ida right next to me here. Ladies and gentlemen, Mr. MC down here, Al Hill, my favorite classmate over here, Jay Stratton, my favorite speaker over here, Margaret Compton. Yeah, that's right. Ladies and gentlemen, good friends all, this is a wonderful time to be here. Incidentally, this Cecil, "Ses-il" business kind of intrigues me.

[LAUGHTER]

Somebody asked me one time, which is it, Cecil? Is it Cecil or "Ses-il?" Well, I said, it all happens to be dependent upon where I'm located at the time, whether I'm west of the Pecos or east of Suez, and as long as you're calling me in good time for dinner.

I'm sure Jerry knows that I include several important specifications within the title of president, not the least being a strong sense of entrepreneurship and imaginative innovation. Some of you know that I have often referred to my good friend-- Dr. Robert R. Schrock is around here somewhere tonight. He ought to hold up his hand. Where is he? Yeah, I see him back there. Yeah, I see him. All right, Bob, I see that blush on your face back there.

As I say, some of you know I've referred to him, the emeritus head of geology and geophysics, as also my most expensive friend, since he had so much to do with cultivating-- you notice I use the word cultivating-- my interest and ultimately involvement in the construction of the present-day MIT Earth Sciences Center, a tall outpost from Texas and New England. But I am inclined to think that Dr. Wiesner belongs in this category also, as I now recall a few incidents.

First, I would remind him of a certain luncheon session, again with Eugene McDermott also present. And this was at the Four Seasons restaurant in New York City, back in the late '50s when Jerry was then involved with advisory activities in Washington. Jerry did a good job on that occasion of confirming my hopeful ideas that geology and geophysics, while at a low level of importance at that time-- this was back in the '50s-- nevertheless were probably destined to be increasingly necessary. And so MIT should by no means rule out earth sciences as an essential discipline. How right he was.

Thus, I was given the necessary courage to begin thinking about more and better space for the department. As Ida and I look back more than 20 years to that fortuitous rendezvous in New York, I realized that this was also a good example of Jerry's constructive thinking. By evaluating not so much the current needs, but far more importantly, the probable needs of the future, such as we witness them today in 1980.

Thus at the present time the expanding exploration industry is completely dependent upon higher education and sophisticated techniques, as we also cultivate a hand-in-glove relationship between industry and education.

It would be appropriate to mention also that Jerry was forever conscious and quite aware of the vital importance of people and the consequent fact that the degree of any operation's success is invariably dependent upon the character and indeed the quality of its leadership. With all of the faculty here present, I could easily go on to a discussion of the Cecil and Ida Green professorships. But that was the part that had to be cut in order to stay within the eight minutes prescribed by Dear Professor Martin.

So Jerry, you would assume from the above recording of events that I have at least mixed feelings about your forthcoming retirement of president of good old MIT. First, with the capable and happy help of Laya, you have done such a good job, both of you, that your departure now seems like the end of an era.

On the other hand, because of your steadfast and conscientious efforts, both of you certainly deserve the privilege and the consequent enjoyment of a more relaxed and less scheduled lifestyle. It is a further credit to you that you are now leaving the presidency in the most capable hands. So dear Laya and wonderful Jerry here, good luck to the two of you. Good health and many happy years to both of you.

[APPLAUSE]

HILL: Thank you, Dr. Cecil "Ses-il." I trust you noted that I use both pronunciations in my introduction.

Our next speaker is Phyllis Ann Wallace, professor in the Sloan School of Management. Professor Wallace's interests are primarily in the economic side of management. And until the early '60s, she was primarily interested in international areas. At that time, she made the decision that national problems are more important than international ones and switched to the studies of national economics and how to improve our overall situation.

During the early '70s, she served on an advisory committee to the Metropolitan Applied Research Center in New York City. And it was there that she first worked closely with Jerry. As I understand her, she believes that architecture and urban planning go hand in hand with education, child and health care, and services for the elderly-- that's good-- and handicapped in all new communities. I believe herein she sees eye-to-eye with Jerry. Professor Wallace.

[APPLAUSE]

WALLACE: Dr. Hill, honored guests, ladies and gentlemen, unlike other speakers tonight, my remarks will not be based on shared memory or a lengthy association with Jerry Wiesner. I will attempt to give an MIT faculty perspective, based on a survey conducted by me during the past few weeks.

The first theme I call role model. Wiesner is a most unusual man in two ways-- one, in terms of his ability to embody concern about people and the issues. Two, he is strong and extraordinarily bright with enormous sensitivity. Since he had major national responsibility when he was in his 30s, it would have been easy to have been arrogant, but he never was. He has served as my role model.

The second theme I called president. Quote, "I am a Wiesner booster. He has been an exceptionally good president for MIT. He has technical competence and is genuinely concerned about people. He is unique among presidents of research universities in his support of equal opportunity. His attitude on women and minorities was way ahead of the faculty."

Three-- visionary. Wiesner is a visionary for disarmament. He's willing to put his energies where his concerns are. He has never hesitated to take policy positions which are not always popular, but he's held in high regard even by those who may disagree with him. The theme of science, technology, and society continues to be an overriding concern.

Four-- what I call the MIT family. Although Jerry is extraordinarily concerned about broad and important issues in the society and in the world, he is involved with a range of activities at MIT. He has a real concern for people at MIT. They are almost like family to him.

Around the Institute, he's not seen as a boss. He has a strong interest in student welfare as well as the faculty. He has the impressive quality of caring about people in the large as well as for individuals. Not only does he know you, but he knows about you. He gives you the feeling of caring about you. The human element in his administration has been outstanding.

The Institute has not been bound to strict departmental categories, and that is very Wiesner. Jerry has a commitment to education of a different kind. He has a sense of what is important in many fields. He can spot the critical issues. He was able to cut across fields and put together people who did not necessarily fit in traditional places.

He has maintained and strengthened the traditional areas of MIT and with the addition of new areas, tried to give students and faculty all of the advantages of a full-fledged university. Yet it is still an institute of technology. One faculty member called it, and I quote and underscore this, "a crazy kind of love that the faculty has for Jerry, even when they may be furious with him about something," end quote. We hail you, Jerry Wiesner, MIT's man for all seasons.

[APPLAUSE]

HILL: Thank you, Professor Wallace. There will now be a slight digression from the printed program, and it will begin with Professor Martin, who has something to tell us.

MARTIN: A number of people have-- who are not here tonight-- have written, sometimes letters directed to Dr. Wiesner, sometimes to me. And where I've gotten them, I have transmitted them to Dr. Wiesner. And I'm not going to read any of those except one tonight. And this one was delivered to me this morning by Dr. Press when he was called out of town to go inspect the volcano in Washington state. This is from the--

[LAUGHTER]

--the President of the United States. To Jerome Wiesner-- my very best wishes to you on your retirement as president of the Massachusetts Institute of Technology. I am glad to take part in the tribute to your accomplishments. Combining service to science and engineering to the university and to our country, you have had a most distinguished career.

Your record of achievement has been marked by dedicated work during World War II and subsequently important contributions in the vital area of arms control. Your outstanding expertise in this and other fields led to your membership on the first President's Science Advisory Committee under President Eisenhower and then to becoming President Kennedy's science adviser and director of the first Office of Science and Technology in the White House.

We are grateful that upon your return to MIT you continue to provide your valued counsel to our government in addition to assuming leadership of one of the world's foremost scientific, engineering, and academic institutions. Individuals of your caliber and dedication make us especially proud to be citizens of this great country. And I know that your fellow Americans would want to join me in this expression of appreciation for all you have done. Sincerely, Jimmy Carter.

[APPLAUSE]

HILL: It gives me great pleasure to introduce our next speaker and retiring provost Walter Rosenblith.

ROSENBLITH: Thank you, Al. Jerry and Laya and friends of Laya and Jerry-- how to do justice to nearly a third of a century of friendship and of working and dreaming together? Perhaps an illusory unity of humanity's cultural pursuits, the end cultures of this afternoon, but this and so much more, Jerry and Laya.

Archibald MacLeish said perhaps best at your inauguration-- adviser to presidents the papers call him. Adviser, I say, to the young. It's the young who need competent friends, bold companions, honest men who won't run away, won't write off mankind, sell out the country, quit adventure, jibe the ship.

When people ask you, what will you do, Jerry, after you retire? I think the answer is simple. You will continue to be Jerry Wiesner. And better there ain't.

[APPLAUSE]

HILL: Thank you, Walter. I take great pleasure in asking Dr. Johnson to say a few words and to spread a few dollars where they will do the most good.

[APPLAUSE]

JOHNSON: Thank you, Al Hill. Members of the MIT family and distinguished guests who join us on this wonderful occasion from Cambridge and from places beyond-- I see across this wonderful audience in this grand old hall, which we hope to replace--

[LAUGHTER]

--so many who are so close to Laya and Jerry. And it's a great honor for me to have a part in speaking about you both. I think the thing that delights me about Jerry Wiesner most of everything else is that he is an optimist about our world. That's awfully important. He knows all the problems. He has a sense of foreboding that hangs over, and yet he is a complete optimist about the prospects for humanity.

And second, I'd like to say something that hasn't been mentioned in all of the 18 speeches that have been given in these last 24 hours. He has done something which doesn't come quickly to mind. In the last nine years, he has set aside so often his personal interest.

You know what kind of person he is. He has all these things he wants to do. And so often, he's had to push them, not just a little bit aside but way into the background-- things he wanted to do, things he was driven to do. And he submerged them in a sense, sacrificed himself and his own personal wishes because he knew there was a strong and prior personal commitment which he had made as president of the Institute in favor of the corporate purpose of this great society of which we all have the honor to be a part.

And in so doing, while only history can judge, he has furthered, he has furthered the progress of education and research and furthered the opportunity for each of the members of the faculty and for every student on the campus. That he did that in a selfless way perhaps will never be understood by all but those who are the closest to him. And we are forever in his debt.

Jerry, it's been a joy to work with you over these years, to know your genuine sense of the highest standard, requiring of yourself the highest and best performance. And it's been a pure delight to join with you in pressing on that broad frontier of education and pressing forward with MIT. Thank you.

[APPLAUSE]

HILL: Thank you very much, Dr. Johnson. Our next speaker, I was reminded by Howard's remark, will be the first president to have four ex-presidents in residence to help him through his rougher times. However, he will have a great many things said about him on September 26, and I shall not attempt to preempt those remarks.

I should like to tell you one brief story, which is quite true but I don't think has had wide circulation, and I don't know why. The day after it was announced that Paul Gray was becoming chancellor, I was at a meeting where was present a young mathematician. And he seemed preoccupied.

And I asked him what was on his mind. And he said, do you realize in a period of a few short months, Paul has gone from assistant provost to associate provost to dean of engineering to chancellor. And I calculate that at that present rate of growth, in precisely 29 days, Paul Gray will become God.

[LAUGHTER]

It shows the dangers of extrapolating exponentials. Well, he didn't quite make it, but Paul's had an upward bound program all his own. And I am very happy to ask our chancellor and president-elect, Paul Gray, to make a few remarks.

[APPLAUSE]

GRAY: Thank you Robert. Jerry, Laya, and friends-- that's the second example I've heard in the last two weeks that shows the dangers of extrapolation now.

I went through high school with a girl whose name was Shirley Zahn, Z-A-H-N. We had many classes together, and she was always the last person called on to recite. Tonight, I know just how she felt.

[LAUGHTER]

Nearly three months ago, after a dinner at which the MIT Corporation honored Jerry and Laya, I reflected with that group on the experience of 13 years. It seems impossible, Jerry, it really does-- 13 years of working with and for Jerry Wiesner. As I thought about what to say tonight, I tried to improve on those words and concluded that there really wasn't much I could do to improve on them. And I'd like to repeat a portion of them this evening.

Jerry is a genius, many have said. He's smarter than anyone else at any given moment. He's wise and human. But tonight in this family of tech men and women and MIT friends, it's my assignment, as we celebrate Jerry and Laya, to examine in the language of electrical engineers the componentry of Jerry's genius.

My amateur analysis suggests four unique qualities in his brand of statesmanship. First, it is his obvious delight in absorbing the broad sweep of the Institute's intellectual activities and his astonishing level of understanding of so much of what goes on here.

In countless meetings of visiting committees, I've been overwhelmed by Jerry's evident understanding of not only the subject at hand but the intellectual context in which it's embedded. Many of you here tonight who have been in visiting committee meetings over the years have had that same experience, I'm sure. As an observer, I'm impressed. As his chancellor, I'm enthralled. And as his successor, I'm still intimidated.

Second is Jerry's willingness to explore all possibilities in dealing with problems, even those possibilities which are evidently impractical or irrelevant. How frequently those easy, *a priori* judgments turn out to be wrong. This proclivity is both exhilarating and bewildering to those who work closely with Jerry, for that mind which so readily draws in novel ideas often hands them back transformed and enriched. This characteristic contributes greatly to an administrative environment which fosters creativity and discounts the status quo. It can be a very heady atmosphere.

The third characteristic on my list is Jerry's persistent unwillingness to regard any discussion as closed, any decision as irrevocable. Now, this quality has certain unsettling effects on an organization. I have said that it sometimes resembles playing badminton with a marshmallow. One is never sure whether it will stick or bounce.

Nevertheless, this willingness to reconsider in the light of fresh data or increased understanding has been for MIT a source of strength. While we've made our share of mistakes in the past nine years, few of those mistakes have been ratified by holding the prior positions in the face of changed circumstances. And Jerry deserves most of the credit for this wholesome atmosphere of managerial skepticism.

Finally, there's Jerry's single-minded insistence on quality, on close attention to the goal of excellence in all that we do. He has insisted not just that MIT be the best of the science-based academic institutions but that it strive to be in the front rank of world-class universities. He has, by building on the foundations laid by his predecessors and by striking out in response to his own instincts, largely realized those objectives. MIT has become, in his phrase, an international symbol of science.

Now the topography near the pinnacle resembles-- for those of you who have tramped the mountains of New Hampshire-- Monadnock more than Chocorua. The contour lines are far apart on the map, and fine distinctions are very difficult to discern. Nevertheless, it's clear that the Institute has moved upward in recent years, thanks largely to Jerry's leadership and to his vision of excellence.

In conclusion, I will say, Jerry, only that you have left indelible footprints on the Institute, footprints which both define where we are in 1980 and point away toward the future. The shoes that left those marks are large ones, as I know better, perhaps, than anyone else present in this company of friends and admirers. Thank you.

[APPLAUSE]

HILL: Thank you, Paul. Our next item is a ceremonial one, which will be carried out by the chairman of the faculty, Professor Sheila Widnall. Now, Mount St. Helens may come to Boston, but this particular mountain won't come to Muhammad. And so we go down there. And since this is a joint gift, Laya, you might like to move down there.

WIDNALL: Is Laya coming down? Before we unveil this mound that's sitting here, I would like to pay special tribute to the committee, the faculty committee that was organized to pay tribute to Jerry Wiesner on this occasion. The chairman of this committee was Ted Martin. And members of the committee were Mildred Dresselhaus, Herman Feshbach, Morris [INAUDIBLE], Al Hill, Nicholas Negroponte, Joel Orlen, Lou Smullen, Ben Snyder, Phyllis Wallace, and myself.

Clearly, all of us have benefited in the last two days from the work of this committee. I think one of the most difficult tasks that the committee faced was to find a fitting gift for Jerry. In a faculty with interests as diverse as this, to find a gift for a man with as diverse a set of interests as Jerry is an exceedingly difficult task. We thought for a while that we would give him Building 20.

[LAUGHTER AND APPLAUSE]

But there was a certain objection to that from the [INAUDIBLE] committee. So what we did at that point was we put a tail on Jerry and we began following Jerry and Laya around on some of their trips to various galleries, trying to identify and connect with Jerry's interest in the arts. And we believe we have identified a piece that we hope will have a special meaning for them. And I hope that maybe the rest of us can also identify with it.

So Ted, you want to help me with this? This is a piece of Eskimo art. You recognize that? And the name of the piece is *The Two Owls*. It's by an artisan named [INAUDIBLE] who lives in Cape Dorset. And the plaque reads, presented to Jerome B. Wiesner by the faculty of the Massachusetts Institute of Technology with warm appreciation of his presidency, May 21, 1980.

[APPLAUSE]

HILL:

At the suggestion of Louis Smullen, the Lincoln Laboratory-- and this was really John [INAUDIBLE]-- put together an elegant collection of papers on tropospheric and ionospheric scattering, two fields in which Jerry took the lead in developing for practical use. And I have here this collection. And Jerry, here is the book. You can open it.

[APPLAUSE]

Jointly, Pat [INAUDIBLE] of the Draper Lab and Ted Martin of the faculty are presenting you, Jerry, with this pictorial documentation. And now the unveiling, please.

[APPLAUSE]

There is a great deal of detail in that painting. And I hope afterwards you will all take a peek. It clearly shows talent, skill, a sense of humor, and an understanding of a subject whom, to the best of my knowledge, she had not met. Thank you very much, Pat.

[APPLAUSE]

WIESNER:

Should I read from these papers? Just to tell people what this is all about-- a number of us-- in fact, the first paper-- got interested in how one could extend the range of communication systems when we were worrying about making an air defense system for the United States. And Ed Purcell, I notice, is among the authors on this first paper, as well as myself and some old friends who are no longer with us. And it was the beginning of a very intensive and extensive set of research activities, which culminated, really, in my learning some lessons that have stood me in good stead through my professional career.

Actually, it started with Walter Rosenblith and Norbert Wiener-- probably allowed us to do this. And that is Norbert was very interested in the analysis of messages and tended to concentrate on the randomness, the uncertainty, unexpectedness in messages. And when we began to work on this particular communication medium, we discovered it was a very erratic one. It was only that early work that gave us the courage to try to use it as a communication medium. And it did work very well.

And that taught me that Norbert was really very, very right that one has to look at any set of signals. It's noisy. And if you look at it carefully enough and work on it well enough, you can extract a meaningful message from it. Course, the lesson, really, that Norbert gave us, the heritage we got from him, was that all of life is really an information process.

And as an electrical engineer, I've been able to use my background as Cecil Green has. He was able to become a geologist and geophysicist, something I've really never forgiven him for, with the background of electrical engineering. And I have been able-- with the lessons I learned then-- to steer a course through all kinds of uncertainties.

In fact, one time when I was serving in the government, I was in a discussion in the Cabinet meeting, in which it was pretty obvious to me that we were dealing with a problem that had no solution. If we had looked at it six months before, we might have seen, found a solution. But it was now too late.

And everybody who has any understanding of control systems knows that whenever you have a control system which the signals come too late, the thing just oscillates violently. And it appeared to me that this was precisely the process we were engaged in in the government. We were getting messages which we should have had months before. And we were dealing with a problem with which any response was going to be the wrong one.

And that's frequently been the case, I think, in our social affairs. And it's taught me to try to be both open-minded and very willing to look for the unusual solutions, the noise, as they would appear, and hope that in this process one would indeed find a solution.

Now I hardly recognized the character that's been described here tonight. I think my friends have done a very good job of filtering. Now, Cecil Green, of course, had been hoping that I was retiring, because he thinks I threatened Bob Schrock's role as his most expensive friend. But I must tell him that I've so enjoyed the role of fundraiser that the one privilege I've insisted on as I retire is the right to continue to visit our good friends like Cecil and give them opportunities to create great new things at MIT.

My life at MIT has been a delight. Sometimes, I've thought of the story of the American soldier in World War I who was sent to go forward and see where the German troops were. And he shouted back to his commander, I've captured 10 Germans. I'm sure you all know this story. And the commander said, bring them back. And he said, I can't. The commander said, come back yourself. He said, I can't. And this institution is very much like that.

If anyone thinks you can give leadership to this particular faculty of 950 individuals, they haven't been around very long. Life here from the very start has been a learning experience, a continuous learning experience, and a great pleasure for that reason.

And MIT is an institution that was founded at the time of the Civil War. And we heard some bleak as well as optimistic discussions this afternoon about the world in which we live. And it's certainly complex. But on occasion, I've gone back and read the memoirs of Mr. Rogers, who started this institution. And I can tell you, the times look pretty rosy today compared to the days in which he was trying to keep this newly founded institution alive and meeting the needs of the country at the time.

I don't know whether I'm an optimist or not, but I'm a realist. I realize this is the only world we've got, the only one we're likely to have. And we have to use our intelligence and our talents and our opportunities to deal with the problems as they confront us. The problems that Sid Drell talked about, the problems of communication that John Hersey talked about are certainly more serious, at least more threatening.

And all that means, I think, is that we all must work just a little bit harder both to avoid the worst traps that we could fall into and to seek-- I wouldn't say solutions, because I don't believe there is such a thing as solutions. I think the world is a continuously evolving place. And as we deal with one set of problems, we inevitably create another set.

It's a dynamic, continuously evolving experience for all of us, for every human being. And we must be prepared, I think, not only to deal with the problems we face today but the new ones that we create for ourselves, because we're inevitably going to create them. And as MIT moves ahead with Paul, who is certainly as perceptive and understanding of the tremendous opportunities and dangers which this institution faces, I think we can look to our future, to the challenge, with some hopefulness.

And all I want to say to all of you faculty members and so many friends who are here that it's been a pleasure. It's been a most exciting and interesting life. I hated to admit that I was turning 65 and had to quit, because I so enjoyed what I've been doing. But I suspect I will have equal opportunities to continue, since this is an equal opportunity institution that ought to provide opportunities for males as well as females.

I do wish though, Sheila, Ted, you had given me Building 20. I've been trying to find an office over there. And I haven't been able to carve one out yet. But hopefully I will. It's where I began, almost where I began my MIT life.

Actually, as I think Al Hill mentioned this afternoon, he first stuck me up in the attic of Building 6, but I didn't stay there long. I found Ed Purcell and went to work for him. He had a little more space, a little more air. And we soon built a temporary building on the campus. That was 30 years ago, 1942. We're about to make-- pardon? '42-- 40 years ago.

We've asked the national monuments commission to put a plaque on the building and a coat of paint. It's really the best building on the campus. You can drive nails into its walls. You can drill holes in it and it doesn't complain. Nobody notices them. There are already so many. And it's the place I feel most comfortable.

And with that, I'm reminded of the remarks of a great leader of Caltech, Clark Millikan, who at about this time after a long ceremony was asked to give his address. He said-- I'll paraphrase mine-- is 61 Shattuck Road, Watertown, Massachusetts, and that's where I'm going. Thank you all very much.

[APPLAUSE]