Twenty-five of the Radio City Music Hall Rockettes who will help us celebrate our Twenty-Fifth Anniversary on Saturday.
Acoustical Society News

ANECDO TAL H I S T O R Y O F T H E P R O G R A M

THE TWENTY-FIFTH ANNIVERSARY CELEBRATION

of the

ACOUSTICAL SOCIETY OF AMERICA

THE FORTY-SEVENTH MEETING

HOTEL STATLER
New York, New York

June 23, 24, 25, and 26, 1954
The Twenty-Fifth Anniversary Celebration

Wednesday through Saturday, June 23-26, 1954

The Statler Hotel, New York City

A Quarter Century of Acoustical Science. “Since we are committed to a decimal system of numeration while at the same time holding the scale-of-two in high regard, and since our unit for the measurement of long times is the period of the earth around its orbit, therefore the Council of the Acoustical Society of America has declared this particular moment, a quarter century since our founding, as a time for high celebration of the success of the Acoustical Society in advancing our science and as a moment for assessing past progress and orienting future effort. A goaded Program Committee, under the chairmanship of Dean Robert B. Lindsay, has organized 151 papers into a lavish program—lengthened to four days (morning, noon, and night), broadened to three simultaneous sessions (with certain exceptions), enriched by the papers of distinguished scientists from abroad, dignified by collaboration with Columbia University in the celebration of its 200th Anniversary, invested with a sense of historical importance through the preparation of a time capsule for transmission to our 100th Anniversary Celebration, and beautified by a session on Large Auditorium Acoustics in Radio City Music Hall followed by a Cinemascopes film and giry stage show. Truly, if you are the kind that attends only a few Acoustical Society meetings per century, this is THE meeting to attend.”

The Program and the Program Committee: The barking of the foregoing paragraph announced this Forty-Seventh Meeting in the Program which was mailed to the members in advance. Winston E. Kock, with much support from Ralph L. Miller, designed the technical program and invited most of the speakers, while Richard H. Bolt invited the distinguished scholars from abroad.

Cyril M. Harris arranged the evening at Columbia, Floyd A. Firestone in collaboration with Hallowell Davis planned the banquet and other entertainment features, and Wallace Waterfall made all of the arrangements with the hotel. Program Chairman Robert B. Lindsay gave fatherly advice to all.

Statistics: The registration of 527 was an all-time record, the runner-up being our 1947 meeting in New York with a registration of 480. At the 1947 meeting 230 attended the banquet, while this year there were 273 at the dinner. This latter figure is not a record, being topped by the 312 who attended the more-fun-per-dollar banquet at RCA last year. An unusually large number of ladies graced our social functions, and 60 lunched with Mrs. Waterfall in the Delegates' Dining Room at the United Nations overlooking the East River.

The Sessions: Commemorative Sessions of Invited Papers by distinguished foreign visitors and local scholars viewed past achievements in the many branches of acoustics and called attention to the more fruitful fields for future research. Each regular session bore the name of a scientist who has made acoustical history, and in most of the sessions his photograph was projected on the screen. Thus we attended—

The Dayton C. Miller Session on Musical Acoustics
The Paul Langevin Session on Ultrasonics I
The Thomas A. Edison Session on Transducers
The Vitruvius Session on Architectural Acoustics
The Hiram Percy Maxim Session on Noise
The Wallace C. Sabine Session on Architectural Acoustics
The Harvey C. Hayes Session on Underwater Sound and Wave Propagation
The Hermann von Helmholtz Session on Physiological Acoustics
The George S. Ohm Session on Hearing
The Rudolph Koenig Session on Instrumentation
The Lord Rayleigh Session on Waves and Vibrations
The J. B. J. Fourier Session on Noise
The Pierre Curie Session on Ultrasonics II
The Alexander Graham Bell Session on Speech

Some good-natured objections were lodged with the Program Committee for associating the name of Fourier with noise (objection overruled), and we are pleased to hear that Harvey C. Hayes is alive and hearty though already sted above with the immortal departed.

The Extra-Curricular Social Affairs: After the dinner the Davis's entertained in the Presidential Suite. On the previous evening, before the affair at Columbia, the Harris's had a buffet dinner in their Riverside Drive apartment which has a beautiful view up the Hudson to George Washington Bridge. The Firestone's fired the opening gun on Wednesday morning by inviting a group to breakfast in the Cafe Manhattan at the Statler. But the high point of the program for the ladies was their luncheon with Mrs. Waterfall in the beautiful Delegates' Dining Room overlooking the East River at the United Nations. After lunch the ladies went for a guided tour of the United Nations buildings.
Evening Session on Musical Acoustics at Columbia University

Dr. Cyril M. Harris arranged an interesting evening session on musical acoustics at Columbia University, which was celebrating its Two Hundredth Anniversary while the Acoustical Society was celebrating its Twenty-Fifth Anniversary. Dean Dunning spoke for the University as follows:

**Man’s Right to Knowledge and the Free Use Thereof**

**DEAN JOHN R. DUNNING**

*Columbia University*

"I think it is particularly appropriate that the Acoustical Society join with Columbia University in their respective anniversary celebrations. The bicentennial theme, "Man’s Right to Knowledge and the Free Use Thereof," is as pertinent to the field of acoustics as it is to other branches of science and the arts and vital to its continuing development. The free interchange of material among persons in this country and with their colleagues from other lands—some of whom we are fortunate to have with us tonight—has made progress in acoustics possible, both in the advancement of theoretical knowledge and in practical applications of benefit to people everywhere.

"Contributors to the field of musical acoustics over the centuries in far separated lands have added to their respective cultures and to man’s enjoyment of living. The field of architectural acoustics has been beneficial in providing us with the knowledge for designing the most favorable environment for the performance of musical instruments, and in addition with knowledge making it possible for our homes and places of employment to be pleasanter environments in which to live and work. As a result of acoustical research in the field of speech, we are much closer to an understanding as to what it is about speech that conveys information—perhaps some day making possible the effective use of voice control equipment, or perhaps practical and effective means of converting speech waves into stimuli other than auditory that will enable the deaf to follow conversations easily by means other than lip reading. Work in the field of psycho-acoustics and physiological acoustics has given us added insight into the problems of hearing. We can look forward to advances in medicine based upon the applications of acoustics to that field. Ultrasonics has already proven itself a practical tool for materials testing and certain other industrial applications. Further research may uncover new uses for the science of inaudible sound. With the increase of industrialization, new means of transportation, and many new types of labor-saving devices in homes and offices have made it possible to increase in the noise of the environment that surrounds us. The field of acoustics, within the past several years, has taken active strides toward a better control of this unwanted sound. Those of you who have been active in the field of acoustic instrumentation, for example microphone and loudspeaker development, have contributed to our bicentennial theme by providing means for the freer diffusion of knowledge.

"The free use of knowledge, which you in the science of acoustics are formulating in your academic and industrial research, will in the future, as in the past, leave its strong impress on many aspects of contemporary life."

The Invention of the Pianoforte was discussed in a charming manner by Dr. Emanuel Winternitz, Curator of the Musical Collections of the Metropolitan Museum of Art, Professor of
Music at Yale University, and talented amateur magician. "The pianoforte—the pest of civilization—at least before television. When the mechanism of the pianoforte is stringed with strings of the harpsichord it gives a very different sound, like a flower blossoming out. But I should not use such sentimental words here, it is just the romantic approach."

The Modern Piano was discussed by an engineer named Theodore Steinway who was introduced as the representative of a local piano company—we never were told which. In a rapid-fire discussion of piano design, he projected about a peck of lantern slides with snappy comments. Professor Willard Rhodes of Columbia played records of Indian music, and Professor Otto C. Luening, assisted by Professor Vladimir Ussachevsky, played tape music such as we never heard before, with such titles as—Fantasy in Space—Sonic Contours—Concerto for Tape Recorder and Orchestra.

Many thanks, Cyril, you arranged an interesting evening for us, providing relaxation which by the end of our second day we were needing.

The Time Capsule for Transmission to Our One-Hundredth Anniversary Celebration

Utilizing the vocabulary of the day, we have designated as a Time Capsule the records of our Twenty-Fifth Anniversary Celebration Dinner and after-dinner entertainment, as preserved in:

1. A 16-mm sound movie a couple hours long.
2. A tape recording of the same sound track which will be transferred to disks for long-time storage.
3. The photographs of the occasion.
4. This account in the Journal.

The title of this time capsule is—"A Parade of Acoustical Personalities." Posterity can read our technical contributions to the science of Acoustics in this Journal, but the purpose of the time capsule is to transmit to posterity the flavor of the personalities of the acousticians of our day. How much would you give to see and hear a sound movie of after-dinner speeches by the group of famous acousticians whose names have been mentioned in designating our sessions?

A Time Capsule Custodial Committee has been appointed by President Leo Beranek to preserve safely the foregoing records from bomb and bookworm and bring them to the attention of our One-Hundredth Anniversary Program Committee or other interim committees. Each of these very healthy young men is now not over twenty-five years of age, and it is his duty to keep breathing for another seventy-five years in order to fulfill his appointed mission. Additional appointments will be made later.

BERNARD A. LANDES (Chairman, pro tempore), University of Michigan, Speech Clinic, Ann Arbor, Michigan
ROBERT P. DEANLEY, Raytheon Manufacturing Company, Waltham 54, Massachusetts
SALMAN A. ELDER, Wilson Hall, Brown University, Providence, Rhode Island
GEORGE B. LOTT, Ordinance Research Laboratory, The Pennsylvania State University, State College, Pennsylvania
JOHN W. WILLIAMS, 970 East 92nd Street, Brooklyn 36, New York
JAMES R. WYLIE, Box 185, Starks, Connecticut

A Fanfare for our Photographing and Recording Crew Through Winston Kock and Ralph Miller a crew of experts from the Bell Telephone Laboratories was assembled on the balcony of the Grand Ballroom of the Statler with sound-motion camera, tape recorder, tape reproducer, and lantern slide projector. Twenty-five kilowatts of photoflood bulbs gave a high level of illumination at all portions of the Ballroom. After considerable debate, it was decided that it was better to photograph the members' faces rather than the backs of their heads, and a speakers' table seating 90 was provided. F. M. Tylee and Tom Musca installed and operated the sound-motion camera, loading magazines with extra-long rolls of fast black and white film, in a changing bag. Floyd Harvey and J. H. Kronmeyer operated the tape recorders and reproducers, with Ralph Miller up riding The Gain. A telephone was provided for whispering communication with Editor Firestone at the speakers' table. A lot of energy and expense went into these arrangements, and we are greatly indebted to the Bell Telephone Laboratories' group.
The Twenty-Fifth Anniversary Celebration Banquet (looking toward third base)

Seated at the Speakers' Tables are:

Officers and Council Members
Council Members and Past Presidents
And their Ladies

Program Committee and Patent Reviewers
Program Committee and Patent Reviewers

First Treas. Stoddard, Burris-Meyer, Simmions
Biennial Awardees and Scholars from Abroad
The Twenty-Fifth Anniversary Celebration Banquet (looking toward first base)

Seated at the Speakers' Tables are:

- Interesting People of Importance
- Officers and Council Members
- Council Members and Past Presidents
- Biennial Awardees and Scholars from Abroad
- And their Ladies

Program Chairmen Lindsay and Kock
Program Committee and Associate Editors
The Banquet of Celebration

The Twenty-Fifth Anniversary Celebration banquet hall is filled with brilliant scholars and beautiful ladies, and glows resplendently under the twenty-five kilowatts of photoflood bulbs which had been specified by the reading of the exposure meter of our sound-movie photographer Tylee.*

But quiet, everyone has been seated, Dr. Arnold Small is playing sweet music on the violin, and President Hallowell Davis begins to speak:

“Members of the Acoustical Society of America, and our guests and friends: This is our Twenty-Fifth Anniversary Celebration held in New York City in the month of June, 1934. I explain these things, not because you do not know them, but because we are making a Time Capsule as part of this our Twenty-Fifth Anniversary Celebration, to transmit to future Anniversaries, particularly our One-Hundredth Anniversary. This explains the somewhat unusual ratio of head table to the body of the organization; we wanted to have many faces facing toward the camera. We will now begin our Twenty-Fifth Birthday Party Dinner.”

Dinner is served. The strains of sweet music continue. The camera slowly pans over the entire party till everyone is photographed. Confidential remark picked from the sound track—“The camera caught me just as I dropped my shrimp.”

—But now we have finished the dessert and the red light on the front of the camera indicates that it is running again.

President Davis: Well now, friends, let’s proceed with the really pleasant part of the evening affair, the celebration of our anniversary. It is a Birthday Anniversary, and I think it is very appropriate for me to open this after-dinner part of the proceedings by reading a letter of greetings and congratulations, which incidentally mentions also the birth of another organization.

AKADEMIET FOR DE TEKNISKE VIDENSKABER
LYDTEKNISK LABORATORIUM

København K., Danmark, June 19, 1954

The chairman of the meeting of the Acoustical Society Hotel Statler, New York

The first child of ICA (International Commission on Acoustics) was born on the 19th of June 1954 at 12:55 p.m. The name of the child will be: The Scandinavian

* (The whole movie and the sound recording have turned out beautifully and certain shots from the movie are reproduced here in order that the reader may catch its spirit. But you should remember that it is a long trail from a 16 mm negative, to a 16 mm workprint, to a 5-in. negative enlargement, to a 3-in. glossy print, to the engraver’s negative, to the engraver’s cut, and finally to the printed page. So view these pictures while held at 1.4 arm’s lengths.)

Acoustical Society. 125 happy fathers from four Scandinavian countries were gathered at the Cradle to welcome the boy. We hasten to announce the birth of the boy to the grandfather and send our best greetings on the occasion of the 25th Anniversary of the American Acoustical Society.

Signed: Paavo Arni, Finland
Keno Berg, Norway
Claes Wachtmeister, Sweden
Fritz Ingerslev, Denmark

[applause]

President Davis: That was welcome news from abroad. We have quite as welcome friends from abroad who have come across the sea and are with us tonight. Four of them have contributed to our program and I hope that these four distinguished guests will consent, each of them, to say a word or two to us from the microphone in front of me. Professor Richardson, would you be kind enough to come to the front? Professor E. G. Richardson who comes from King’s College, University of Durham, Newcastle-on-Tyne, England.

Professor Richardson: Mr. President, ladies and gentlemen. I was going to say also fellow members. I really feel that I am not qualified to speak under the heading of distinguished foreign visitor, being neither distinguished nor really a visitor since I have been a member of this Society, almost since its inception. Professor Dayton C. Miller was a revered friend of mine, and I remember it was about a year after the inception of the Society that he wrote to me and suggested that I might be interested, and I certainly was, and I joined forthwith. I believe I can claim now probably to be the senior foreign member. If anybody here or anywhere else claims to have joined before 1931, let him stand up now or forever hold his peace. [applause]

The American Acoustical Society can claim to be the first of these societies or groups, we just heard of the latest one. In Britain we tried to form one in 1937 as an off-shoot of the London Physical Society, and we had the idea of affiliating to your Society, but unfortunately we couldn’t get enough support in our country and it wasn’t until sometime just after the war that we were able to form the British Acoustics Group. We, I think, are the first of these children coming from the parent stock and, as you know, we have, with the aid of my friend Professor Meyer and a French group, started an inter-
national journal, Acustica. We hope, therefore, that this cooperation will continue, especially through this new organization of the International Committee on Acoustics.

I am very glad to be here. I am afraid I cannot promise to be at the Fiftieth, certainly not the Hundredth, Anniversary, but we will convey our greetings to that meeting when it does take place. [applause]

Professor Erwin Meyer of the Physical Institute at Göttingen, Germany: Mr. President, ladies and gentlemen. Silver weddings in human life fortunately occur very often, even in our time which is full of divorce, but a silver anniversary of a society is a rare occasion. Up to now I have no personal experience with a silver wedding; it will happen for me only in a few years, but I think surely one of the many points to be discussed at such a jubilee, if I am allowed to use the scientific word "discuss" for a matter absolutely nonscientific, are the children and their development. Let us try to do the same for our silver bride, the Acoustical Society. The choice to designate our Society as "silver bride" or "silver bridegroom" is a little difficult, but I hope with the choice of the word "bride" I am more on the safe side. [laughter] Then the bridegroom or rather the bridegroom, there are many, are the founders of the Society which only means that the bride herself is very youthful and therefore energetic. [laughter] Now what about the children from this relation, I mean the acoustical societies in the other countries. There are many, so many that I cannot enumerate all. I am only authorized to speak for one of these younger children, "The Acoustics Group in the German Physical Society."

Acoustics is, of course, an old branch of physics which has always been treated a great deal in Germany. But now in the couple of years we are in the very happy position of having a special and active Acoustics Group with many members, and I have the honor and the privilege to deliver our Group's best wishes for the future of your Society. I know of nothing which better summarizes our wishes than that your Society may cultivate the science and technique of acoustics on the same high standards as up to now; also for the next seventy-five years until the Centenary of 2029.

And now a technical remark may be allowed. The most quoted link between our acoustical science and public opinion in all countries is without doubt the noise, this by-product of human life which we have historical reports about during all centuries. From the time of the horse-driven vehicle, as well as from our motor vehicle time, we have heard and we hear again and again in all that the human being in civilized countries is constantly exposed to various sorts of annoying and nerve-breaking noise. In my country, in Deutschland, the number-one acoustical enemy is the motor bicycle which is almost unknown in your country but numbering hundreds of thousands on our roads. Planes, and especially jet planes, with their enormous and always-increasing energy are a fantastic noise source and represent today probably the greatest technical problem for acoustics in your country. I am afraid we will still many decades to solve this question in a reasonable way, but I do hope certainly our acoustical grandchildren in the year two thousand twenty-nine will have the whispering or even the breathing jet plane. [laughter] This is my technical wish today at this Silver Anniversary of the Acoustical Society. [applause]

President Davis: Professor Van Itterbeeck of the University of Louvain of Belgium, I am sorry that he is not here—we would have enjoyed a word from him also. Now Dr. Parthasarathy, from India, would you say a word for us please? [applause] Dr. Parthasarathy is head of the division of acoustics of the National Physical Laboratory of India. We are extremely pleased to have you with us this evening.

Dr. S. Parthasarathy: Mr. President, ladies and gentlemen. I'm glad to be here on the occasion of the Twenty-Fifth Anniversary Celebration of the Acoustical Society of America, coming from the other side of the world. I've enjoyed the lively discourses and discussions during the various meetings of the Society. If what the Society has done in the last twenty-five years is an indication of its future, a more intense life of activities for the future is assured, both in the academic and technological aspects.

It has been known for over half a century that light has a dual personality. It behaves both as a wave and as a particle. If that is true with energy of electromagnetic character, we will not be far wrong in presuming that energy, be it mechanical, electrical or sonic, should occur in quanta. So far, we have sound to occur as waves, and its behavior is explained on the basis of the wave character. We are now just on the threshold of a new era in acoustics with so much research activities in it, all over the world. It is my fervent hope that in the not distant future, maybe in the next twenty-five years, someone present in this audience will unfold through experiments the quantum nature of sound.

And now we turn to this country. America is a country full of energy and vitality. She no longer follows the policy of isolation that she used to do in the days before the First World War. The initiative in many matters has been taken over by her. I shall illustrate this by an anecdote.

Some decades ago, before the First World War, an Englishman on a tour of this country went to a hotel to stay. He asked the bellhop "Will you please take me to my room?" On hearing this, the face of the bellhop registered surprise, and he exclaimed "Go! he talks American!" [laughter]. I will now say in my own native tongue: "Best wishes to the Acoustical Society; and many more Anniversaries." [We are sorry that our printer does not have the interesting characters in which Dr. Parthasarathy's good wishes are expressed in his manuscript.] Thank you. [applause]

Professor A. C. Raes of Belgium. Professor Lothar Kramer of Germany, Dr. S. Parthasarathy of India, and Professor B. G. Richardson of England.

President Davis: Our other foreign guests I will not impose on by asking them to say anything, but I hope they will rise so that we may recognize them. Professor Lothar Kramer from Germany. [applause] Professor Raes from Belgium. [applause] And we regret the absence of two others whom we had expected, both of whose names were on the program, Professor Amedeo Giacomini from Italy and Dr. Koji Sato of Japan. We are sorry that they are not with us today. We do have a representative from the laboratory in Rome where Professor Giacomini works, who is here as a substitute for Dr. Giacomini, Dr. Sette. [applause] Please take our best wishes to Dr. Giacomini and our regrets that he was not with us.
[At this point, Dr. Paul Onley, Fellow, sang a baritone solo at high level with professional competence, accompanied by Mrs. Onley.]

Dr. Paul Onley, Fellow, baritone.

President Davis: We will now begin with our own Parade of Acoustical Personalities, our past Presidents. The first of our Presidents is Dr. Harvey Fletcher, I believe now Professor also. Harvey, Uncle Harvey, as so many of us call you, will you speak to us? [applause]

First President Dr. Harvey Fletcher: I am glad to know I have so many nieces and nephews here; welcome to our family party. [laughter]

Uncle Harvey Fletcher, First President.

I was asked to say something about the organization of this Society, so it will be somewhat serious, or funny, according to the way you look at it. The first contact which I had with a young man named Wallace Waterfall was by a letter dated November 6th, 1928. And he was a young man at that time, although he denies it now. He addressed me, and I quote,

"Dear Sir: Within the last few years there have been a great many developments in the subject of architectural acoustics. Architects, builders, and the public in general are beginning to recognize in the building industry a new engineering science which is approaching a state of development comparable with other engineering sciences."

That’s the first letter. Later in this letter he suggested that we ought to have some sort of an organization for acoustical engineers. He sent such a letter to about fifteen men. On November 16th, and I want you to notice that that is only less than ten days later, I replied [laughter], and told him the idea was fine, and I suggested several other names to be included among those he invited, and that they all be invited to a meeting where an organization may be considered. And it was finally decided that such a meeting would be held December 27th, and we invited them to be at the Bell Telephone Laboratories. Less than a week later, Dr. Arnold sent a letter to all these people to come and have luncheon with him on that day. As you all now know, this meeting was held, and later I’ll show you a picture of the members that were present. We have extensive minutes of this first meeting, and I note, “speeches were made by—Professor Knudsen, Anderson, Watson, Richtmeyer, Miller, Saunders, Waterfall, Wolff, Stoddard, Maxfield, Hewlett, Taylor, Parsons, Chrisler, Hickman, and Frederick.” So you see our meeting started out as a talking society and it has continued ever since through the years. [laughter] After all this speckmaking, a temporary set of officers was installed. I was honored to be your first temporary President. Here are the words spoken by me at that meeting:

“I appreciate the honor as the first temporary President of this Society which I think is going to make history. Fifty years from now,” and I didn’t say twenty-five, I said fifty,—“Fifty years from now, this little gathering will be referred to as the First Meeting of the Acoustical Society of America. I hope some of you are living to describe it.” Mr. Waterfall was elected temporary Secretary [biggest burst of hilarious laughter of the whole banquet], and I’m sure you’ll be interested in knowing what he said [revolution of the laughter]. “I appreciate the honor of being Secretary of this Society, [some more laughter] and I can assure you that the letter writing will continue as it has in the past.” [renewed louder laughter] I’m tempted to ask Wallace at this time how many letters he has actually written since he made that promise. [still more laughter] Later in the evening he may be able to tell us.

The committee which was elected to form a Constitution and By-Laws were these temporary officers, and added to them were Richtmeyer, Miller, Saunders, Maxfield, and Parsons. Thus ended the first meeting of the Acoustical Society with everyone present being extremely enthusiastic. As you will see, this meeting was held twenty-five years ago last December. We are celebrating the Twenty-Fifth Anniversary now because the first official meeting of the Society was held here in New York City on May 10th and 11th, 1929, and later I’ll show you an announcement of that meeting. It was held in the auditorium of the Bell Telephone Laboratories. Those of you who were present remember that we had at this meeting two of the finest demonstration lectures that we have ever had: one by Dr. Arnold on Acoustic Foci, and one by Professor Miller on the Science of Musical Sounds. At this meeting permanent officers were elected as follows: President, Harvey Fletcher; Vice-President, Vera O. Knudsen; Secretary, Wallace Waterfall; Treasurer, Charles Fuller Stoddard. Members of the Executive Council were Paul E. Sabine, J. P. Maxfield, C. W. Hewlett, G. R. Anderson, Dayton C. Miller, and F. R. Watson. The Publication Committee members were Wallace Waterfall, F. R. Watson, Paul E. Sabine, and Charles Fuller Stoddard. Thus the Society was launched twenty-five years ago and the first issue of The Journal of the Acoustical Society of America came out in October, 1929.

Now I want to show you just two slides. The first slide [see next page] shows you the original members. There were four not on this photograph, and they were Donald MacKenzie, John H. Bolen, Bert Graham, and H. D. Arnold. Right in the center was your first President. [laughter] The next slide [copy not available] is the first announcement gotten out by your Secretary, Wallace Waterfall. I thought you would be
Part of the group of organizers of the Acoustical Society, Bell Telephone Laboratories, December, 1929.


interested in seeing it. He or somebody else made a mistake, and they had to correct it as you see. [laughter] ... [applause]

President Davis: While our first President is making his way back, I'll point out that he is the only living Honorary Member of the Acoustical Society. [applause]

Dr. Fletcher: I'll like to say that I still have to pay for these business, however. [laughter]

President Davis: Fletcher mentioned Dayton Miller in the course of his description of the first meetings. We wish that Dr. Miller were still alive and with us, but one of his students will speak briefly about Dr. Dayton C. Miller, our Treasurer, Herbert Erf. [applause]

Treasurer Erf: I am very happy that I was asked to say a few words about Dr. Miller, our second President. Dr. Miller was, of course, a professor. He was just an inspiring teacher as well as a distinguished scientist. In Dr. Miller's very early age he was very much interested in music and actually was a composer and an artist in his own right. It was perhaps his interest in music that, later on in his professional life as a professor, got him into the science of sound. In 1905, I think, the record shows that he directed his research fully in the direction of sound, and in 1908 he came out with the famous phonograph which was demonstrated to the American Physical Society at its Baltimore meeting in 1908. Then he used this instrument, in fact I think it was designed perhaps with this in mind, to study the tonal quality of musical instruments, particularly the flute, for which he had a very fond affection—and we'll have a slide in a moment showing Dr. Miller in white tie and tails with his famous gold flute. By the way, his flute collection numbered somewhere between 1400 and 1500; he had carved ivory, jade, and what-not, and they are all now housed at the Library of Congress on exhibition at all times.

As many of you know, of course, he was author of several books on sound, the famous one being The Science of Musical Sounds which I think was published in 1915. And then in 1935, at the suggestion of our good Editor, Floyd Firestone, he brought out his Anecdotal History of the Science of Sound. Then during World War I he did a good deal of work in the study of the shape, size, and speed of sound waves from big guns at Aberdeen Proving Ground.

In 1914 or '15 he went to Boston to give the Lowell Institute Lectures. At that time he was the house guest of Dr. and Mrs. Wallace Sabine, and from that time on he was a real researcher in the field of building acoustics.

Firestone, Morse, and myself are proud to be disciples of Dr. Miller. And I'm very happy to be able to tell you people about this tonight. Thank you. [applause]

Professor Miller, his portrait, and President William Wickenden of Case Institute of Technology who said on this occasion in 1940: "We shall make a permanent place for this portrait in the Rockefeller Laboratory of Physics, a building which you, Doctor Miller,
planned with loving care, and to which your inspiring teaching
and notable researches have added an enduring distinction. In
years to come this portrait will be one of our shrines; many a
busy teacher, many a man wrestling with a problem of research,
many a student going about his daily tasks, will pause before it,
restrained by the personality of a man who loved truth, beauty
and integrity, with his whole heart, and will be inspired to carry
on the torch which you have borne so nobly.”

President Davis: We are glad to have here this evening our
first Treasurer, Mr. Stoddard. His photograph you saw in the
Lantern slide that Dr. Fletcher showed. Dr. Stoddard, would
you stand please. [applause]

Mrs. Harold Burris-Meyer, First Treasurer Stoddard, Mrs. Vern
O. Knudsen, and Mr. Burris-Meyer.

Editor Firestone: I wonder how many of you remember the
Chinan’s receipt that Mr. Stoddard gave us at that first
meeting when of course he was not prepared with any forms
and we were all prepared to pay our money, being full of
enthusiasm, so each of us just wrote his name on a piece of
paper, tore it in two, and he took one half and we kept the
other half. [laughter]

First Treasurer Stoddard: And my home is now Chinese.

President Davis: Undoubtedly some of you knew that Mr.
Stoddard was our first Treasurer, at least if you are looking at
the published list of our Past and Present Officers such as I
hold in my hand, his name is there as the Treasurer in 1929.
But anyone who has studied this particular page may be
puzzled that we have a Treasurer and we have a President and
Vice-President at that time, but it would seem that the
Executive Council was not instituted until 1933, and furthermore
it would seem that Floyd Watson was the first Editor of the
Journal. Careful researches have revealed that this is not the
case, that somehow has made an error here. I think we
should maybe charge it to our Secretary, but I will say imme-
diately that it is everyone’s error because this has been before
you, all of you, for years and years and years, copied from one
list from one program from one Journal to another. I will let
our good Secretary, and he is a good Secretary [laughter], and
the dean of the Council, fill in the missing information that
should have been on record. [applause]

Secretary Waterfall: I will atone for my sins by reading these
names which should precede the list that was in the last
published membership list and will be in the next one I assure
you. The Council members which were omitted from that list are:

<table>
<thead>
<tr>
<th>Name</th>
<th>Years</th>
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<tbody>
<tr>
<td>Paul E. Sabine</td>
<td>1929–30</td>
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<tr>
<td>J. P. Maxfield</td>
<td>1929–30</td>
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<tr>
<td>C. W. Hewlett</td>
<td>1929–31</td>
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<tr>
<td>G. R. Anderson</td>
<td>1929–31</td>
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Dayton C. Miller 1929–31
Floyd R. Watson  1929-32
M. D. Arnold 1930-33
G. W. Stewart 1930-33
Vern O. Knudsen 1931–34
E. W. Kellogg 1931-34
F. A. Saunders 1931-35
Floyd A. Firestone 1932–35
Paul E. Sabine 1933–34

Dr. Davis mentioned that there should have been another
Editor in that list, but I can only claim to have been the
Managing Editor from 1929–1933, at least that was my title
for the first four volumes.

President Davis: There’s nothing like getting the record
straight. Next we will hear from our first Vice-President and
subsequent President, Vern Knudsen. Vern, would you go
forward to the microphone? [applause]

Third President, Dean Vern O. Knudsen: I was instructed by
the Program Committee that the first speaker was speaking
seriously and the rest of us were to speak somewhat less
seriously. Mr. President, and honored guests, and members of
the Society. The many papers on noise at this session and the
announcement that was made today that the Acoustical
Society is sponsoring a new journal on noise control prompt me
to speak not about my greatest love but rather about my
greatest hate, noise. I choose as my text therefore “I hate
noise.” [laughter] Well, I first thought of this subject many
years ago. It seemed to me that the good Lord in his mercy,
or evolution in its extraordinary adaptive processes, had pro-
vided the majestic elephant and the lowly ass with earflaps
that would at least partially close the ear canal. [laughter]
But man, poor creature, was not so favored. Man therefore
felt that he was obliged to do something about this and began
developing earplugs. My own version, a double septum with an
airspace, in 1938, modified by my colleagues at UCLA and
later by my colleagues at Harvard, led to the Ear Defender or
the Ear Wardens. These and other similar earplugs have done
their 30-dB or better jobs quite well. But consider the recent
trend of noise levels. When this Society was organized, we
thought that 125 decibels was a big and a dangerous noise.
Today we speak of 150 decibels in about the same manner that
we did of 125 decibels only 25 years ago. Thus in a matter of
only 25 years we’ve had an increase of 25 decibels, or on the
average one decibel a year. [laughter] Now I know it is very
risky business to extrapolate, and I certainly would not do it
any other place except at a birthday party such as this. But I
trust that I may be granted the levity to extrapolate this,
ignoring of course such things as the dissipative forces that
come from finite amplitudes, which certainly become very
great at about 155 decibels, or overlooking, of course, the
193-decibel barrier when you have complete modulation of the
air, or such deterrents to this increase as was made sure by
today’s announcement that we are going to control noise—
granting those things or passing them aside, and extrapolating
this curve, when we celebrate the hundredth anniversary of
the founding of the Acoustical Society of America, we would
arrive at a noise level of 225 decibels. [applause] Now I wish
you to imagine, if you will with me for just my remaining half
minute, the kind of ear defender or body defender, say, that
you would need against such a noise as this extrapolated value
75 years hence. We start with the best kind of earplugs, with
earslaps, with a helmet, with a diving suit. That is not enough.
Then get a soundproof, automatized, mobile booth, with
of course a digital or an analog computer in the side and a tape
recorder, and you’ll give your instructions to that where you
want to go, push the button, and away you go. [laughter]
Incidentally, if that is made of lead you will be able to with-
stand not only the noise of 2029 but you’ll be pretty well
protected against the H-bomb or what comes next. Thank you.
[applause]
Acoustical Society of America

At the
Twenty-fifth Anniversary Celebration

Vern O. Knudsen
was proclaimed
Honorary Member
by unanimous accord of the executive council

As a scientist, he has achieved eminence in acoustics
As a member, he has made manifold contributions to the welfare of the Society
As a President, he has guided the Society wisely during its formative period
As a man, he has endeared himself to his colleagues

New York City, June 25th, 1938

President Davis: I now take great pleasure in announcing to you that Vern O. Knudsen has been elected Honorary Member of our Society. [applause] “As a scientist he has achieved eminence in acoustics. As a member he has made manifold contributions to the welfare of the Society. As a President he has guided the Society wisely during its formative period. As a man he has endeared himself to his colleagues.”

Miss Helen Meinzer, soprano soloist, kindly agreed to sing for us. She is a student of Louis Simmonds; he has often spoken in our meetings since our founding. There was much applause when Mr. Simmonds took a bow with Miss Meinzer. (Photo courtesy of Bruno of Hollywood.)
President Davis: I will ask a former Council member, Leo Delsasso, if he will come down and say a word or two that I understand he has for the benefit and erudition—words of warning and so on. [applause]

Dr. Leo Delsasso: I am very sorry to be the one person to bring a somber and sad note to this otherwise festive occasion. I hope that when the time capsule is opened they will forgive me. I do feel in duty bound, however, to call attention to one of the occupational hazards that goes with membership in the Acoustical Society—this for the benefit of the young people who are here. I sat through the meetings today listening to some of these expert young folks—they are expert because they know about Hankel Functions and a variety of other subjects of that sort—but in addition to that they are very able people and are likely to be called into administration even before they know it. I should like to point out that this is a real danger. And just to prove my case I want to ask some of the former members of the Society, or some of the present members of the Society who have fallen by the wayside, to step up and say a few words as to how this all happened to them. I'd like to read the list. Some are here and some are absent. The first one, Dr. Knudsen, Dean of the Graduate School at UCLA, we'll start with him again, please come forward. Dr. Lindsay, Dean of the Graduate School of Brown University, will you please come forward. [applause] Dr. Schilling, Dean of the Graduate School, Penn State. [applause] I believe Dr. Schilling is not here. Dr. Fletcher, Dean of Science and Engineering, Brigham Young University. [applause] Dr. Walker, Dean of the College of Engineering, Penn State. Dr. Boner, Dean of the College of Arts and Sciences, University of Texas. Dr. Hutchisson, Dean, Case Institute of Technology. These gentlemen unfortunately could not be here. Perhaps they no longer exist. Dr. Pegram, Dean of the Faculty of Applied Sciences from 1917 to '30, then Dean of the Graduate Faculty from 1930 to '49, Columbia. [applause] He has found a way to end it all; he is now Vice-President Emeritus and Special Adviser to the President. [laughter] All of these folks have fallen by the wayside, and I think, Mr. President, you should ask them for an accounting. [laughter]

Editor Firestone: Before Mr. Delsasso gets too far away I would like to mention that he sometimes signs himself "Assistant to the Dean, UCLA." [Laughter]

Dean Knudsen: Really there's nothing extraordinary about physicists, and more especially acousticians, becoming deans, as this spectacle before you [laughter] and the other four gentlemen who, as Delsasso said, prove the point about the hazard of becoming deans. I know poor Boner is at home boning over his budget and I presume the others are doing

Reversing the usual action, the deans are "called up on the carpet" for an accounting by Dr. Leo Delsasso (right). Left, Dean Knudsen of UCLA; Dean Lindsay of Brown; Dean Fletcher of Brigham Young; and Dean Pegram of Columbia. Absent are Deans Schilling, Walker, Boner, and Hutchisson.
The real problem, though—I think some of the younger members of this Society might very well attack this problem—is the irreversibility that this process seems to possess. If the recent trend continues, there may be a sorry celebration 75 years from now. We up here will be the majority, and you down there will be the minority. [Laughter] To dean or not to dean really is a serious question! [Laughter] That each of us tries to answer when we are called to this post. Each makes the resolve “I shall be a professor first and a dean second.” Soon he becomes a dean first and a professor second. Ultimately he becomes just a dean. But the second law of thermodynamics will not be denied. I think this process is quite irreversible. There’s nothing extraordinary at all about the movement in the other direction. Deans may become Provosts, or Vice-Presidents, or advisers to Presidents, or Chancellors, or Presidents, but the process doesn’t move the other way. One of our colleagues, we will all bear witness, tried the reversible process, and he is now dead. [Laughter] The younger members, I say to you—“Beware all ye who enter here.” [Laughter and applause]

Dean George B. Pegram: Mr. President, members of the Society, ladies and gentlemen. I think I must reverse the second law of thermodynamics a little bit in the case of deans because, after I’d been guilty of being a dean for some thirteen and a half years, though I still kept on teaching and kept in touch with research, I got out of being a dean and for six years had the time of my life [laughter] just doing research on nuclear physics, at a time when nuclear physics was very important. [Laughter] There’s that much to show against the irreversibility. But on the other hand, I did get caught in the deanship again, and, by the time I had finished that and got out, I’m afraid I was a little beyond any reversibility. [more laughter]

I think I should tell one little anecdote, warn some of the newcomers. Dean for a year or two, it was reported that the blue-eyed, fair-haired, angel five-year-old child of one of our professors who had had classes with several of the deans—the professor, not the young child [laughter] had been heard running up and down the corridor in front of her father’s office singing at the top of her voice, “All deans are fools. All deans are fools.” [laughter] It did seem likely that this little child had not had such acquaintance with deans as would entitle her to make a judgment of any kind, but perhaps she got her ideas from her father. Her father, very unfortunately, soon had to betake himself to an institution for mental diseases to take care of him. [laughter and applause]

Dean Fletcher: I want to say that I’ve been doing research all my life, last year and this year, and so I decided to take up a deanship for a little recreation. [laughter and applause]

Dean Knudsen: W.R.E.G.K-E-reation? [laughter]

Dean Lindsay: I merely want to say that you see before you the latest in the line of horrible examples whose sad fate has already been called to your attention by my distinguished colleagues. I hope perhaps I may claim a little extenuating circumstance like the servant girl who somehow managed to produce a baby without benefit of clergy and apologised for her transgression by saying, “But you see, sir, it’s just a very little one.” [laughter] You see before you actually a embryonic dean indeed [laughter], a dean who in spite of this microphone should speak in very muted tones compared to the stentorian voices of his hard-boiled, seasoned colleagues here who are old in the business and of course are utterly lost, as they themselves have admitted. [laughter] Speaking of course of muted tones can’t fail to remind us of ultrasonics, and I want to take this occasion to say that no amount of administrative duty, so far as I’m concerned—here I’m saying something that distinguished Dean Knudsen wouldn’t agree with—will ever make me give up my love for this subject to which I have devoted a good deal of attention, and I certainly look forward with the same amount of hope to that expectation, expressed by the somewhat inebriated damsels who was speaking about ultrasonics, of all subjects, to a friend of mine and asked him if he really knew how old this subject was. He said he didn’t, and she said, “Well, it’s over two thousand years old.” He expressed great surprise at that, and she said, “Yes, it was invented two thousand years ago by a man named Pethegorus.” He said, “Pethegorus? Pethegorus? Oh, you mean Pythagoras.” “Yes, yes, Pethegorus, the man who discovered the music of the spheres, and oh how nice it will be when we can at long last be there where Leopold Stokowski leads off in the first all-ultrasonic, orchestra.” Well I may say, ladies and gentlemen, that I shall be very happy to be there too because it will be a great relief to us all. [laughter and applause as the deans exit]

President Davis: Fourth President Paul E. Sabine sends this message on tape: The Foundations of Architectural Acoustics. This year, 1954, the twenty-fifth in the life of the Acoustical Society of America, is the sixtieth in the history of architectural acoustics, the youngest branch of acoustical science. It was sixty years ago that Wallace C. Sabine, then the youngest member of the physics faculty at Harvard University, was given the job of diagnosing and curing the faulty acoustics of the Lecture Hall in Fogg Art Museum.

Wallace Clement Sabine (not Adlai Stevenson).

What started out to be the presumably simple practical problem of making an acoustically poor room usable proved to be the beginning of a new branch of physical science. At the time there was no adequate theory of the behavior of sound within enclosed spaces. Moreover, there were no means ready-to-hand for making an experimental study of the problem. A present-day physicist would get an idea of the difficulty of the problem if he were asked to solve it without the use of electronic equipment, now found in any modern physical laboratory.
Caricature which Paul E. Sabine sent one year on a Christmas card with this sentiment:

Since all I wish at Christmas time
All power of words transcends,
With characteristic modesty
I send myself to all my friends.

Fourth President Paul E. Sabine, author of Atoms, Men and God.

The job was a real challenge to the insight, ingenuity, and patience of the young physicist who undertook it. Over a long period of years, using only organ pipe sources, a stop watch, and his unaided ear as apparatus, he developed and validated an adequate theory of reverberation in rooms, a criterion of acoustical excellence based on measured reverberation times, and a practical method of measuring the absorption coefficients of materials. The first use made of his knowledge and skill was in the design of the Boston Symphony Hall at the turn of the present century.

This research involved making observations in hundreds of audience rooms and concert halls throughout the country. His reference standard room was the constant-temperature room in the sub-basement of Jefferson Physical Laboratory. Because of its curved ceiling, the room was ill-adapted to use as a reverberation chamber, and the necessity for complete freedom from outside noise limited its use for sound experiments to the early morning hours when there was no other activity in the building. The need for a sound chamber free from these objections was met by his friend Colonel George Fabyan, who built the Riverbank chamber on his Riverbank estate near Geneva, Illinois. The completion of the new laboratory coincided with Wallace Sabine's untimely death at the close of the first World War.

Carrying on the research program planned for the new laboratory was assigned to the present speaker early in 1919. The shift to a new observer necessitated the recalibration of the organ-pipe sound sources, and the determination of the sound chamber constants by a repetition of the methods originally used by Wallace Sabine at Harvard. This, together with a comprehensive study of the sound-insulating properties of materials and a structural units, occupied the facilities of the new laboratory for some five years. Then came another shift from what Floyd Firestone has called the “toot and listen” technique to the wholly objective methods made possible by the development of the present electronic devices for the production and measurement of sound. Correlation of the then existing data with that obtained by the new methods was a major part of our activities at Riverbank in the years just preceding 1929.

During this period several similar laboratories were established, first at the Bureau of Standards, and later at universities and by various manufacturers of acoustical materials, so that with the organization of the Acoustical Society and the publication of its journal, architectural acoustics came to be recognized as an established branch of scientific technology. Its use by the architectural profession in the design of important buildings, such as the large Music Hall in Radio City and the remodeling of the House and Senate Chambers of the National Capitol, attests the practical value of the scientific results of work in this field.

If I were an oriental Philosopher, I should look forward to attending, in my next incarnation, the meeting of the Acoustical Society in 2029, to witness the opening of this time capsule. Barring that esoteric hope, I can only extend my word of greeting to the physicists of a future generation and express the wish that they will find the foundations of acoustics on which we are working today as trustworthy as we have found those of the generation just preceding us. [applause]

President Davis: It is with great pleasure that I announce that the Executive Council at its last meeting voted Honorary Membership for Paul Sabine. [applause] I will ask his son, Hale Sabine, in his own right a former member of our Council, to come forward and receive in place of Paul Sabine the Certificate of Honorary Membership. Will you transmit this—I will not read it as the citation is identical with the citation of
Vern Knudsen—and with our regrets to him that he was not here to receive it in person and our appreciation of the message that came to us through the tape.

Mr. Hale J. Sabine: Thank you very much. [applause]

Hale J. Sabine

President Davis: Honorary Membership was also voted by the Executive Council at this same time to another of our past Presidents, Dr. Floyd R. Watson. [applause] Again we regret deeply that Floyd Watson is not here to receive the Certificate in person. I will point out that also Floyd Watson was Editor of The Journal of the Acoustical Society, Editor from 1933 to 1939.

Sixth President Floyd R. Watson, by tape: Greetings from Floyd Watson in far-off California. The wonderful Program for the Twenty-Fifth Anniversary Meeting of the Acoustical Society is evidence of the continuing activities of the members. I have always had a great respect for those who are competent in their domain of research with a further sincere appreciation if they are also cooperative and friendly. If time permitted me to give credit for members with these qualifications, I would want to recite the accomplishments of a large number whose names appear on the roster of the Society. However, I am contenting myself with sending my appreciation to my many friends and my praise to all those who are so successfully advancing the progress of acoustics. [applause]

President Davis: I wonder if Bob Leonard who is a neighbor of Floyd Watson would undertake to deliver the Certificate of Honorary Membership to him with our best wishes, and our regrets that he was not here to receive it in person.

Bob Leonard: Very happy to do so. Thank you. [applause]

Fifth President Frederick A. Saunders.

President Davis: Our fifth president was Frederick A. Saunders. We do not have a tape from Professor Saunders, but we have something in the good old-fashioned way, a letter, and I will myself read this letter because Professor Saunders was one of my few professors of physics and taught me a little of what little I received in the way of formal instruction in the subject as a student at Harvard. So I take pleasure in reading to you the greetings for the Twenty-Fifth Anniversary of the Acoustical Society of America:

Fifth President Frederick A. Saunders, by letter: "In the years in which I had the honor of presiding over this not always very solemn Society, our Tenth Anniversary occurred. It is one of my pleasantest memories that we then had the opportunity of welcoming Sir William Bragg to our meeting. He gave us some acoustical reminiscences and a demonstration of combination tones, both in his characteristic manner, combining clarity and charm.

It was a triumphant occasion for the Society in general and for the Bell Telephone Laboratories in particular whose staff had done so much in acting as nurses and baby sitters to the infant Society and in accelerating its growth by feeding it with
invigorating research material. On that occasion, Harvey Fletcher, our most honored Honorary Member, gave a stimulating evening address on auditory patterns, and his staff showed their mastery of speech in more than one way. Altogether it was a very creditable show for any ten-year-old to put on. [Laughter]

Now that the Society has come of age we need not be surprised at its vigor, the embarrassing proliferation of its Journal, or the effervescence of its beloved Editor. If all these qualities persist in their growth, the One-Hundredth Anniversary will be well worth a trip back from wherever we happen to be at the time." [laughter and applause]

President Davis: The Executive Council also voted Honorary Membership to Frederick A. Saunders. [applause] I have here his Certificate. The citation again is identical with that which was read for Dean Kundsen. I am going to entrust this Certificate to my wife, Mrs. Davis, for transmission to Frederick Saunders, she being a friend of his family.

Professor Saunders was interested in music. His studies of the violin you all remember. You have read about them in The Journal. He studied scientifically how music is made, and what makes a good violin and a bad violin. We have as a member of our Society, a member of our Council in fact, a very skilled practitioner of this art, and I will call on Arnold Small to give a demonstration on the instrument that Frederick Saunders loved so well. [applause]

Seventh President Edward C. Wente has now retired after forty years at the Bell Telephone Laboratories. He invented the first practical condenser microphone.

The advent of stable electronic amplifiers made possible the transformation of the weak sound waves into powerful, easily measurable electric currents. In modern acoustics practically all experimental studies are therefore made by first effecting this transformation. We may truly say that the electronic amplifier changed experimental acoustics almost completely from a mechanical science to an electrical one. I wonder whether 75 years from now the future members of this Society will in retrospect be able to see anything that will have had an equally revolutionary impact on our science. Thank you. [applause]

President Davis: Thank you, past President Wente. We are now ready for the musical number by Arnold Small and his accompanist, Dr. Pikler.

Following a formal introduction, Maestro Small finds that his accompanist has apparently gone out for a beer. Councilman Saxton, Editor Firestone, and Thirteenth President Hunt are enjoying his predicament. So is he.

Editor Firestone: I suggest, Mr. President, that you go on to the next number and come back to this.

President Davis: Well, in the parade here before you, Dr. E. C. Wente, will make a speech. The floor is yours. [applause]

Seventh President Edward C. Wente: We are this week celebrating the Twenty-Fifth Anniversary of the founding of this Society. This year has another anniversary interest for me, personally, as it marks forty years since I first entered the laboratories of the Bell Telephone System. That year, I would like to point out, marked the beginning of modern experimental acoustics, not because I came on the scene, but because of the fact that during that year 1914 laboratory scientists had developed, out of the Audion of Dr. Lee De Forest, electronic amplifiers of sufficient stability and reliability to meet the exacting commercial demands of a three-thousand-mile transcontinental telephone line. This line, in which a number of these amplifiers were used in tandem, was put into service early in 1915. Then it became possible for all of us to enjoy California without being obliged to live there. [laughter]

"Romance Andalusiae" by Sarasate (freely translated, Romance on the Loose). Dr. Arnold Small plays with professional abandon. A thrilling number. Very capable accompanist, Andrew G. Pikler.
Dr. Small. Dr. Pübler and I will play for you “Romance Andalusia” by Sarasate. I’m sorry to have to recommend that Dr. Lindsay will just have to use some of Dr. Knudsen’s Ear Defenders; this is not an ultrasonic instrument. [laughter]

President Davis: Arnold, you have played for us before, we have enjoyed it before, but never have you played better or have we enjoyed it more than this time. Thank you.

We have had other Presidents, and coming down the line we come to one of the more picturesque members of that distinguished company who has given us musical demonstrations in this very room in past years. He has been prevailed upon, it took a little prevailing, but he has been prevailed upon to show how some of the acoustic effects for which he is famous were really produced. Floyd Firestone. [applause]

Eighth President, and Editor, Floyd A. Firestone: Yes, 'tis true that in this very room I did in 1942 and again in 1952 entertain the Acoustical Society after dinner by singing a program of quartettes all by myself. It sounded like this. Mr. Harvey, dig a little echo out of the Brownian motion. [Tape recording of an excerpt from Sweet Adeline sung in four part harmony with the solo voice ending on 42 cps.]

Well you know how that was done, of course, those of you who were here. I had an electric organ, and I brought the output from it to a speaker unit and then through a tube into my mouth, and, while I played the four-part harmony on the keyboard, I whispered the words to the song, and out came the song in four-part harmony. At least that's how I said it was done. [laughter] But I have a confession to make. This is how it was really done. I will demonstrate.

Now you may have wondered why it was that I did this trick in this very room in 1942 and again in 1952. Well it so happens that the proportions of this room are such that the normal frequencies are in the ratio of 4 to 5 to 6, giving a harmonious relationship. [laughter]

“I now wish to introduce the Three Normal Modes, and I use the term loosely: Ira Hirsch, basso profundo; Dan Martin, baritone; and Secretary Waterfall, with his inimitable whiskey tenor.” [laughter and applause]

But while I'm here I want to call attention to the members of the Editorial Board. It used to be that on ordinary occasions they would be seated off in one corner by themselves at a certain table because, having rejected so many papers of their betters, they no longer had any friends left in the Society. [laughter] The only reason they were on speaking terms with each other was because we have a rule in the Editorial Board that any member may publish his own paper without the benefit of a referee. [laughter] There are several of them who are members of the Editorial Board because that's the only way they can get their own papers published. [laughter] Now I wonder if the members of the Editorial Board would rise. [applause.] Thank you, gentlemen. And there are those who review the patents for the Journal, and I wonder if they would please rise.

Editor Firestone places a rubber tube in his mouth, leading to a four-barreled pitch pipe. Starts singing the melody of Sweet Adeline. Three additional lifelike harmonizing voices are plainly heard.

“In closing, I would like to call attention to my pride and joy. Mrs. Firestone, who edits the comments of the Editor and intercepts all the Letters to the Editor. [laughter and applause]

President Davis: The work of the Editorial Board is so magnificent and so important that it calls for a special commentary. And for this I will ask, speaking for the Society, our official wit and philosopher, Pat Norria. [laughter and applause]
Tenth President John C. Steinberg: Mr. President, members and friends of the Acoustical Society of 1951. Since it hasn't been done, I should like to begin by extending on your behalf, the assembled members and friends here, and on my behalf, our greetings to the Acoustical Society members of 1949.

I had the good fortune to present at the time of the first picture of the Acoustical Society in 1929, although apparently I made no speeches. Through the years the Acoustical Society has been a very interesting and stimulating society to belong to—it's really been a wonderful society to belong to. There's been a spirit of informality and esprit de corps which has been both refreshing and stimulating. I hope that this spirit preserves through the years. Indeed I think that it will because the spirit of an organization is no older than its membership, and there is nothing, at least in the immediate future that I can see, that would indicate that in 2029 there will not be young men and young women some of whom may be interested in acoustics. I suppose that by 2029 all of the problems in hearing and speech and communications that have worried us will have long since been solved. No doubt by that time you will be communicating by some extra-sensory means and will not even need to use your voice and your ears. Be that as it may, judging from today's meeting at least, I would guess that you will still be making articulation tests. [laughter] Again our greetings and best wishes to our One-Hundredth Anniversary. [applause]

President Davis: Thank you, John. I'm not following strictly the order of chronology of our past presidents because some of them will participate in some of the other activities that come toward the end, but we'll skip down now to Philip Morse who was with us earlier in the meetings. He left a tape, and that will now be played for us.

Twelfth President, Philip M. Morse.

Twelfth President Philip M. Morse on a crystal clear tape: Greetings to acoustician past, present, and future. This is Philip M. Morse speaking from the anechoic chamber in the Acoustics Laboratory of the Massachusetts Institute of Technology at Cambridge, Massachusetts. I hope these names and
phrases still mean something to you in the future. The science of sound has changed so much in the past 25 years, however, that one can almost be sure that the problems that we work on now will be solved and nearly forgotten 25 years from now. With the present state of the world, we also cannot be sure that cities or institutions will survive that long. The Acoustics Laboratory at Massachusetts Institute of Technology is now concerned with such old-fashioned things as room resonance, ultrasonic transmission, and the interaction between sound waves and the medium which carries them. An anechoic chamber is a room treated so as to be nearly sound-free. This one is fairly good. Listen closely and hear how quiet it is—[Penetrating voice from the distance shouts, "Hey, are you through in there?"] [laughter and applause]

President Davis: Our most recent past president is a man who will speak golden words to you with a golden tongue, Dr. Harry Olson. [applause; photograph on page 637.]

Fourteenth President Harry F. Olson: They say silence is golden, and if I took that up I would retreat immediately.

My start in acoustics was very fortunate in that my work was under Professor Stewart at the University of Iowa. The pioneering work of Professor Stewart in the field of acoustics is well known, and in my association with him, I feel, gave me a flying start in the field of acoustics. My interest in acoustics has been in sound reproduction, and the last 25 years have been very fortunate, as far as I'm concerned, because they have been the golden age of sound reproduction. The development and commercialization of motion pictures, television, and, for the most part, radio has occurred in the last 25 years. The telephone and phonograph were developed somewhat earlier, but the major growth has occurred during the last 25 years. The part that sound reproduction plays in everyday life is certainly fantastic. [Who's afraid of the big bad woofer?]

The impact of the telephone, phonograph, radio, sound motion picture, and television is tremendous. I think we can safely say that sound reproduction ranks with the printing press and the printed page. It's also interesting that the era of sound reproduction also coincides with the age of the Acoustical Society which all the more makes this the golden age of acoustics. Thank you very much. [applause]

President Davis: Well, we'll have to remember that the eye and the ear of posterity are watching and listening from the balcony. And perhaps for the benefit of those in posterity who may have changed the roles by the time this time capsule is opened and viewed and heard, I will say that in this present year and epoch the Biennial Award of the Acoustical Society of America is given each even-numbered year to a member of the Society not more than 35 years of age who, "during a period of two or more years immediately preceding the award, has been active in the affairs of the Society and has contributed substantially, through published papers, to the advancement of theoretical and/or applied acoustics." I will ask past recipients of this award, and there are many of them here, to stand and be recognized. [applause as past recipients stand: Richard H. Bolt 1942 Leo L. Beranek 1944 Vincent Salmon 1946 Isadore Rudnick 1948 J. C. R. Licklider 1950 Osman K. Mawardi 1952]

And I now have the great pleasure of announcing the name of the man who joins the ranks of those that have just stood, this year's recipient of the Biennial Award, Karl Uno Ingard. [applause] Past President Richard Bolt will tell some of the reasons why the award has been made to Dr. Ingard.

Dr. Richard H. Bolt, with suave and polished air, delivers the encomium for Karl Uno Ingard.

Eleventh President Richard H. Bolt: Mr. President, members now and then. The life and pursuits of Uno Ingard started in Sweden. The earliest reported pursuit revolved around a table on which there was a random distribution of vegetable and animal matter, in short, a smörgåsbord. [laughter] Now the pursuit of smörgåsbord requires both art and science. Ingard had both. His quantitative attack on the smörgåsbord problem led to his first discovery, the full implications of which have not yet been digested. [laughter] Early study of the Bible brought to Ingard's attention the verse "The first shall not fast, and the last shall have thirst." He generalized and condensed this basic theorem into the shorter form, "The last shall be first." [laughter] Since that time, Ingard has indeed kept a fast pace. Returning to the smörgåsbord table, he measured its circumference and got 3.99776 ± 4. [laughter] With rare insight he rounded this off to 4 meters. He then established the Swedish track record for the 4-meter sprint. [laughter] When he reached his teens, he went after the 40-meter and then the 400-meter marks. But he wanted to overcome obstacles, so he became a hurdler. It was but a short jump from hurdling to the broad jump pit, and so here too he made his mark. Actually, the Swedish newspapers of the early '40's carried many a headline on Ingard "The Youthful Flash." Today the Acoustical Society salutes you, Uno Ingard, for your outstanding achievements in the world of sports. [laughter]

But Ingard won more than records on the track. One day he met a lovely sprinterette [laughter] and a very fast girl with the intellect. They chased each other in relays and then to the altar. She is here tonight, Doris Ingard. [applause] We salute you, Doris, for your charm and for your outstanding contribution as a pace-setter for Uno. Doris and Uno have actually collaborated on acoustics research; the problem: to find a name for their first son that would sound good both in Swedish and English. [laughter] They studied this bilingual problem, examining the bilingual euphony of Karl and Sven, of Peter and Per, Matts and Olof. When the boy arrived last June they named him John. [laughter] Perhaps John will turn to music, another of his father's talents. Those of us who have heard Uno at the piano in a dimly lighted room realize that only his greater love of science has protected the leadership of Liberace in this area. [laughter]

It is for his science, however, that we honor Ingard tonight. One measure of scientific contribution is the publication rate. I think his rate is perhaps unparalleled in the 25 years of our Society. The 1953 volume of The Journal carried eight contributions by him. Since completing his doctoral dissertation
in 1950, he has had some twenty publications, and before he
had his Ph.D., he had about ten papers out.

Another measure, of course, is the publication quality.
Ingard's paper, "On the Theory and Design of Acoustic
Resonators," is a masterpiece. Problems that eluded solution
from the days of Helmholtz and Rayleigh have now yielded
completely to Ingard's insight and mathematical facility.
This outstanding quality marks all of his research contribu-
tions on acoustic circulation and streaming, on nonlinear
impedance and boundary layer dissipation, on porous absorp-
tive materials and perforated acoustic tile, on waves in and
periodic structures, and a long list.

His work is particularly distinguished by its breadth. In
studying the propagation of sound in the atmosphere he is
making new contributions to meteorology. He helped to de-
develop a graphic level recorder that is widely used today around
the world. He is now investigating the interaction between
sound pulses and electrons in a metal. He is equally at home
with abstract theoretical physics and with the most practical
details of measurements in a reverberation chamber.

Returning briefly to history, we find that Ingard was teach-
ing electrical engineering at the Tekniska Gymnasiet in
Gothenburg in 1913. In 1914 he received the Electrical
Engineering degree at Chalmers Institute of Technology,
Gothenburg, where he also worked as a Research Engineer in
the Laboratory of Electronics. That same year he was awarded
the John Ericson Medal. The following year he was a Research
Engineer in the Electrical Laboratory, Stockholm. In 1946 he
was appointed Director of the Acoustics Laboratory at Chal-
mers Institute, and he received the Licentiate degree in
physical electronics at that Institute in 1948.

Ingard first came to the United States in 1948, as a graduate
student at the Massachusetts Institute of Technology, where
he received the Ph.D. in Physics in June of 1950. During
1949-1950 he held the Acoustical Materials Association
Fellowship in Acoustics, and during 1950-1951 he was the
Armstrong Cork Company Postdoctoral Fellow in the
Acoustics Laboratory at M.I.T.

In 1951 Ingard returned to Sweden for about a year, during
which time he completed his obligations to the Chalmers
Institute, so that he could accept an appointment as Assistant
Professor in Physics at M.I.T. In the brief period of two years
since his return, he has been extraordinarily prolific in research,
publishing the many papers to which we have already referred
and starting work on several other problems, of which we
shall hear much in the next few years. He has also written a
comprehensive Chapter on Acoustics for Condon's Handbook
of Physics.

But Ingard is more than an outstanding scientist and
engineer. He is an enthusiastic leader of research teams and an
inspiring professor. He is a conscientious citizen of the scien-
tific community, an active participant in programs and
committees. In every sense he is a noteworthy contributor to
acoustics and a most fitting recipient of the Biennial Award of
the Acoustical Society of America. [applause]

Biennial Awardee, Dr. Karl Uno Ingard. "Well, after this
introduction by Professor Bolt I'm a little bit thrown off balance,
but I'll limit myself to saying that whatever the reason may be
for this award, I'd like to take this opportunity to express my
sincere thanks to my teachers and good friends in the Acoustical
Society for their infinite generosity in their efforts to teach me
the tricks of the trade. Also, and in particular, I want to express
my thanks to Mrs. Ingard for her never-ceasing encouragement
and patience with me throughout the years. Thank you." [ap-
plause]

President Davis: Karl Uno Ingard, I take great pleasure in
handing to you the diploma of the Biennial Award and also a
check for $100 which goes with it. Congratulations. [applause]

Editor Firestone: The Editor did not realize that Uno was
part of the name and has been putting his papers first in The
Journal for the last year. [laughter]
"This certificate and One Hundred Dollars is awarded every two years by the Executive Council of the Acoustical Society of America to that member under thirty-five years of age whose contributions to the advancement of the science of acoustics and to the welfare of the Acoustical Society have won for him first place when carefully compared with the excellent work done by other members of similar age and high competence. With pride in the fine achievements of the younger members of the Society, this award to their outstanding representative is happily presented."

President Davis: We are now getting down to really modern times and I will call next on the President-Elect, Leo Beranek, who I believe has some factual information and data for your consideration. [applause]

President-Elect Leo L. Beranek: Fellow acousticians and guests. You've had the rare opportunity this evening of seeing and hearing a long line of presidents, starting from Uncle Harvey, who I am sorry has had to leave. Now you will learn a little about these men and how to follow in their footsteps. My information was all supplied to me by my bureau of statisticians.

There are now sixteen in the presidential line, fifteen of these are living. The oldest is F. R. Watson at 82. The youngest is the incoming president at 39. The average age is 58. The average age at time of taking office was 48. The youngest at time of taking office was 38. The oldest at the time of taking office was 67. Twelve are in the current Who's Who in America. Five had honorary degrees, and Uncle Harvey alone holds six honorary degrees. Eleven have been professors in universities. You stand the best chance of being president of the Society if you meet the following conditions: First, you must be a Fellow, that's required. Second, you should be born in September; five of the group were born in September, and the next most favored month was August, with three. You should be born in the Midwest; eight of the fifteen living were born in the Midwest. You should be born in Iowa; five were born in Iowa. [Laughter] I ought to name my fellow colleagues. There's Hugh Knowles, Harry Olson, John Steinberg, and Edward Wente. You should be married in September; three of
President Elect Leo L. Beranek, our sixteenth, tells how to become President of the Acoustical Society. The following evening at sundown, he became President. He knew how.

them were, only two were married in the favorite month of June. You should have been 27.3 years old when you were married. [laughter] And you should have 2.33 children. [cascading laughter] And finally, you must have an interest in acoustics. [uproarious laughter] At this point I want to thank my statistics bureau, my wife, for her research in the New York Public Library—Phyllis. [laughter and applause]

President Davis: It is time now to call upon the present members of the Council to stand. [applause] I would remind the Council that we have a suspended meeting that was suspended in the small hours of Tuesday morning, and it seems that this is a propitious time and place for us to resume this meeting in order to demonstrate to those assembled here the efficiency with which the affairs of the Society are run. I look about; I see a quorum; the meeting of the Council is in session. There is one item on the agenda that we will take up at this time, this is Project 25Y. Do I hear a motion concerning Project 25Y?

Esf: Mr. Chairman, I would like to move the adoption of our item called Project 25Y. Young: I second the motion. Davis: Moved and seconded that Project 25Y be adopted. The members of the Council have been apprised of this by word of mouth and by letter and by correspondence. Do I hear any discussion? Hearing no discussion, are you ready for the question? [a number of calls of “question!”] The question is called. Those in favor say “aye.” [a chorus of “ayes”] Those opposed—It is a vote and so ordered to be inscribed upon the records of the Society. A motion to adjourn is now in order. Leonard: I move that we adjourn. Esf: I second the motion.

President Davis: Moved and seconded that we adjourn. Those in favor say “aye.” [chorus of “ayes”] Those opposed, “no.” It is a vote. The Council will adjourn until 3:00 p.m. Saturday afternoon in the Town Room on the first floor of this hotel. [applause]

Now perhaps it is only just and proper to satisfy your curiosity as to what Project 25Y may be. 25 Years seems to be the inspiration for this particular title. [Sh-sh, it covers the author—]
ization and appropriations for that which follows, though the Secretary himself does not know it yet.] I will call upon ex
president Hugh Knowles to proceed forthwith with the first step of Project 25Y. [applause]

Ninth President Hugh S. Knowles: This not only has been but still is a highly classified project. In fact, if I had not appealed to the membership of the Society on the grounds that it was in the better interest of the Society to communicate classified information to me, even though I wasn't authorized to receive it [laughter], I wouldn't even know why I'm here. [more laughter] This project 25Y got off to a very delicate start. The initial thought was to call it Project Moosehunt. [ripple of laughter] The reason for this may not appear at first glance— and of course it shouldn't if it's going to be a good title for a classified project. [more ripples] But the reason is that the recipient of what it is that I'm about to hand out has been out on many a moosehunt but, it's alleged, never found one. [laughter] And our big problem was to see to it that he didn't find this, in advance. However on second thought it occurred to the committee that just the fact that it was called Moosehunt and that he hadn't found one might be the tip-off. So it was reclassified simply as Project 25Y.

It could not be discussed at AIP headquarters nor the Acoustical Society headquarters because when we attempted to set in motion the machinery for implementing this, it was found that there was no precedent for any activity of the AIP or of the Acoustical Society in which the recipient had not had either a finger or a foot. [laughter] The next concern was whether such an award, or gift of this kind, might be misconstrued. After all he was continuing in the best tradition in a temporary status, and there was always the possibility that this might be misinterpreted as an invitation to remain permanently. [laughter] This individual actually had run the Society for many years, in fact, the Society could not have operated without him. There was one querulous individual who insisted on knowing, "Well now, is he really the power behind the throne, or is there perhaps a power behind the throne and if so why shouldn't we're going to give to him stand us in good stead and dig us in with the power behind the power behind the throne." I will leave it to you to judge whether the committee has been successful in this, and I take pleasure in giving this to, guess whom. This package—I have not seen the contents myself it's been so highly classified—it's wrapped in a wrapper at least from Tiffany's, and for that reason I'm going to suggest that Wallace keep the wrapper and perhaps he can send something to somebody else in it. [rothical laughter] This I give with the affection of the entire Society for 25 years of memorable service. [resounding applause]

The silver centerpiece from Tiffany's. Secretary Waterfall: It's beautiful—beautiful. The inscription reads— "To the Wallace Waterfall's from the Acoustical Society of America on the Twenty-Fifth Anniversary, June 25, 1954." [applause]

Mr. Knowles, holding aloft the gift: You can recognize how classified this was when I tell you that I was told that it just had one handle. [uncontrolled laughter] You'll be interested to know that the way this occurred was that our operative X-39 was calling Shorty one time on Fifth Avenue when she went by Tiffany's and admired this piece, and so the operative reported to the committee, even though the committee hadn't been authorized to receive this classified information, and this is the result. [laughter and applause]

Secretary Waterfall: Thank you very much. If I look and act bewildered it's because I am. [laughter] It didn't dawn on me until Hugh had gotten well into his talk what was going on. I thought something was a little peculiar about this sudden Council meeting that I hadn't heard anything about. [laughter] I've been in the habit of sending out notices of all meetings. [laughter] To have one so suddenly was quite unexpected.

This is certainly greatly appreciated. It's something which I know that Shorty, who I guess you all know her as Shorty, and I will treasure very much.

I suppose this is the time when I was supposed to spend that three minutes reminiscing about 25 years of Acoustical Society history. I can't do it. There've been too many things, too many things interesting, too many things humorous, too many things serious, to reminisce about them, 25 years of them in three minutes.

I do have a few comments. We've heard tonight that the Society's birth was in New York City at the Bell Telephone Laboratories at a meeting which was held there in December 1928. The Society's conception, however, must be credited to the other coast where I remember distinctively a meeting that Vern Knudsen and Floyd Watson and I had several months earlier in a beach club down in Santa Monica where we got together during the summer and talked about writing the very letters that Harvey Fletcher mentioned I finally received. The Society was national in scope, therefore, at its very beginning. And the fact that it has attained international stature is very evident from the members and guests we have at this meeting.

Hugh Knowles (right) presents a silver centerpiece from the Society to Quarter-Century Secretary and Mrs. Waterfall.
I might mention a few incidents that have stuck in my memory particularly over these 25 years. At the first meeting in the Bell Laboratories, there was a picture taken on the roof that you saw on the screen this evening. I don’t know whether you looked at the picture very closely or not, but if you did you will notice that all of those in the picture were facing the camera except one person who was looking sharply to the right.

That person happened to be me, and I have explained many times that the reason I was looking sharply to the right was because I had a big bandage on my right cheek and wanted to cover it up. [Laughter]

I remember also the start of The Journal. It was a very informal sort of a start. We had a meeting, after the meeting the manuscripts were all gathered, they were handed to the Secretary, and the Secretary was told to go start a Journal. [Laughter] This Journal— I have volume one, copy one, right here with me—this Journal has a little emblem on the cover, which is the same emblem that you will see on our present Journals [on the first page, though the new cover emblem is one face of our medal]. I’ve always been very nostalgic about that little emblem. A printer and I got together with a compass and we spent a lot of time, had a lot of fun, drawing that thing, and I’ve always— I’ve always loved it. But one of our more artistic members—not a man who plays a violin exceptionally well—said that he regarded this as a rather uninteresting exercise in mechanical drawing and hoped that we would have something more artistic to replace it soon. And I’m more or less happy to tell you that we will have something more artistic to replace it soon. [The new front cover emblem is one side of our medal, while the old emblem will remain on our first page.]

Our Council meetings have always been extremely interesting to me, not only because of the many minutes that have to be written up afterwards, but because many really interesting things are done. I remember many of these Council meetings running into the wee hours of the morning, but I don’t think any ever lasted as long as one that took place in the Firestone home in Ann Arbor. Myrtle, if I may call you such, got tired of the whole thing about twelve o’clock and went to bed. When the sun came up the next morning, she came down the stairs and there we were still meeting. So she decided that the best thing to do was to get us breakfast, which she did. We ate breakfast, and then we went to the meeting for the second day. We haven’t done quite that lately, although we were up till one o’clock the other night.

I remember another incident when Pat Norris drowned through a blackboard full of mathematics. And none of us realized what he had developed until a year later C. L. Eyring presented a paper giving the rigorous development of a formula which he insisted should be called the Norris-Eyring Formula, and you all know well now.

Such reminiscences could go on indefinitely. But I would like to make a few comments about my job as Secretary. It started 25 years ago when I thought I knew something about acoustics. Now I only know acousticians. The Acoustical Society must accept some part of the responsibility for what has happened to me. Twenty-five years ago I contracted an insidious disease, which has become more consuming as the years have gone by, and I am told it will eventually prove fatal for no cure has yet been found for secretion-itis. [Our statistical department reports that he is the Secretary of the American Institute of Physics, The Acoustical Society of America, The National Noise Abatement Council, and the Acoustical Society of America. Ed.] The compensation for all this pain is the privilege of working with the many fine people in the worthy cause which I consider the Acoustical Society to be. In the Society I have enjoyed close association with—well the numbers have been mentioned already tonight—sixteen Presidents, sixteen Vice-Presidents, seven Treasurers, fifty-six Council members. There have only been two Editors because Floyd seems to go on forever about like I do.

Fortunately the Secretary gets a lot of help, and he owes whatever success he may have had to the faithful cooperation of many people. The Secretary’s secretary is a key person in a smooth-running organization, and no one has ever had a secretary better than Betty Goodfriend who has been with me for more than ten years. I wish Betty would stand and take a bow. [applause]

The Secretary’s secretary for over ten years, Betty Goodfriend, is now also the Counselor and wife of Mr. Lewis Goodfriend, Editor of the Society’s new journal, NOISE Control.

Finally I must acknowledge the help of my closest adviser, Mrs. Waterfall, Shorty to most of you, who has come to be as fond of the Society and all of its members as I am. [applause]
President Davis: Project 25Y was classified, it was classified as secret, at least the part you have heard about was classified as secret. There was another part to this project, one classified as top-secret, and this part we entrusted to another Past President, one well known for his ability to keep his mouth shut [laughter]. Ted Hunt. [applause]

Thirteenth President Frederick V. Hunt: Mr. President, members and guests of the Society. It is a well-established American legend that business executives front for their offices while all the work of the world is done behind the scenes by the Secretary. Scientific societies are not exempt from this dependence on the loyal service of efficient Secretaries. I think that you will probably concede the validity of these remarks, but I can assure you that there is one group that really knows how true this is, and that is the long line of past presidents who have been privileged to serve the Society under the watchful guidance of our temporary Secretary, one and only Wallace Waterfall. On behalf of the past presidents and on behalf of the members of the Society, then, I wish to make another presentation. You are represented in this because of the action of your Council representatives in the approval of Project 25Y. And I will ask Dr. Julian Frederick to show you what Project 25Y is about and ask you if you will approve it. [applause]

Dr. Hunt: Aw, go on, let Wallace see it. [applause] If we were to put a title on this work of art, I think it would be—The Face Presented to the World by the Acoustical Society of America [laughter] for in a very substantial way Wallace’s beaming smile is the face of acoustics in America.

Of course it’s not often possible to present a portrait that is a surprise to the subject. In fact, we wouldn’t have dared try this if it hadn’t been for the fact that Floyd numbered among his acquaintances an artist who makes a specialty of candid portraiture. I don’t really know whether we achieved this surprise or not, and we may never know, but I will say that Wallace was under observation a number of times when he didn’t know it, and I can tell him now that the pictures that were taken in his office a few months ago were not, as he was told, for the purpose of preparing a slide for this occasion, but for the sake of giving the artist a chance to consolidate and reinforce his impressions of his subject. [laughter and applause]

Dr. Frederick V. Hunt, representing the past presidents, and Dr. Julian R. Frederick, representing the membership, present a portrait of Secretary Waterfall. At that moment, Wallace, in the background, had not seen it. (Dr. Frederick was chosen as a representative fellow since his wife had given birth to twins a month earlier, making the grand total of 5.0 children. Congratulations to Marian and Julian!)

A bevy of beauty: Dr. John Steinberg, Mrs. Hugh Knowles, Mrs. Arnold Small, Mrs. John Steinberg, and the portrait.
Portrait of Quarter-Century Secretary Wallace Waterfall. Dr. Hunt: “Wallace, this is your portrait to dispose of as you wish, and I mean dispose if you wish. [laughter] We hope, however, that you will consent to let it hang in your office at the American Institute of Physics, at least part of the time, if only to allow it to offer enduring testimony of the affection we all bear you.” [applause]
President Davis: There is still another part to Project 25Y. [Laughter] And perhaps some of you will now begin to understand why toward the beginning of these exercises my voice was a little shaky, my choice of words uncertain, and I was wriggling around rather uncomfortably. This is because, with Wallace sitting here, there has been something in my pocket that has been burning a hole right all the way through.

Secretary Waterfall: I thought I had made my speech for the evening. [Laughter] This has certainly been the best kept secret since the atomic bomb. I’m not very easily fooled, at least I didn’t think I was. You have done me much more honor than I deserve. Honestly, I feel that the Acoustical Society owes me nothing. It has done a great deal for me, it has made it possible for me to do many of the things that I have done. Honoring me as you have tonight is greatly appreciated, and I feel that you have very considerably overdone it. Nevertheless I am extremely grateful. [Hearty and heartfelt applause]

"I have in my pocket here, to be presented to Wallace Waterfall, the First Gold Medal of the Acoustical Society of America."

Wallace thinks it is all over now and lights a cigarette, but...

A standing ovation of overwhelming and extended applause.
Davis: I have here the certificate that goes with the Gold Medal and I will read it: "Twenty-Fifth Anniversary Celebration—Wallace Waterfall—Secretary for a Quarter Century—is hereby proclaimed recipient of the Society's—First Gold Medal Award. His vision conceived an Acoustical Society. His energy promoted its formation. His enthusiasm has inspired our cooperation. His efficiency has diligently maintained our orderly procedures. His wordly wisdom has counselled our successive Presidents. His smile has increased our joy of living.

"In appreciation of his continuing devotion to our service, this medal of gold is awarded to him by action of the Executive Council, endorsed by the enthusiastic acclaim of the Fellows and Members assembled at this Celebration. Hallowell Davis, President." [vigor and affectionate applause]
Secretary Waterfall: Well now you can't go any further. [laughter] I sincerely hope that the minutes of this meeting are in proper order [laughter], this special meeting that was just recently held, but my recollection of the record, and it's usually pretty good, would lead me to declare that this presentation was entirely illegal. [laughter] Nevertheless, it's certainly wonderful.

"I don't know whether you people have seen this medal or not, but it's a beautiful thing."

"It has on the front a tuning fork radiating waves. . . ."


President Davis: Well, Wallace, I can't say any more either, although I wish I could— supporter of Presidents, it's all in there. I can't.

So, now we will proceed with what little is left of our Celebration. I want to recognize and give thanks to the committee that has arranged all of these affairs, arranged the program, all of the technical facilities that are needed, the local committee up here at the high table at the left. Would the Program Committee stand. [applause]

I think now is the time for a little relaxation. Let's have a radio selection that I believe, Floyd, you said you wanted to bring in at this time.

Announcer on a record: And now—This I Believe. Here is Edward R. Murrow.

Edward R. Murrow (by transcription): This I Believe. Dr. Hallowell Davis is Director of Research at the Central Institute for the Deaf and professor at the Washington University School of Medicine in St. Louis, Missouri. As a leading expert in neurophysiology and hearing, he is prominent in a number of professional societies. His work is highly specialized and technical, but now Dr. Hallowell Davis states his creed in terms that the layman can easily understand.

Dr. Davis (by transcription): I speak as a scientist. I believe in man. I believe in man as a part of nature. Nature includes the physical universe, the life of plants and animals and man, and also the mind and thoughts of man. I believe in nature's laws—impersonal and merciless, but reliable. I believe that man can learn enough of nature's laws to shape his destiny, but nevertheless his destiny must remain within the bounds of nature's laws.

It is man's fate to struggle for existence with other living things and with himself. It is man's privilege to rule this planet for many millions of years if he is able. The survival of mankind is the yardstick by which I measure good and bad. The struggle for existence is not easy, nor can I be sure we will succeed. I believe that man is on his own. He can learn to
happen after the next great glacier has come and gone, or it may never happen. But this I believe and believe with all my heart, it is possible that it can happen and that our efforts today and the examples of our lives can make it more likely. On this possibility I stake my faith. I still believe in man.

The Voice of Edward R. Murrow: That was Dr. Hallowell Davis of St. Louis, Missouri. He is director of research at the Central Institute for the Deaf. [sober and sustained applause]

President Davis: Well, as I said on that occasion, I believe in evolution. The Acoustical Society of America is in a state of evolution. We don’t know what the form of the Society will be or what the subject matter of the papers and the programs will be at the Hundredth Anniversary Celebration. We wish that we could look into the crystal ball. There is a crystal ball up here [pointing toward the movie camera], but it is only half a crystal ball, it’s a one way affair, posterity can look at us, but we can’t look back through that lens and see you on the other side. I wish we could. I know that we would find you as strange and quaint and amusing, in your ways, different from us as you find us as you look at our faces on the screen. However, you are our descendents, you carry on the torch; and [raising his arm] with this salute to posterity I declare this meeting, our Twenty-Fifth Anniversary Celebration, adjourned. [applause]

After adjournment about 11:00 p.m., the members came to the speaker’s table to congratulate Waterfall on his awards and Davis on his philosophy, but the cameraman continued to photograph and record till his reel was run through. The following confidential remarks have therefore become a matter of public record: Esq: Congratulations, Waterfall: Got me floored. A voice: Was the portrait a surprise? Waterfall: Lord, yes. I didn’t have any idea about it. I thought that was a legitimate deal. I thought after I’d given my three-minute talk that he’d throw a slide like that on the screen, and I wondered why he didn’t. [laughter] . . . The voice: We did better than we thought. . . . Waterfall to Davis: You did a damn good job. [and how] . . . Waterfall: I sure hit the jackpot!
Acoustical Society of America
Twenty-fifth Anniversary Celebration

Radio City Music Hall
Saturday Morning
June 26, 1954

Admission $ .91
Tax .09
$1.00

Technical (etc.) Session at Radio City Music Hall
New York, June 26th, 1954, 9:00 A.M.

This souvenir ticket, whose stub admitted the bearer to the Radio City Music Hall, shows Rockettes being radiated from a flare horn.

The Technical (etc.) Session at Radio City Music Hall: "At 9:00 A.M. sharp on Saturday, the fourth day of the Celebration, we will repair to the more deeply cushioned seats of the Radio City Music Hall at 50th Street along the Avenue of the Americas. For an hour and a half the stage and main floor of this 6200-seat auditorium were ours for the discussion of Large Auditorium Acoustics. Mr. Vincent Gilcher, sound engineer of the Music Hall, explained the acoustical equipment; 80 microphone inputs, 100-watt amplifiers, a CinemaScope screen 80 feet wide. John E. Volkmann explained the acoustical imperfections of the theater, which he and the late Keron Morrical had diagnosed, and discussed the continuing program for the improvement of the acoustics. "Most people don't notice these echoes if they don't know they are there." President-Elect Leo L. Beranek, appearing on our program for the fourth time, outlined the broad experience which he has had in the acoustical design of large auditoriums and even expected us to believe that way down in Caracas he had corrected the acoustics of a spherical auditorium by means of colored clouds which float in its empty spaces. We decided that by this time he and we needed some relaxation and we welcomed the promise of the program that "at 10:29 the satisfactions of science will be abandoned for the joys of art and beauty."

The film was The Student Prince in CinemaScope and contained one of the most moving acoustical effects which we have ever heard: The body of the King is lying in state in the cathedral and the Student Prince (voice of Mario Lanza) is singing the requiem with but moderate reverberation since he appears to be close to us. He is accompanied by a choir in the distance with about a four-second reverberation time, this choir having been recorded on a fourth channel of the stereophonic sound system and reproduced on a multiplicity of loudspeakers distributed over the ceiling of the auditorium. The effect is that of being surrounded by the reverbrant sound in the cathedral, and the final chord dies away in about four seconds as the least damped normal modes of the cathedral slowly lose their energy. Our emotions, however, reverberate for more than a minute.

The stage show including the Rockettes, Corps de Ballet, and Symphony Orchestra was of the lavish style for which the Music Hall is famous.

Coda: The whole Celebration was marred by the absence of only one sour note. The Ladies' Programme had advised that "you should come with us to our Technical (etc.) Session at Radio City Music Hall, which will end our Celebration at 1:30 P.M. on a fortissimo chord of the sixth." This last chord turned out to be a bland major triad with none of the spice that comes from that element of discord which is supplied by the inclusion of the sixth.

But there was fulfillment of the promise of the last paragraph of the program foreword: "Thus the Twenty-Fifth Anniversary Celebration of the Acoustical Society will end at 1:30 P.M. with a grand orchestral tutti. [It did.] (The ushers will assist those members unable to rise.)"

Quickly, six men to carry out the Editor!