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CLIMATE FOR AIEE

Presented by President CLARENCE H. LINDER
to the BOARD of DIRECTORS
Fall General Meeting, Chicago 1960





CLIMATE FOR AIEE

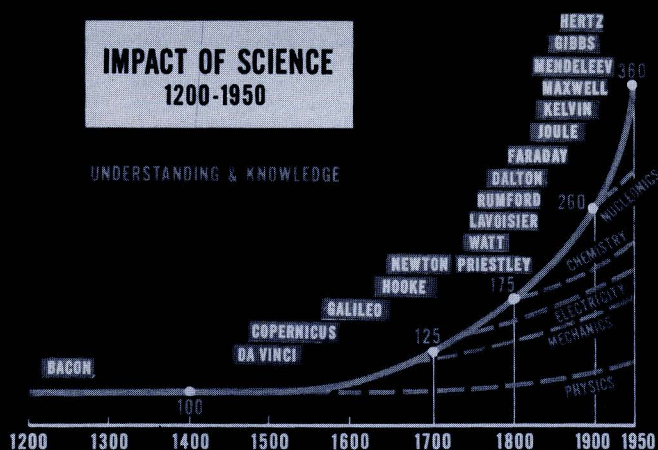
Presented by Clarence H. Linder, President,
American Institute of Electrical Engineers
to the Board of Directors
Fall General Meeting, Chicago, 1960

The brief comments related to each of the charts are included to stimulate interest in the significance of the data.

Much of the data is based on or is an extension of that presented by Mr. L. F. Hickernell in his paper, "The Institute and Its Operations," ELECTRICAL ENGINEERING, June, July, August, 1959.

IMPACT OF SCIENCE 1200-1950

UNDERSTANDING & KNOWLEDGE

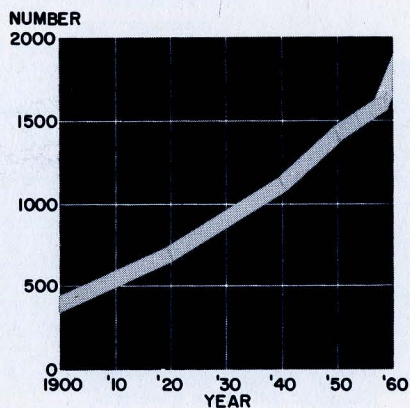


1. Impact of Science

This period of accelerating change — with the increase in funds of understanding and knowledge — suggests the statement of Dr. Zay Jeffries, Fellow of the Institute and Scientist:

“Our progress depends to a considerable extent on seeing to it that the simplifying processes move forward in approximate balance with the complicating processes. If this can be accomplished, then individuals with given ability can expect to go forward indefinitely without becoming the casualties of their own complexity.”

GROWTH SCIENTIFIC AND TECHNICAL SOCIETIES

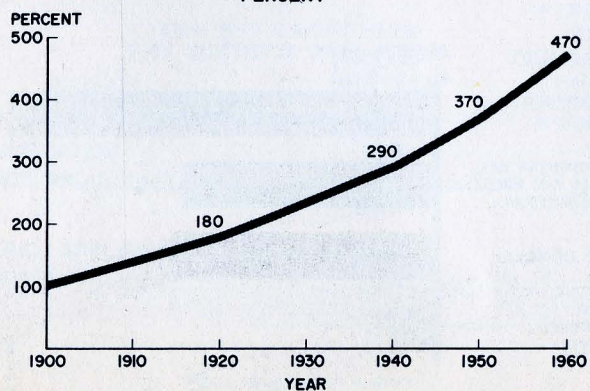


SOURCE: Scientific and Technical Societies of the United States, NAS-NRC

2. Number of Societies

Today there are an estimated 1750 scientific and technical societies in the United States. Perhaps 10% of these can be considered of interest to engineers.

RATE OF GROWTH—NUMBER OF TECHNICAL AND SCIENTIFIC SOCIETIES PERCENT



3. Growth of Societies

The growth rate of technical and scientific societies has been rapid. The tendency for more and more societies to be generated calls for close examination of their composition, orderly presentation of their objectives, and audit of the need they purport to fill.

4. Complexity

A comparison of organizational units of the U. S. Government and AIEE is significant in revealing the complexity of the Institute. True, it reflects AIEE's response in attempting to carry out its objectives; but, commensurate with such great size is the difficulty in getting cohesive, effective management leading to accomplishment of long-range objectives.

ORGANIZATIONAL UNITS	
U. S. GOVERNMENT	AIEE
13 Departments	1 Board of Directors
16 Commissions	1 Executive Committee
24 Administrations	3 Board Committees
23 Government Corporations	13 District Executive Committees
711 Offices of . . .	112 Sections (each with Executive Committee)
96 Services	72 Subsections (each with Executive Committee)
96 Bureaus	223 Sections Technical Groups (each with Executive Committee)
621 Divisions	13 District Student Activities Committees
46 Boards	160 Student Branches (each with Executive Committee)
461 Miscellaneous Bodies	5 Departments
2,107 Agencies	20 General Committees
	8 General Technical Committees
	24 General Technical Subcommittees
	6 Technical Divisions
	52 Technical Committees
	247 Technical Subcommittees
	81 Technical Working Groups
	70 Representations on ASA Sectional Committees
	8 Representations on Joint Awards
	29 Representations on Other Societies
	1,148 Organizational Units
	1959

$$\frac{1148}{2107} = 55\%$$

5. Objectives

The rapid change and growth in technical knowledge requires outstanding contributions on the part of engineering societies in the management of the increasingly complex technology. Objectives of the societies must be re-examined, re-evaluated and re-aligned with the times. In AIEE the objectives have been sharpened since 1884 and are better focused toward future progress.

OBJECTS OF AIEE

1884

Objects of the AIEE are to promote the Arts and Sciences connected with the production and utilization of electricity, and the welfare of those employed in these industries by means of meetings for social intercourse, the reading and discussion of professional papers and the circulation by means of publications among its members and associates of the information thus obtained.

1960

Object of this association is the advancement of the theory and practice of Electrical Engineering and its allied Arts and Sciences, and the maintenance of high technical and ethical standards among its members.

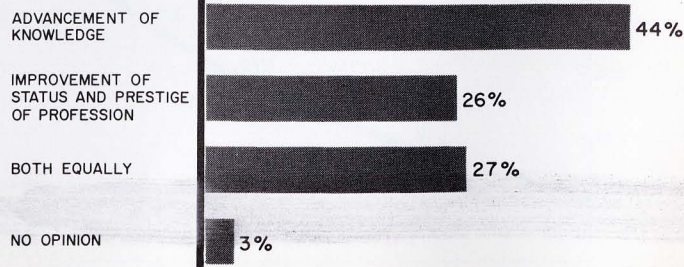
6. Membership Appraisal

Interest in the advancement of knowledge and understanding brings with it an added responsibility to the Institute: to organize and integrate these vast funds. Not to be overlooked is the strong membership concern for improvement in status, prestige and order in the engineering profession. Although all of the societies have made efforts in this direction, headway has been slow.

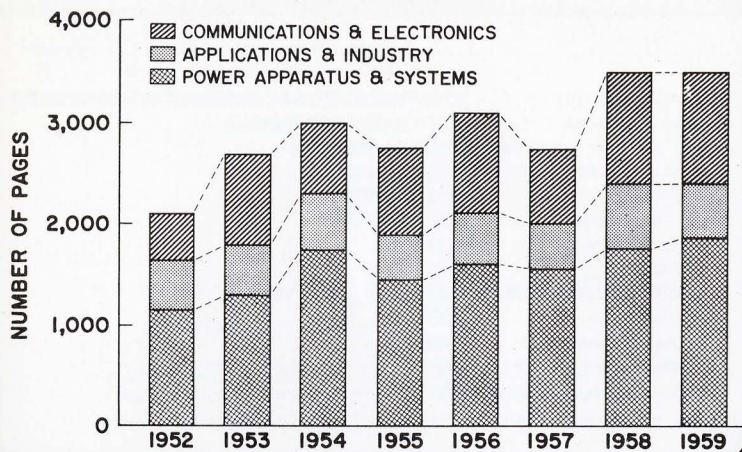
"MEMBERS APPRAISE THE AIEE"
OPINION SURVEY
JULY 1955
BY
OPINION RESEARCH CORPORATION

RELATIVE IMPORTANCE OF OBJECTIVES

WHICH SHOULD THE AIEE
DEVOTE MORE ATTENTION TO ?



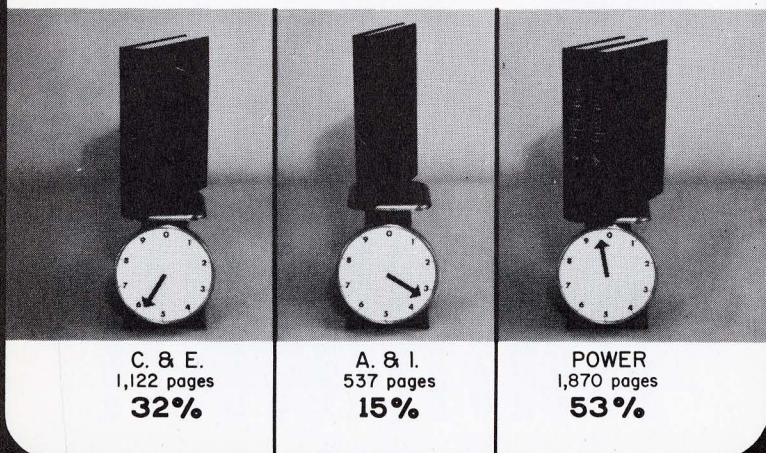
TRANSACTIONS PAGES PUBLISHED 1952-1959



7. Transactions, 1952-1959

Transactions Papers are classified in three ways: Communications and Electronics; Applications and Industry; Power Apparatus and Systems. The Transactions pages reflect the distribution of interest pattern in published material. This pattern has remained fairly constant over the past decade. Not to be overlooked is the fact that the number of pages published is a measure of quantity only, not quality.

AIEE TRANSACTION VOLUME 78-1959



8. Weight of Transactions

Visual emphasis is given to the magnitude of the Institute's publications by weighing the 1959 Transactions volumes. 32% are for Communications and Electronics, 15% for Applications and Industry, and 53% for Power Apparatus and Systems.

COMPARISON TECHNICAL COMMITTEE INTEREST AND TRANSACTION PAGES

DIVISION	PRIMARY INTEREST *	PERCENT 1959 TRANSACTION PAGES
INSTRUMENTATION	5.0	
COMMUNICATION	10.5	
SCIENCE AND ELECTRONICS	13.1	
	<u>28.6</u>	<u>31.8</u>
GENERAL APPLICATION	7.4	
INDUSTRY	22.2	
	<u>29.6</u>	<u>15.2</u>
POWER	41.8	53.0

* 1956 MEMBERSHIP SURVEY

9. Primary Interests

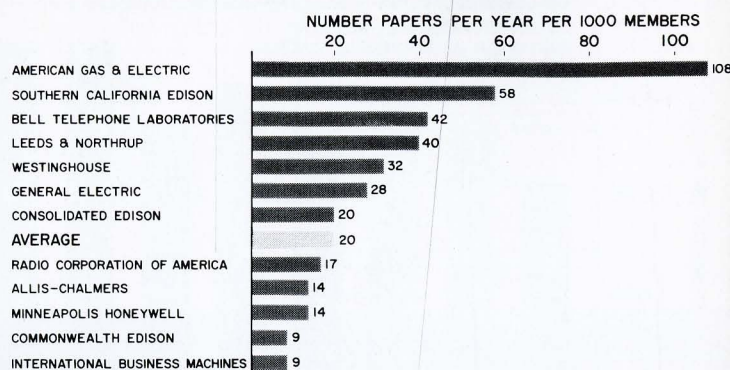
A comparison of technical interests expressed by the 1956 Membership Survey and the distribution of the 1959 Transactions Pages points up the need for better balance of effort. Power is a dominant concern in the Institute, but it should not be given more attention than is warranted by expressed membership interests. An equitable balance of the publications is a goal toward which to strive in meeting the objective of making the Institute more meaningful to more members.

10. Papers per 1000 Members

Comparison of known author-company transaction papers published from 1952 through 1956 indicates that 20 such papers are published yearly per thousand members. However, this is a specially-selected group and the over-all membership average for contributions of this nature may be nearer to 10 papers yearly per thousand members, or only 2.5 per cent of the total membership.

These data are possible only because the member-by-Company information was available in connection with the United Engineering Center program.

COMPARISON OF AUTHOR-COMPANY PUBLISHED AIEE PAPERS FOR PERIOD 1952-1956 INCLUSIVE

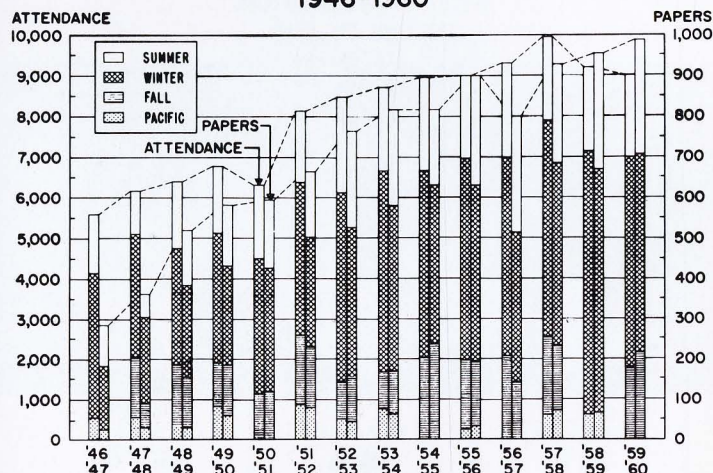


NOTE: INCLUDES 2055 PAPERS FROM 278 COMPANIES WITH TOTAL MEMBERSHIP OF 20335.

11. General Meetings

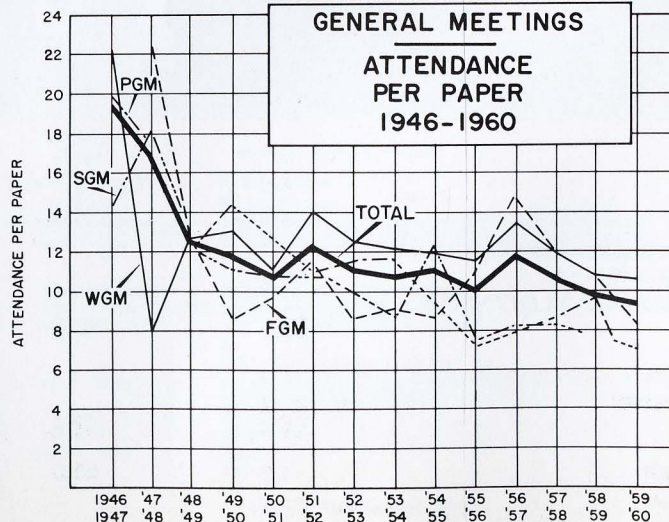
Attendance at the General Meetings has increased numerically; however, except for the Winter General Meeting, it has not kept pace with the membership growth rate. Paper contributions are at a peak, but attendance per paper has slackened to an all-time low (8.9 people per paper in 1959-1960). This raises serious questions about the quality, effectiveness and dollar value of this general kind of technical exchange.

GENERAL MEETINGS-ATTENDANCE AND PAPERS 1946-1960



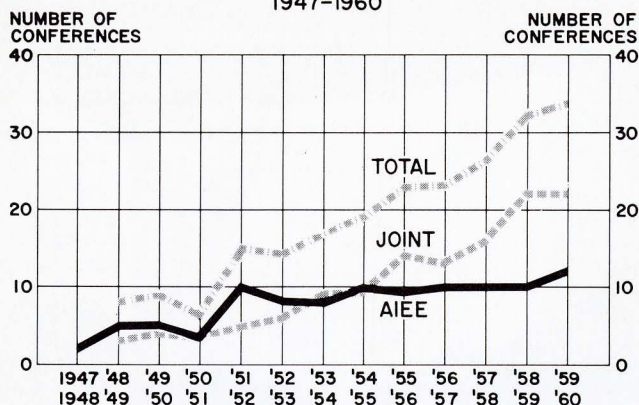
12. General Meetings (continued)

GENERAL MEETINGS ATTENDANCE PER PAPER 1946-1960



SPECIAL TECHNICAL CONFERENCES-NUMBER

1947-1960

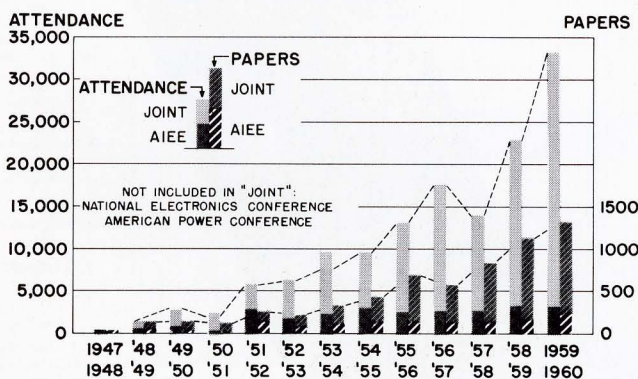


13. Special Technical Conferences

The exchange of technical information is a prime objective of the engineering societies. An important contribution to the exchange communication channels was the inauguration of the Special Technical Conferences. These have grown from 9 in 1949-50 to 36 in 1959-60. Today's engineering challenges require the intermix of many disciplines, and the joint technical conference is one important instrument for achieving the necessary exchange of information. Perhaps it is significant that the conferences held by AIEE alone remained constant, while there has been a big increase in joint conferences.

SPECIAL TECHNICAL CONFERENCES ATTENDANCE AND PAPERS

1947-1960

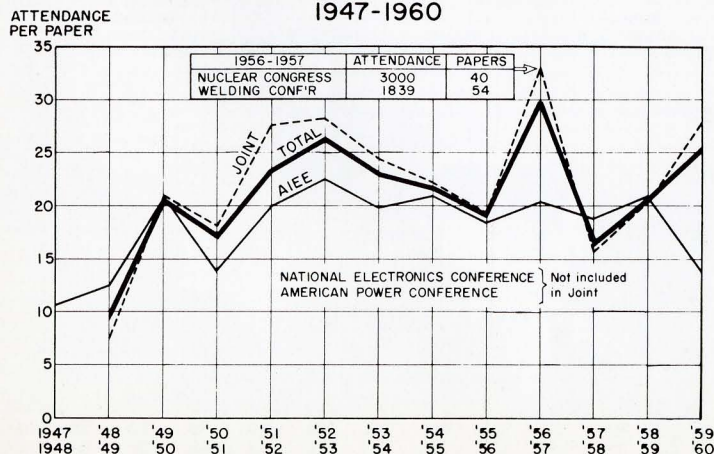


14. STC-Annual Attendance and Papers

That the joint technical conference is effective is shown by the great upsurge in attendance and increase in papers. In 14 years, attendance at AIEE STC's has increased from approximately 400 to 3400, 8.5 times, as compared with an attendance boom at joint STC's from approximately 600 to 30,000, or 50 times. Papers at AIEE STC's have increased from approximately 40 to 240 or 6 times, while at joint STC's they have increased from about 80 to 1070, 13.5 times.

SPECIAL TECHNICAL CONFERENCES- ATTENDANCE PER PAPER

1947-1960



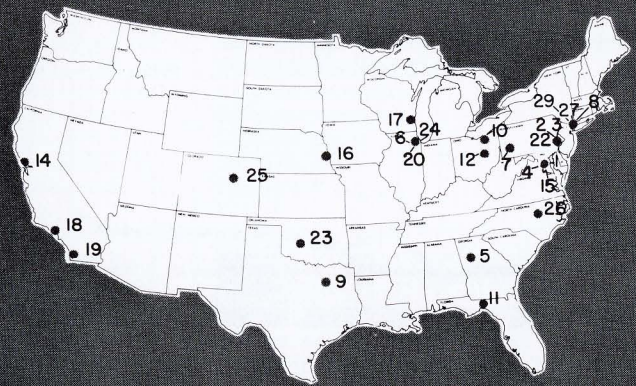
15. Attendance-STC

Well-planned sessions and quality papers are the keystones of enthusiastic attendance.

16. Geographical Dispersion

The 1960 Special Technical Conferences have been fairly well distributed geographically. Planning of the conference schedules should include consideration of the relationship of the conference location to membership distribution, subject and meeting schedules of other societies in order to achieve utmost effectiveness and avoid conflict and duplication.

1960 AIEE SPECIAL TECHNICAL CONFERENCES



17. Magnetohydrodynamics

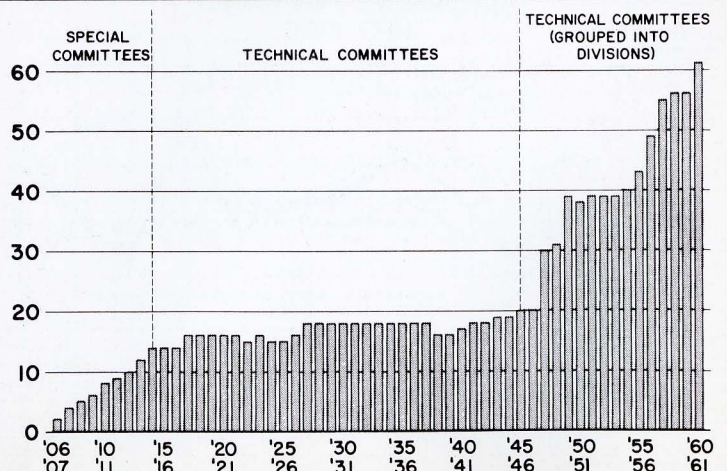
Technological frontiers are rapidly changing and a technical society which would be truly useful must align with the times. The special technical conference on Magnetohydrodynamics is a good example of AIEE's leadership at a leading edge. An opportunity to work closely with educational institutions was grasped.



18. Number of Committees

The expansion of technical committee activity is a quantitative response to membership needs and potential requirements of the field. There are now 60 technical committees divided among the 6 technical divisions. The question arises: What is the significance of these numbers? Should growth impedance be matched to the rate of growth of understanding and knowledge for maximum output? In any case, this explosive expansion within the society poses serious management questions.

NUMBER OF TECHNICAL COMMITTEES



	1905	1910	1915	1920	1925	1930	1935	1940	1945	1950	1955	1960	1961
Telegraphy & Telephony													
Communication													
Communication Switching Systems													
Radio Communication Systems													
Spec. Communications Applications													
Telegraph Systems													
Television & Aural Broadcasting Systems													
Wire Communications Systems													
Communication Theory													
Data Communication													
Broadcasting													
Space Communications													

19. Development Pattern — Communication Division

Eight committees are now required to cover the work areas of this Division. The primary expansion was in 1948.

	1905	1910	1915	1920	1925	1930	1935	1940	1945	1950	1955	1960	1961
Railway													
Electricity in Marine Work													
Electrically Propelled Vehicles													
Traction and Transportation													
Production & Application of Light													
Transportation													
Land Transportation													
Air Transportation													
Marine Transportation													
Domestic and Comm. Applications													
Aero - Space Transportation													

20. Development Pattern — General Applications Division

Five committees cover the work areas in this Division. An enlargement of the committee structure has primarily followed the changes in transportation.

	1905	1910	1915	1920	1925	1930	1935	1940	1945	1950	1955	1960	1961
Electric Lighting													
Electrochemical													
Electrophysics													
Electricity in Mines													
Prime Movers													
Iron & Steel Industry													
Lighting & Illumination													
App. to Iron & Steel Prod.													
Applications to Mining Work													
Indust. and Dom. Power													
Electrochem. & Electrometal.													
Electric Machinery													
Electric Welding													
Industrial Control Devices													
Chemical Industry													
Electric Heating													
General Industry Applications													
Mining and Metal Industry													
Feedback Control Systems													
Industrial Power Rectifiers													
Petroleum Industry													
Mining Industry													
Metal Industry													
Indust. & Comm Power Sys.													
Machine Tools Industry													
Rubber & Plastics Industries													
Textile Industry													

21. Development Pattern — Industry Division

Throughout the history of this Division there has been a constant awareness of the need for expansion. The work of the Division is now covered by 14 committees.

22. Development Pattern — Instrumentation Division

Re-defining the fields of the interests of this Division is indicated by the change in the titles of the committees. In addition, one new area has been recognized. In all, 8 committees at present cover this important field.

[illegible]

23. Development Pattern — Power Division

Periods of expansion are indicated in the early 20's and in 1946. Constant re-alignment and re-examination of the committee structure of the Divisions helps to assure that the objectives of the Institute are realized.

[illegible]

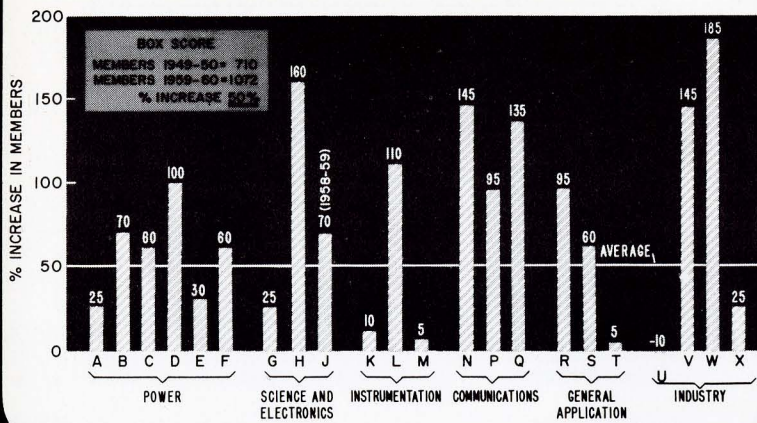
24. Development Pattern — Science and Electronics Division

The dynamics of the leading edge of technology are illustrated by the changes in the committee structure of this Division. The ambition to cover new fields and to adequately identify and cover work in segments of older technologies is strongly reflected.

[illegible]

COMMITTEE MEMBERSHIP - TYPICAL EXAMPLES

PERCENT INCREASE IN NUMBER
OF PERSONNEL 1949-50 TO 1959-60



COMMITTEE MEMBERSHIP - IDENTIFICATION

DIVISION	BELOW AVERAGE	ABOVE AVERAGE
POWER		
A. INSULATED CONDUCTORS	25	70
B. POWER GENERATION		60
C. RELAYS		100
D. ROTATING MACHINERY		
E. SWITCHGEAR	30	60
F. TRANSFORMERS		
SCIENCE AND ELECTRONICS		
G. BASIC SCIENCES	25	160
H. COMPUTING DEVICES		70 (1958-59)
J. ELECTRONICS*		
INSTRUMENTATION		
K. IND. AND INTEGR.	10	110
L. RECORDING AND CONTROLLING	5	
M. TELEMETERING		
COMMUNICATIONS		
N. RADIO COMMUNICATIONS SYSTEMS		145
P. TELEGRAPH SYSTEMS		95
Q. WIRE COMMUNICATIONS		135
GENERAL APPLICATION		
R. DOMESTIC AND COMMERCIAL		95
S. LAND TRANSPORTATION		60
T. MARINE TRANSPORTATION	5	
INDUSTRY DIVISION		
U. ELECTRIC WELDING	-10	145
V. FEEDBACK CONTROL		185
W. POWER SYSTEMS		
X. PETROLEUM INDUSTRY	25	

* REDUCE FROM 114 PERSONS TO 35 PERSONS IN 1959-60 (-52%)

25. Committee Personnel

Along with the near doubling of the number of Institute Technical Committees in the past ten years, there has been an over-all increase of 50 per cent in committee personnel. If growth is a consequence of increased interest and contribution in a particular technical area, such growth may be valid. On the other hand, Parkinson's Law may have come into effect. The growth pattern of committee membership should avoid appointments that are simply nominal. The subcommittees are on the frontline, dealing with new technologies. Here, the creative and active members can be recognized as the dynamic talent desired by the Institute for appointment to committees.

26. Committee Personnel (continued)

RECOGNITION OF NEW TECHNOLOGY

YEAR	NEW A I E E COMMITTEES	NEW TECHNICAL SOCIETIES
1946		American Society for Quality Control
1947		Association for Computing Machinery
1948	Communications Switching Systems Radio Communications Systems Special Communications Applications Television and Aural Broadcasting Systems Telegraph Systems Wire Communications Systems Metallic Rectifiers	Society of Photographic Engineers American Institute of Industrial Engineers Audio Engineering Society
1949	Feedback Control Systems	Society for Social Responsibility in Science Society of Industrial Packaging and Materials Handling Engineers Society of Women Engineers
1950	Electrical Techniques in Medicine and Biology Magnetic Amplifiers	Air Pollution Control Association Society of Fire Protection Engineers
1952		Operations Research Society of America Society for Industrial and Applied Mathematics Radiation Research Society
1953		Atomic Industrial Forum Reaction Missile Research Society

27. Recognition of Technology

A comparison over the past 15 years between new AIEE committees and the formation of new technical societies raises the question of the appropriate time-phasing for recognizing a new technology. Should there have been a new committee, group, or activity of some sort in a particular field which would have made the new society unnecessary? Or was a committee formed that should have been a society? If the Institute is to do an effective job by organizing and discontinuing committees, the committee structure should be cross-referenced to these expanding areas of technology. Through such a mechanism, much needless, wasteful duplication of effort might be eliminated.

28. Recognition of Technology (continued)

RECOGNITION OF NEW TECHNOLOGY
(Continued)

YEAR	NEW A I E E COMMITTEES	NEW TECHNICAL SOCIETIES
1954	Communications Theory Petroleum Industry Solid State Devices Dielectrics	American nuclear Society American Astronautical Federation Association for Applied Solar Energy Appliance Engineers' Society Society of Technical Writers and Editors (est)
1956	Instrument Division Committee Indicating and Integrating Instruments Recording and Controlling Instruments Electronic and High-Frequency Instruments Special Instruments and Auxiliary Apparatus Telemetry Nucleonic and Radiation Instruments Aerospace Instrumentation	Society for Printed Circuits (est)
1957	Data Communications	Society of Reproduction Engineers
1958	Mining Industry Metals Industry Applied Automatic Techniques Man Machine Integration Nuclear Congress and Nucleonics	Society for History of Technology
1960	Fundamental Electrical Standards Space Communications Machine and Tools Industry Rubber and Plastics Industry Textile Industry	Society for Programming Computers

29. Membership

Membership totals have consistently increased over the years, but there has recently been a decrease in rate of growth. However, study of membership growth should both take in account attrition from all causes and, particularly, identify the new segments of the membership.

AS OF
MAY 1

A I E E MEMBERSHIP

TOTAL

INCREASE

PERCENT

1950	34,198		
1951	38,058	3,860	10.1
1952	42,220	4,162	9.8
1953	45,426	3,206	7.1
1954	47,923	2,703	5.6
1955*	48,993	1,070	2.1
1956	49,949	956	1.9
1957**	50,558	609	1.2
1958	52,213	1,655	3.3
1959	53,827	1,614	3.1
1960	55,491	1,664	2.9

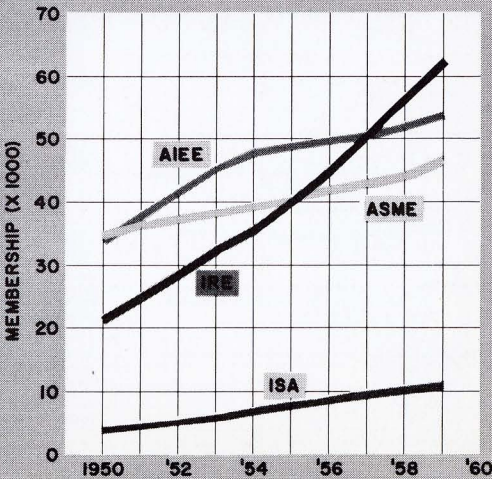
*Dues increased \$5, each grade

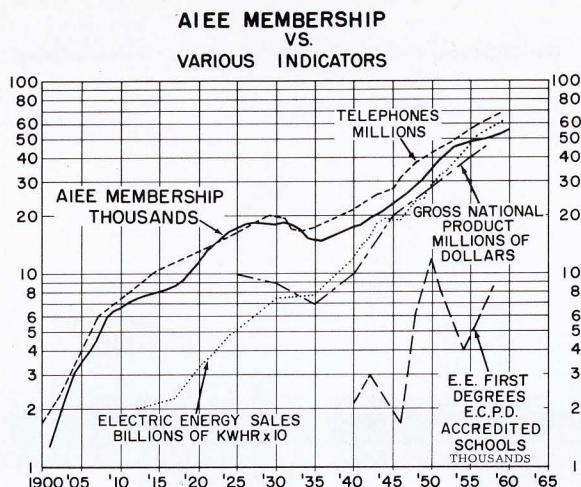
**Foreign exchange allowance discontinued

30. Comparative Membership

The comparative membership figures, exclusive of student members, raise a number of questions: What should growth be? Is growth a proper measure of success? What does it signify? What does the AIEE growth pattern mean on a comparative basis?

COMPARATIVE
MEMBERSHIP
GROWTH

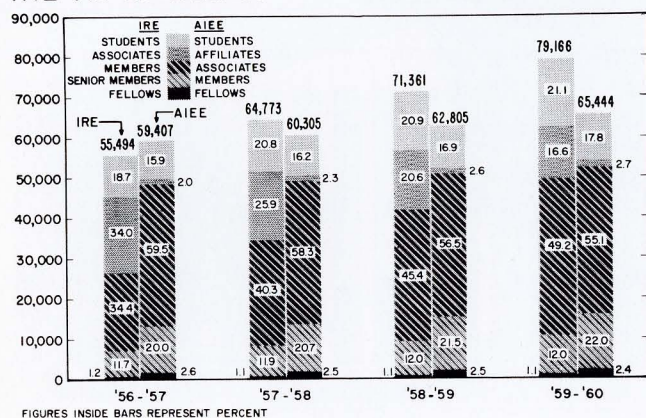




31. Membership Indicators

Comparison of Institute Membership with number of telephones and kilowatt hours gives an indication of how the Society compares with two possible indicators of consumer demand growth. What should the criteria be for Institute growth?

MEMBERSHIP GRADE DISTRIBUTION
IRE AS OF DEC. 31 AIEE AS OF APR. 30



32. Membership, AIEE-IRE

AIEE-IRE relationships have been looked at in diverse terms of competition, cooperation and/or co-existence, and a membership comparison is therefore of interest.

SOCIETY	NUMBER OF STUDENT	
	BRANCHES	MEMBERS (APPRX.)
AIEE	164	11,000
ASCE	144	11,000
IRE	192	16,700
ASME	145	11,600
AICHE	111	4,100
IAS	79	4,650

1959-1960

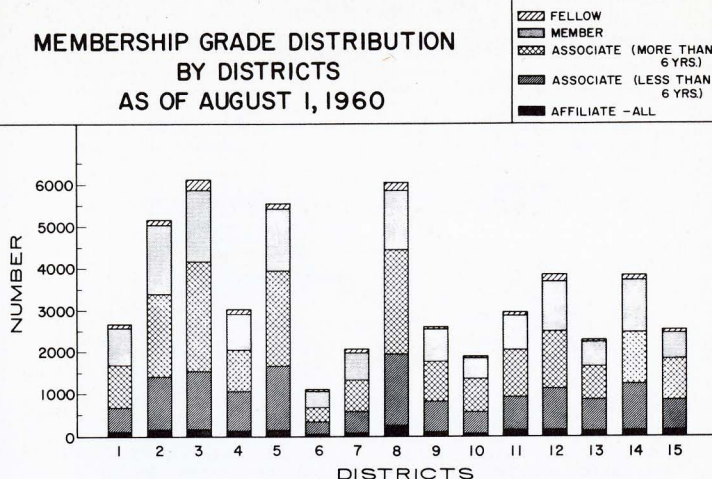
33. Student Branches

The "student body" of just these few technical societies is more than 60,000. The membership of the technical societies comes from this source. The challenge and opportunity are to provide programs that meet the needs of these potential members. Some pioneering is in order.

34. Membership Grade Distribution in Districts

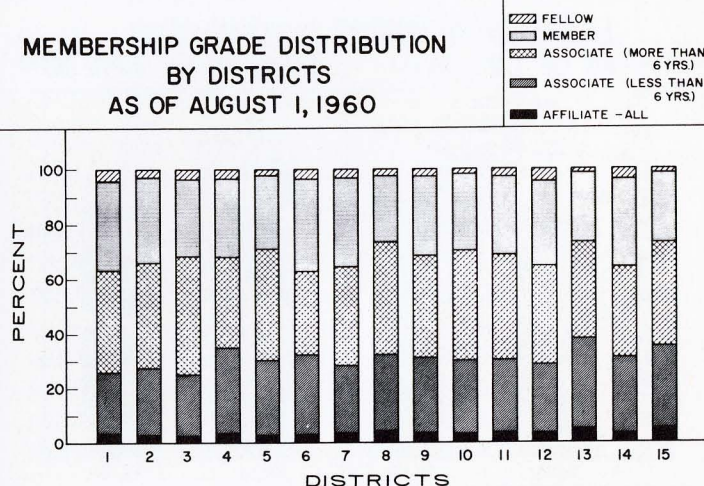
Proportionally, membership composition of the total Institute has the following averages: Fellows — 3.0%; Members — 29.5%; Associates (more than 6 years) — 37.0%; Associates (less than 6 years) — 27.0%; Affiliates — 3.5%. Each District follows the pattern of Institute grade distribution fairly well. Upgrading the membership classification through planned programs is a continuing responsibility of the Sections.

MEMBERSHIP GRADE DISTRIBUTION
BY DISTRICTS
AS OF AUGUST 1, 1960



35. Membership Grade Distribution in Districts (continued)

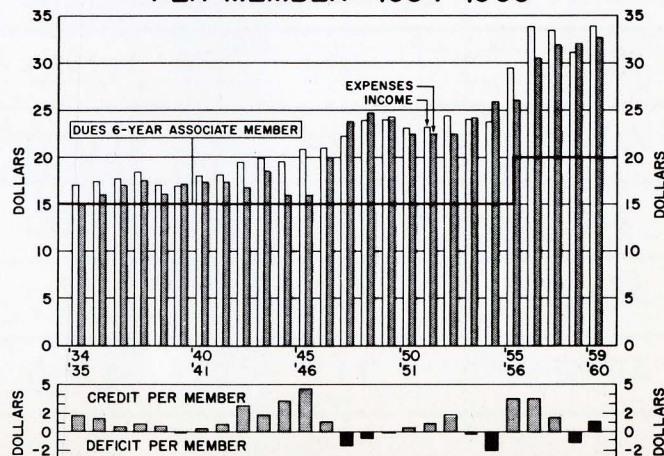
MEMBERSHIP GRADE DISTRIBUTION
BY DISTRICTS
AS OF AUGUST 1, 1960



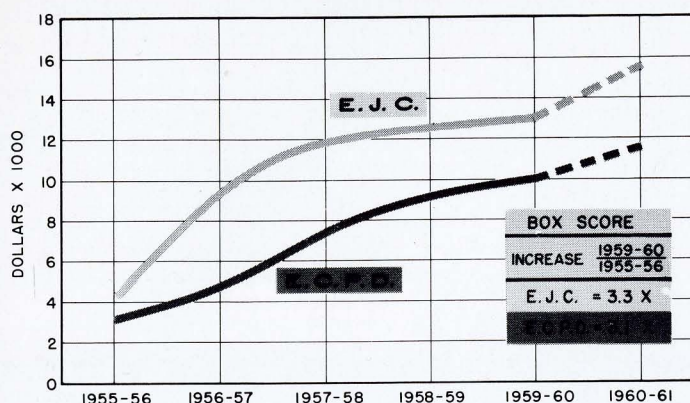
36. Income and Expenses

The problem of a balanced budget is ever present. Every service to the membership (expense) and all sources of income require constant scrutiny to identify significant trends and to find ways and means of improving value received.

INCOME AND EXPENSES
PER MEMBER—1934-1960



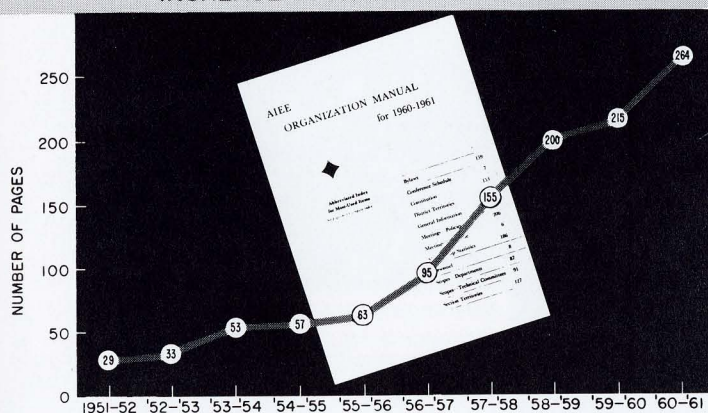
ASSESSMENTS TO AIEE



37. Assessments

Expenditures of AIEE funds for external activities should be continuously examined in terms of: the long-range value received by the whole profession, and the reasonableness of the charge.

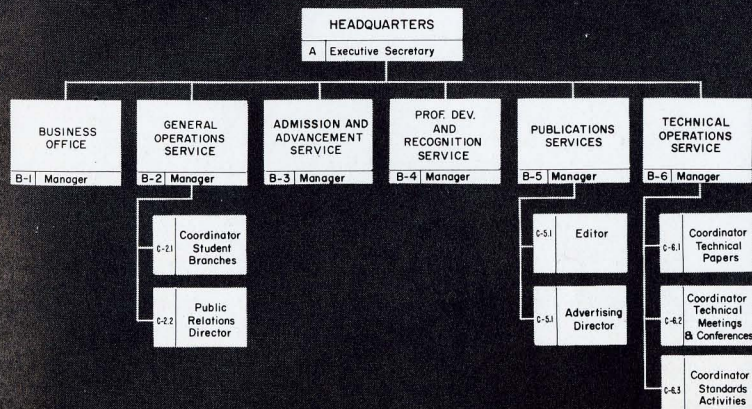
AIEE ORGANIZATION MANUAL INCREASE IN NUMBER OF PAGES



38. Organization Manual

The complex trends affecting the AIEE are clearly indicated by the increase in the number of pages of the AIEE Organization Manual, which has gone from 63 pages to 264 in a period of about five years.

COMMITTEE FOR HEADQUARTER REORGANIZATION Recommendation March 7, 1958



39. Headquarters

An adequate Headquarters operation with well-defined responsibilities and authority is essential for the Institute to effectively promote its objectives with continuity. In 1957 a committee was authorized to study and recommend necessary actions. The present Headquarters organization plans to follow the committee's proposals. Some recommendations remain to be implemented.

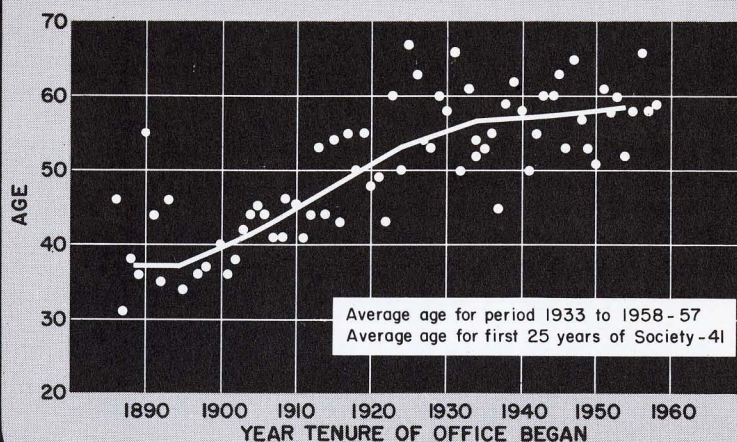
40. Maturing Process

Looking back at the 90's, it was the young who were in the forefront, solving the barrier problems of industry and the societies. Now it is difficult to become a society officer if you are under 55. As men get more firmly entrenched in their business interests, there may be a lessening of sensitivity for the needs, requirements and changes of the dynamic technical front. If age per se has become a criterion for positions of leadership, and creative abilities of the younger are being passed by automatically, then a definite problem exists.

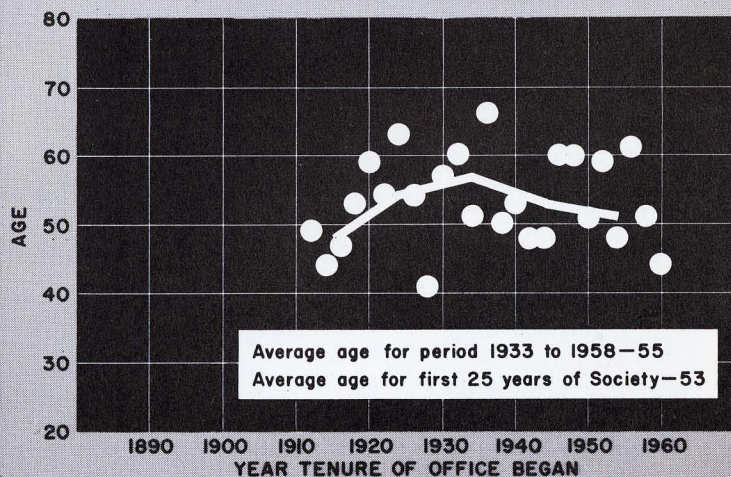
41. Maturing Process (continued)

42. Maturing Process (continued)

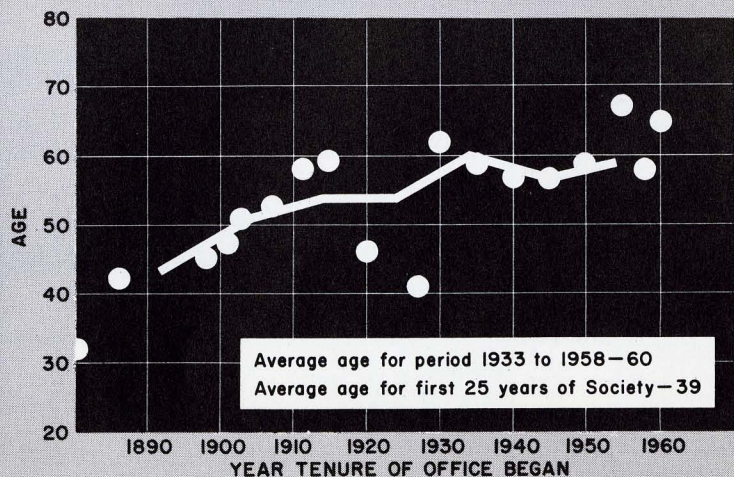
AGES OF AIEE PRESIDENTS



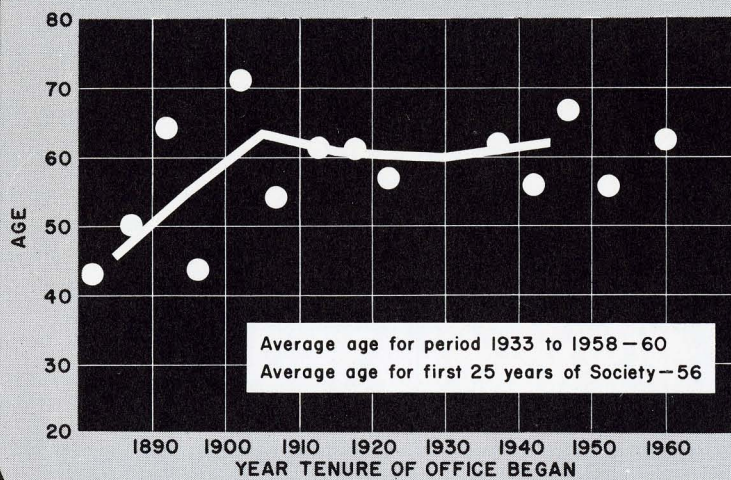
AGES OF AICHE PRESIDENTS



AGES OF AIME PRESIDENTS

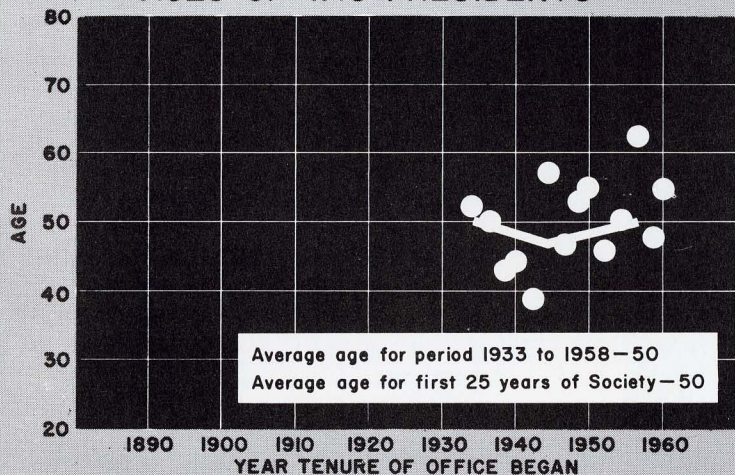


AGES OF ASME PRESIDENTS



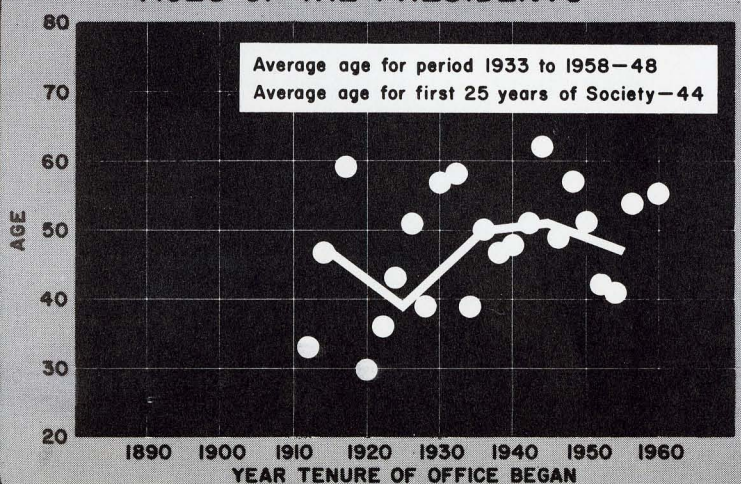
43. Maturing Process (continued)

AGES OF IAS PRESIDENTS



44. Maturing Process (continued)

AGES OF IRE PRESIDENTS

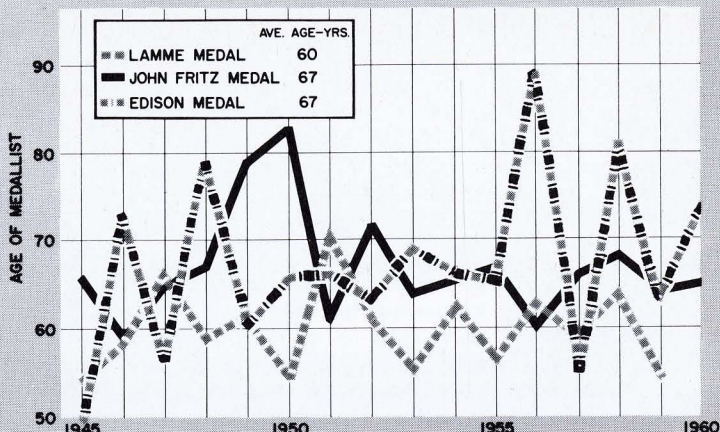


45. Maturing Process (continued)

46. Ages of Medallists

A built-in time-delay element is indicated as a part of a recognition system. Should honors be reserved for men who have reached great maturity or should they be awarded nearer to the time of achievement? Should an award be an incentive or a reward?

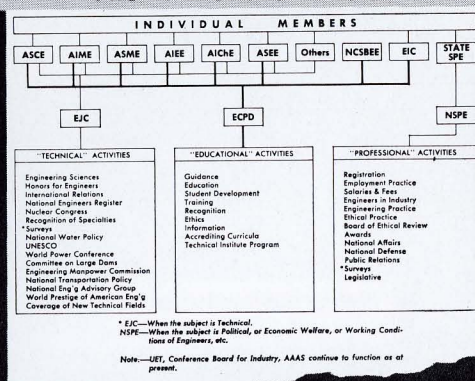
AGES OF TECHNICAL SOCIETY MEDALLISTS



47. Functional Plan

The Functional Plan is a major contribution to the understanding and realization of unity in the engineering profession.

The Functional Plan



48. NSPE Survey

An important and informative report on “grass-roots” attitudes and knowledge of Unity was recently completed by the National Society of Professional Engineers. The report comments that “. . . effective organization of the profession and answers to the many perplexing problems involved will be accomplished only to the degree that individual members of the profession inform themselves on the subject and are willing to support whatever solution may evolve with their time, their money and their energies.”

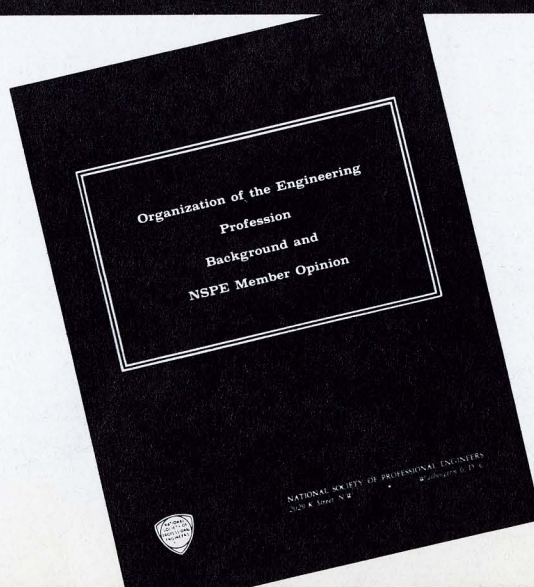


Table 11. "What do you think would be the most effective plan for the organization of the engineering profession at this time? (CHECK ONLY ONE ANSWER)."

Replies	No.	Per Cent
Functional Plan	2,477	19.2
Functional Plan, with coordinating body	6,008	46.5
Federation of engineering societies at the national level such as Engineers Joint Council	2,552	19.8
No Answer	1,875	14.5
TOTAL	12,912	100.0

49. NSPE Preference

Preference for some form of the Functional Plan was indicated by over 65% of the respondents.

Question 9: What do you think would be the most effective plan for the engineering profession at this time?

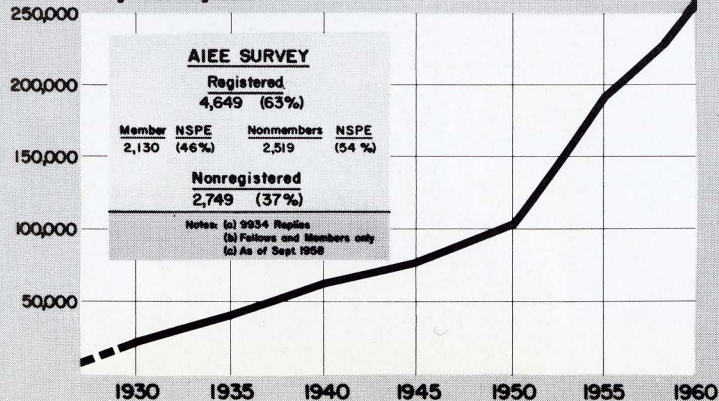
	ASCE		ASME		AIEE		AIME		AICHE	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
1. Functional plan	428	16.3	335	20.8	559	30.4	43	15.2	49	17.2
2. Funct. plan & coord.	1,238	47.0	822	51.1	895	48.8	126	44.7	133	46.7
3. Federation	641	24.4	284	17.6	208	11.3	72	25.5	64	22.5
4. No answer	325	12.3	169	10.5	175	9.5	41	14.6	39	13.6
TOTAL	2,632	100.0	1,610	100.0	1,837	100.0	282	100.0	285	100.0

50. Founder Society Reaction

60% to 80% of the respondents from each Founder Society believe in some form of the Functional Plan as an effective unity mechanism. This poll, taken at the "grass roots," supports the belief that the profession is ready for unity through individual member action.

DATA FROM NATIONAL COUNCIL OF STATE BOARDS OF ENGINEERING EXAMINERS

Number of Registered Engineers



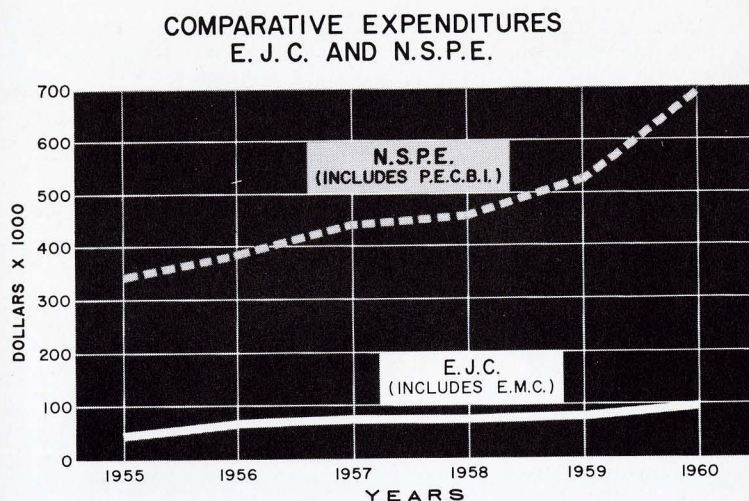
51. Registration

More and more engineers are becoming registered because of a growing level of business in the practice of professional engineering and recognition of the need for standards of performance.

52. Activity Index

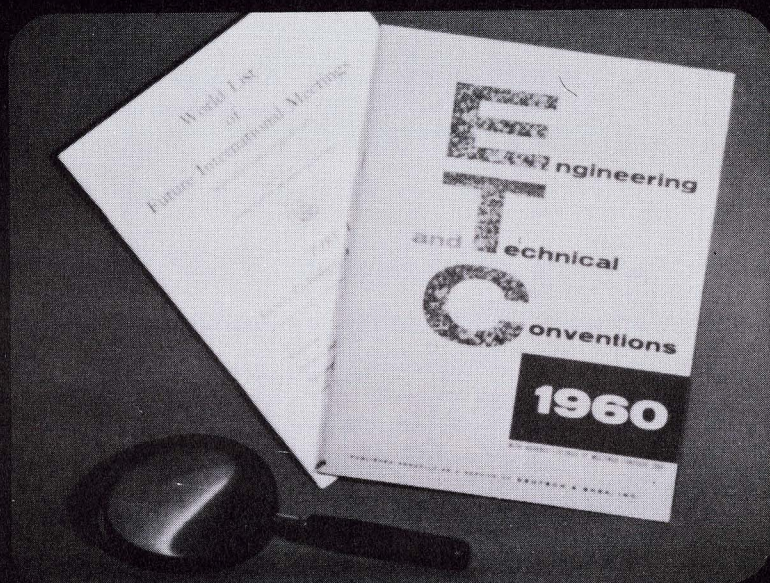
Progress toward objectives is a function of the dollars available to spend on worthwhile programs. Funds available to the society are, in turn, a function of the membership's belief in the work being done.

An amount equal to that shown is spent by the local and state NSPE chapters.



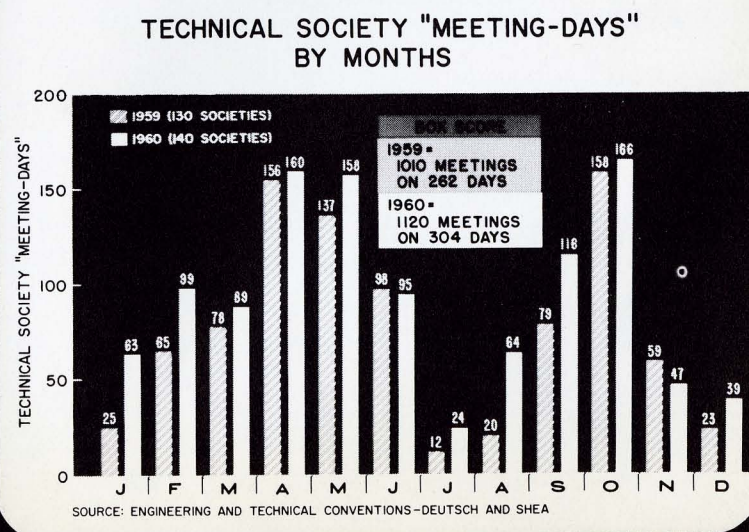
53. Meeting Schedules

Accurate knowledge of technical meetings scheduled or planned — what subjects they are to cover and where they are to be held — is the first step toward control of quality and quantity of papers.

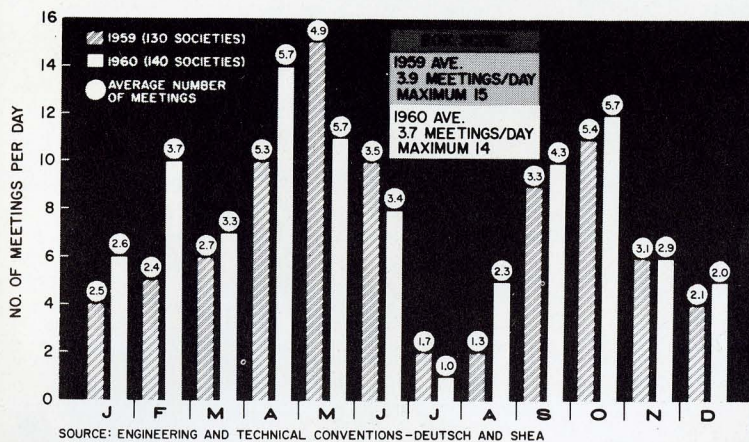


54. Meeting Days by Months

Of obvious impact is the quantity of meetings held per year. These figures were taken from "Engineering and Technical Conventions" by Deutsch and Shea, an advertising firm which in 1960 gave coverage to 140 miscellaneous engineering societies. If all societies were covered, the quantity of meetings would be even greater. The distribution of meetings in 1959 and 1960 shows a strong seasonal pattern.



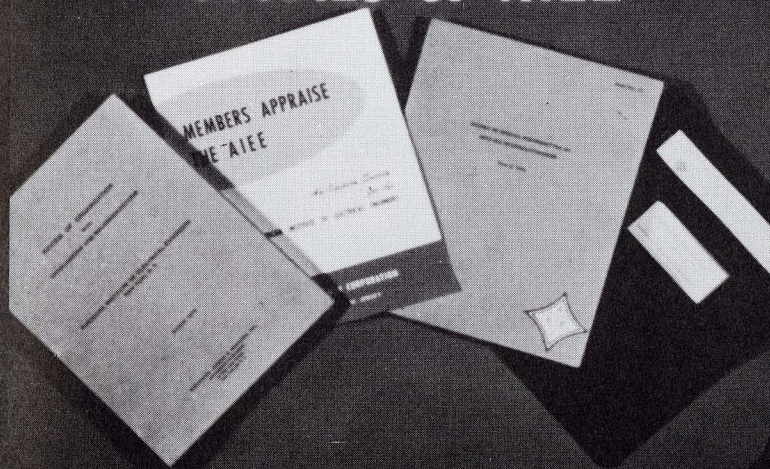
TECHNICAL SOCIETY MEETINGS AVERAGE PER DAY AND MAXIMUM DAY



55. Meetings Per Day

A major barrier to effective, efficient transmission of information within limits set by available funds may be the tremendous duplication of effort. Analysis of the data which show an average of almost 4 meetings per day for the past two years would probably point up duplication and conflict in time, geography and technical matter. Each meeting should be so planned and organized that it is the most effective under the circumstances, otherwise the engineering society is not living up to its responsibilities and challenges.

STUDIES OF AIEE



56. Studies of AIEE

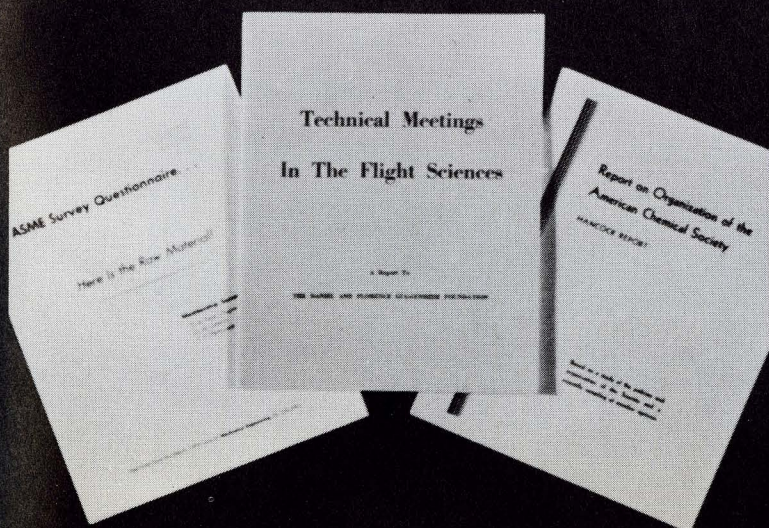
AIEE has "looked at itself" through various types of studies. Much valuable information is in such reports as those listed below, but creative contributions are needed to implement the principles they develop. Perhaps we have had enough of introspection and are ready for some policy guide lines, within which we can move ahead.

"Review of Organization," Stevenson, Jordan, Harrison, March, 1956.

"Members Appraise AIEE," Opinion Research Corporation, 1955.

"AIEE-IRE Relationships," P & C Special Subcommittee, June, 1959.

"Institute Activities and Organization," Special Task Force, Jan., 1959.



57. Surveys

Since the areas of opportunity and the areas of decision have many common elements for all technical societies, the findings contained in studies made by other societies are mandatory reading for those who propose to take part in the management of technology. Recommended particularly are these:

"ASME Survey Questionnaire," March, 1955.

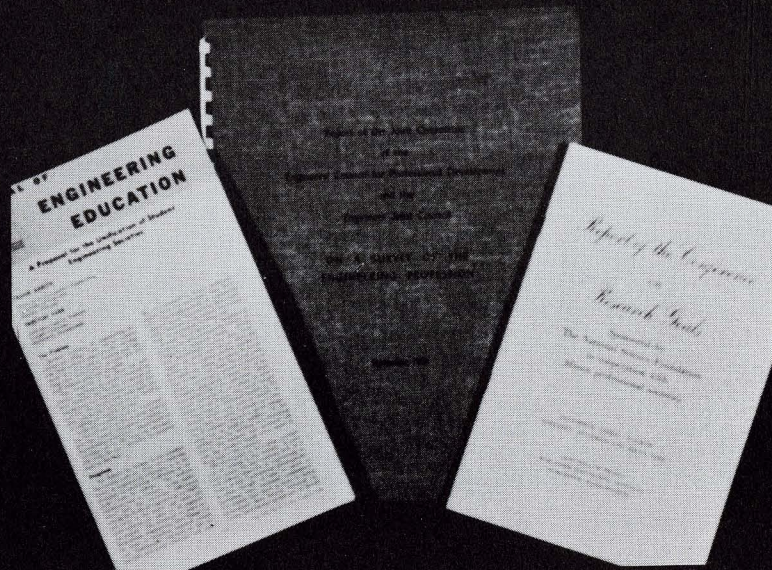
"Technical Meetings in the Flight Sciences," 1959.

"Report on Organization of the American Chemical Society," 1947.

58. Intersociety Studies

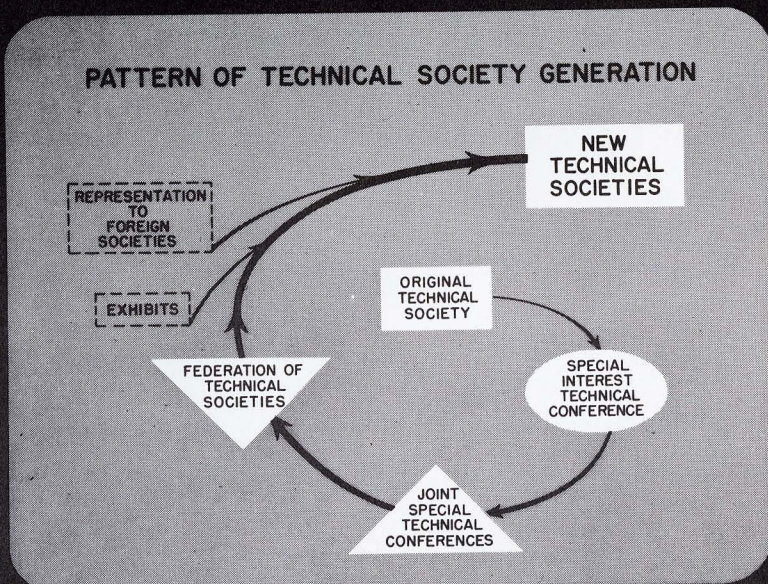
Identification and evaluation of plans for advancing engineering and science are made by many societies. Familiarity with the thinking from such diverse viewpoints should be background knowledge for every AIEE member.

Examples: *Journal of Engineering Education*, ASEE, 1960.
"Survey of the Engineering Profession," ECPD, EJC, Sept., 1956.
"Report of the Conference on Research Goals," National Science Foundation, 1959.



59. Generation

The generation of new technical societies is a product of the forward movement in knowledge and understanding. But, underlying the splintering process there is also some evidence that the older societies have not always been flexible enough to keep pace. Pressures come from group common interests; from desire for autonomy; and from recognition of foreign forums. Growth and change must be recognized as a challenge, opportunity and responsibility of each society, leading to better management of technology.



60. United Engineering Center

The spirit of cooperation and integration is symbolized by the United Engineering Center.





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