A Report of the St. Louis Meeting December 26–31, 1952

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GOOD weather, the enthusiastic cooperation and interest of St. Louis citizens, and warm hospitality on the part of local scientists combined to make the 119th meeting of the American Association for the Advancement of Science a decidedly pleasant and memorable occasion. The Academy of Science of St. Louis arranged a luncheon at which the Executive Committee and administrative staff of the Association were guests, and many resident scientists invited out-of-town speakers and colleagues to their homes. Apart from its friendliness, this annual meeting of the AAAS was one of the most important and significant conventions in the long history of the Association, now in its 105th year.

The sixth St. Louis meeting was noteworthy in more than one respect. Among the items of business transacted in the two sessions of the Council, at which 106 members were present, was the adoption, by unanimous vote, of a sixth constitution and a new set of bylaws that will, it is hoped, enable the Association more efficiently to continue its work of advancing science. The Academy Conference, with 29 academies officially represented, had a particularly successful series of sessions. This recurrent conference and the Conference on Scientific Manpower were joined this year by a Conference on Scientific Editorial Problems, which was so well received that the participants decided to organize it, also, to continue at future AAAS meetings. The special sessions, which add so much to the meetings each year—the distinguished evening addresses sponsored by the American Mathematical Society, the National Geographic Society, the Scientific Research Society of America, the Society of the Sigma Xi, and the United Chapters of Phi Beta Kappa, as well as the presidential address of the AAAS itself—attracted large and appreciative audiences. The AAAS Science Theatre, which showed the latest in foreign and domestic scientific films, was consistently well patronized. The Annual Exposition of Science and Industry, with 72 exhibitors and 116 booths filling Convention Hall of the Kiel Auditorium and overflowing into the promenade, was up to the high standard of recent years and drew an appreciative audience. There were programs in all principal fields of science and there was a universal concurrence of opinion regarding their high quality. All these aspects of the meeting merit more than passing mention.

Symposia. The number and quality of the symposia were impressive. The three general symposia were much more than reviews of the literature of their subjects. "Disaster Recovery," with eminent authorities from a variety of fields, analyzed the characteristics of natural and man-made disasters and examined the common principles of recovery. "Applications of the Theory of Games" pleased the mathematicians and statisticians, and interested the laymen who attended. In "The Nation's Nutrition," eight national leaders in the field presented, primarily, their own most recent research. With highly qualified discussants in addition, this program commanded a gratified audience that exceeded two hundred in number.

Another highlight of the meetings—an innovation that proved popular and will be repeated—was the series of four public discussion book panels arranged by the Society of Systematic Zoology and cosponsored by Section F. These sessions, set up in TV fashion with authors and discussants present, drew audiences approaching two hundred. Audience participation was encouraged and, in one of the panels on evolution, spirited discussion prolonged the session long beyond the scheduled time.

The 18 sections and subsections of the Association, together with the 35 participating societies and other organizations that had programs of their own, arranged 62 symposia and panel discussions—a record-breaking total that surpassed the previous high of 42 at the Philadelphia meeting of 1951. All were of high caliber, but with 90 sessions and 381 speakers, there was competition that cut attendance at some programs during the four-day period in which most of them were concentrated. Most program chairmen expressed satisfaction with the attendance.

The proportion of symposium papers to short contributed papers was high because relatively few of the larger scientific societies met with the Association this year. Of the 53 organizations that participated, 35 had programs of their own and, of these, only 24 had sessions for contributed papers. For many of these participating groups, however, either it was not their national meeting or their memberships are modest in size. Their participation, it should be emphasized, manifested their interest in the AAAS and the work it is doing, and their contributions were substantial.

At St. Louis, the emphasis on symposia and panels constituted a further advance toward the point of view developed in the Arden House Conference—that AAAS meetings should offer programs that not only will provide opportunities to integrate the several scientific disciplines but will also serve to increase public understanding and support of science. How best to attain these worthy objectives merits careful study. A general symposium, planned in part for intelligent laymen who are local residents, must have a strong special appeal if it is to compete successfully with the daily routine and social habits of business and professional persons. A technical symposium can be expected to attract specialists but it is handicapped if it stands alone and is not supported by paper-reading sessions in the same field. Individual scientists, who attend a scientific meeting primarily to read a paper and to hear several others in their specialty, constitute an important and receptive audience for symposia that integrate the sciences, develop neglected interdisciplinary areas, or deal with problems of common concern to all scientists. The number present at a AAAS meeting is in direct proportion to the number of contributed papers. At St. Louis ten AAAS sections contributed substantially to the attendance by arranging 25 sessions at which 165 contributed papers were read. Indeed, the 24 societies that had scheduled 54 sessions for paper-reading reported only an additional 209 short papers, of which 94 were given before the three mathematical societies.

A number of section secretaries and others interested in scientific meetings have independently reached the following basic conclusions:

1. Most people go to meetings primarly to see other people in their own or allied fields.
2. The reading of a paper commonly means financial assistance to the author in getting to the meeting.
3. Advance publication of the program, by providing a partial list of those who will be present, stimulates attendance.
4. Once at the meeting, the individual scientist enjoys the symposia and general sessions that are available, but only exceptionally can a scientist afford to attend symposia at a meeting in which sessions for contributed papers in his field are nonexistent.

As long as a AAAS meeting has a core of sessions for contributed papers, a good potential "core attendance" for symposia is assured, and it is gratifying to know that the number of contributed papers will increase at the AAAS Boston meeting of December 26–31, 1953, because full-scale national meetings of the American Society of Zoologists, the American Society of Naturalists, the Genetics Society of America, the American Society of Human Genetics, not to mention sessions of other societies, are scheduled to take place in conjunction with the 120th meeting of the Association.

Participating societies at St. Louis. In addition to the 18 sections and subsections of the Association, a total of 53 societies and other organizations officially participated in the 119th meeting.

An analysis of the 264 separate sessions of the St. Louis meeting yields some interesting statistics (Table 1).

TABLE 1

Number of sessions for contributed papers	79
Number of symposia and panels	95
Number of business sessions	32
Number of meal functions (at many of which addresses were given or business transacted)	27
Number of round-table sessions or conferences	10
Number of sessions devoted exclusively to addresses	21
Total	264

There were at least 912 speakers, including authors of contributed papers, 374; authors of symposium papers and panel members, 403; discussants, 83; speakers giving introductions and principal addresses, 52.

Attendance. The official number of registrants (exclusive of representatives of the press, exhibitor personnel, and others who assisted with the conduct of the meeting) was 1938. At first thought, this may seem to be an exceptionally low number for a AAAS meeting, whereas, actually, this figure does not compare unfavorably with past meetings in St. Louis, nor does it even approximate the total attendance. Two experiments apparently account for the low registration: One was the sale of copies of the General Program–Directory to institutions and to individuals, separately, at cost ($1.50), without requiring registration. Programs sold in this way totaled 626. Although not every purchaser attended the meeting, there is reason to believe that a substantial number did, without completing their registration by paying an additional dollar for a convention badge. Second, because of the high degree of local support and cooperation, President Bronk proclaimed that all sessions of the meeting would be thrown open to interested adults and college students in Greater St. Louis. This proclamation, which was widely publicized locally, brought many persons, at least to the special sessions and the exposition, who otherwise might not have come at all. At the same hour on Monday evening, Dec. 29, for example, the National Geographic lecture in the Opera House had an audience of 3400; the Sigma Xi address in the Gold Room of the Hotel Jefferson enjoyed an attendance of 1000; the mathematicians' dinner had several hundred; more than 100 geologists were at Washington University; the science teachers had events at the Hotel De Soto; and there were scheduled sessions in psychology, the social sciences, and medicine. It is a conservative estimate that during the meeting a total of 8000 different persons attended one or more phases of the meeting.

TABLE 2

DISTRIBUTION OF REGISTRANTS BY STATES AND COUNTRIES

Alabama	15	North Carolina	10
Arizona	1	North Dakota	2
Arkansas	21	Ohio	86
California	40	Oklahoma	28
Colorado	23	Oregon	4
Connecticut	20	Pennsylvania	45
Delaware	3	Rhode Island	7
District of Columbia	60	South Carolina	3
Florida	15	South Dakota	6
Georgia	5	Tennessee	34
Idaho	5	Texas	36
Illinois	265	Utah	9
Indiana	80	Vermont	1
Iowa	57	Virginia	31
Kansas	55	Washington	6
Kentucky	15	West Virginia	9
Louisiana	17	Wisconsin	40
Maryland	42	Canada	14
Massachusetts	25	Cuba	1
Michigan	76	England	1
Minnesota	37	Finland	1
Mississippi	11	India	1
Missouri	495	Israel	2
Montana	5	Mexico	1
Nebraska	32	New Zealand	1
New Jersey	32	Philippines	1
New Mexico	2	Venezuela	1
New York	103	Total	1938

The registration totals for the two previous meetings in St. Louis—2649 (March 1946) and 2292 (December 1935)—afford an interesting comparison. At these two earlier meetings, the botanical societies, the entomologists, the parasitologists, the geneticists, the horticulturists, the American Society of Zoologists, and other societies all held their annual national meetings with the AAAS. In 1952, without any of these organizations participating, registration was only 700 lower than the registration at the fifth St. Louis meeting in 1946. If allowance is made for the effects of the separate sale of programs and the proclamation of an open meeting, this year's attendance may have been considerably larger than that of March 1946.

At the Philadelphia meeting in 1951, the registration of 3702 exceeded the 3339 registrants of the 1940 meeting in that city, despite the fact that most of the societies mentioned above, and still others, took part in 1940 but not in 1951. Thus, for two consecutive years, it has been demonstrated that, with a core of paper-reading sessions in the sciences proper, there is an audience for the symposia, the conferences, and the special sessions that are distinctive features of the annual meeting of the

Association. Analyses of the registration, geographically and by subject fields are given in Tables 2 and 3.

TABLE 3

SUBJECT FIELDS OF REGISTRANTS

Mathematics	46
Physical Sciences	
Astronomy	16
Physics	116
Chemistry	204
Geology and Geography	106
Engineering	65
Biological Sciences	
Botanical Sciences	198
Industrial Microbiology	32
Zoology	244
Other Biology	88
Medical Sciences	
Dental Research	36
Pharmacy	65
Other Medicine	317
Psychology	72
Anthropology	29
Social Sciences	47
Science Teaching and Education	174
General	83
Total	1938

An inspection of these data indicates that the 119th meeting was definitely a national meeting, with only four states (Maine, New Hampshire, Nevada, and Wyoming) unrepresented.

Detailed comment on the analysis of subject fields seems unnecessary. Two of the paradoxes of the registration are the small number of mathematicians, not withstanding the fact that the mathematical societies officially met with the AAAS, and the large number of botanists, with not a single botanical society meeting with the Association.

Physical arrangements. The excellent facilities of the Kiel Auditorium, within a short walking distance of the downtown hotels, and with its 16 session rooms, made it possible to schedule the three general symposia and nearly all the many sectional programs there, in proximity to the Main Registration-Information Center, the Visible Directory of Registrants, the Science Theatre, and the Exposition. The general policy of offering participating societies a choice of session rooms on a campus or in a hotel, and of consulting society officers on their hotel preferences, again was followed. In this way, it was decided that the three mathematical societies would utilize classrooms at Washington University for their sessions and the hotels Chase, Roosevelt, Melbourne, and Sheraton for sleeping accommodations. The Society of Systematic Zoology and other biological organizations, as well as the medical groups, were based at the Hotel Statler. The three science teaching societies, which chose the Hotel De Soto, used it so intensively that it was necessary to hold a few of their sessions in other nearby hotels. All other sessions were concentrated in the Hotel Jefferson, the headquarters of the Association and of the press. The Lennox, Mayfair, Mark Twain, Majestic, and Claridge hotels were used for supplementary sleeping room accommodations.

Projection requirements were heavy, but no participating society was asked to share in the considerable cost of projection. The Association is indebted to the St. Louis Board of Education, which generously provided all the equipment used, except for several screens in the hotels and the special equipment in the Science Theatre, which were rented. The Association is grateful to Warren K. Begeman, director of Adult and Technical Education, St. Louis Board of Education, for taking complete responsibility for the assembling, distribution, operation, and return of the machines and screens, for making arrangements with the projectionists, a majority of whom were professionals, and for his indefatigable supervision during the meeting. There were several instances of last-minute requests for projection but, so far as is known, in no case was there any real failure to meet the exacting and diverse requirements.

Housing and registration were handled by the staff of the St. Louis Convention Bureau under the general supervision of Fred H. Rein, manager. Copies of all confirmations of hotel room reservations not only went to those who made them but also came to the Washington office of the AAAS. The writer is thus well able to testify to the efficient manner in which these were handled. A new schedule of hotel room rates, necessitated by new contracts with the unions of the hotel workers, went into effect some months after the publication of rates in SCIENCE and THE SCIENTIFIC MONTHLY. Despite this, the bureau and the hotels cooperated to provide accommodations at the rates requested. Supplementary registration facilities were established at the hotels Jefferson, Statler, and De Soto, and also at Washington University, for the first four days of the meeting. In spite of the strain on the resources of the bureau, this phase of the meeting was handled with flawless efficiency.

The Biologists' Smoker. The Biologists' Smoker was held under the joint sponsorship of the Society of Systematic Zoology and the Association, Monday evening, Dec. 29, from 9 P.M. till midnight, in the Exhibition Hall of the Kiel Auditorium. The starting hour was fixed so as to permit attendance at the Sigma Xi address, the National Geographic lecture, the various dinners, and other evening sessions. About 2000 enjoyed the opportunity to renew contacts with their colleagues. Cigarettes were provided through the courtesy of Philip Morris, and the refreshments included beer, Coca-Cola, and several of the products of the National Biscuit Company. The Association acknowledges with much appreciation these generous contributions.

AAAS Science Theatre. Beginning Saturday afternoon, Dec. 27, six programs, each four hours long, showed 37 of the latest foreign and domestic scientific films, chosen for their variety of subject matter and other qualities. Nearly all were in color, with sound, and nearly all were 1952 releases. By a special arrangement, the film *Oak Wilt in Wisconsin* was narrated in person by A. J. Riker, of the University of Wisconsin. *Experimental Film on Air Blast Control of Gasoline Spillage Fires,* produced by Parks College of Saint Louis University, was also narrated. The Association again expresses its appreciation to those who so kindly lent such excellent films.

Local public information. A report on public information at St. Louis will be found elsewhere, but the appreciation of the Association to Howard A. Marple, director, Advertising and Public Relations, Monsanto Chemical Company, and to the members of his Subcommittee on Local Public Information for their effective work in publicizing the meeting in the Greater St. Louis area may appropriately be recorded here.

The St. Louis Reception Committee. The Preconvention Issue of SCIENCE (116, 611 [1952]) listed all those who

served on the Executive Committee and the several subcommittees of the St. Louis Reception Committee, and who, in one way or another, contributed to the success of the convention. The Association was fortunate in having as general chairman, Charles Allen Thomas, president of the Monsanto Chemical Company. He maintained an interest in all phases of the meeting and welcomed the Association to St. Louis upon the occasion of the AAAS Presidential Address of Kirtley F. Mather. To Dr. Thomas and his executive assistant, Philip R. Tarr, the Association is greatly indebted.

Annual Exposition of Science and Industry. The Annual Exposition of Science and Industry is well established as an integral and important feature of the annual meeting of the Association. As its title implies, it provides those who use the tools and materials of science and those who produce and distribute them an opportunity to meet each other. The 1952 Exposition, with 72 exhibitors and 116 booths, which filled Convention Hall of the Kiel Auditorium and overflowed into the promenade, did not fall short of the high standard of recent years. In addition to the latest and best in scientific books, instruments, and laboratory supplies, there were excellent special exhibits and a splendid series of technical exhibits of large industrial firms—which are coming to realize the advantages of showing their latest technological accomplishments to an appreciative, highly trained, professional attendance.

Potential exhibitors in the St. Louis area were approached through a vice-chairman of the St. Louis Reception Committee, and the Association is conscious of its obligation to Leslie J. Buchan, vice chancellor and dean of the faculties, Washington University, for his personal efforts and keen interest throughout. In addition to the exhibitors listed on pages 619–25 of the December 5, 1952, issue of SCIENCE, the following had booths:

Anheuser-Busch, Inc.
Denoyer-Geppert Company
Folkways Records & Service Co.
General Van & Storage Company, White Motor Company, and Fruehauf Trailer Co.
Hospital Topics and *Northwest Medicine*
E. Leitz, Inc.
Ludlow Saylor Wire Company
McDonnell Aircraft Corporation
Missouri Bureau of Public Health Engineering
Natkin & Company, Inc.
Nuclear Research & Development, Inc.
Phillips Scientific Corporation
Westinghouse Electric Corporation

Booth space was endowed by:

Nooter Corporation
Olin Industries, Inc.
Southwestern Bell Telephone Company
The Technicon Company
Union Electric Company of Missouri

Reports of Sections and Societies[1]

American Mathematical Society (A1)

The American Mathematical Society held its 59th annual meeting in conjunction with the AAAS in St. Louis. All sessions were held on the campus of Washington University. There were approximately 80 contributed papers. Marston Morse, of the Institute for Advanced Study, gave the Josiah Willard Gibbs Lecture, entitled "Topology and Geometrical Analysis," and John von Neumann, also of the institute, gave his retiring presidential address, entitled "A Logical Theory of Automata." At a joint session with Section A of the AAAS, R. L. Wilder, of the University of Michigan, gave a retiring vice-presidential address on "Origin and Growth of Mathematical Concepts." A. M. Gleason, of Harvard University, gave an invited address entitled "Natural Coordinate Systems," which was awarded the Newcomb Cleveland $1000 prize for the outstanding paper presented at the AAAS meetings.

At the annual business meeting, D. H. Lehmer was elected vice president, and the following were elected to the council of the society: F. B. Jones, E. E. Moise, B. J. Pettis, R. M. Thrall, and G. W. Whitehead.

E. G. BEGLE, *Secretary*

Association for Symbolic Logic (A2)

The annual meeting of the Association for Symbolic Logic was held at Washington University on Dec. 29. There were morning and afternoon sessions for contributed papers, and during the morning session J. Barkley Rosser gave his retiring presidential address on "Many-valued Logics."

Atwell R. Turquette presided at this meeting, at which, in addition to Professor Rosser's address, the following papers were presented: Alan Ross Anderson, "Improved Decision Procedures for Lewis's Calculus S4 and von Wright's Calculus M;" William T. Parry, "A New Symbolism for the Propositional Calculus;" and Alfred Tarski, "Some Metalogical Results Concerning the Calculus of Relations." Papers by Alfred Tarski on "A Formalization of Set Theory Without Variables," and "An Undecidable System of Sentential Calculus," and by Alan Ross Anderson on "A Consistent Extension of Fitch's *Symbolic Logic*," were read by title.

At the afternoon session, J. Barkley Rosser presided, and the following papers were presented: S. C. Kleene, "Arithmetical Predicates and Function Quantifiers;" John R. Myhill, "A Stumblingblock in Constructive Mathematics;" Robert L. Stanley, "Simplified Foundations for Mathematical Logic;" John R. Myhill, "On the Logical Paradoxes" (by title); and Hao Wang, "Predicative Foundations of Mathematics" (by title).

At the council meeting, the following elections were announced—each for a period of three years: W. V. Quine, president; Leon Henkin, vice-president; A. Robinson and J. C. Cooley, members of the Executive Committee; Robert Feys and Paulette Destouches-Fevrier, members of the council. Stephen C. Kleene was named for another three-year term as editor of the *Journal of Symbolic Logic.*

The next annual meeting of the association will be held

[1] Key symbols correspond to those in the General Program.