A Report of the Eighth New York Meeting

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The eighth New York meeting proved to be the largest meeting the AAAS has ever held. There were 7389 paid registrants, so that even the previous record-breaking meeting of 1949, which had 7014 registrants, was surpassed.

This new high in registration is particularly striking in view of the fact that it was not due to the same circumstances that made the 1949 meeting so exceptional. At that sixth New York meeting the many biological societies that now regularly prefer a summer, or a campus, meeting made up the major portion of the attendance. All the mathematical societies were also present, and in addition (and quite unusually), groups of sociologists, including the American Sociological Association, held their national meetings with the AAAS that year.

By comparison, at the eighth New York meeting, seven biological societies, with some 78 sessions and 347 speakers, contributed substantially but did not dominate the meeting. There were symposia and programs specially arranged by other AAAS affiliates that, in the aggregate, contributed materially. Finally, the symposia and other sessions of the 18 sections, of AAAS committees and conferences, and of the Association as a whole have all grown in quality and attractiveness.

As is true with scientific meetings generally, the annual meetings of the Association have tended to grow in size as the scientific population has increased, but this is not particularly apparent unless they are studied by decades. Between World Wars I and II, just five AAAS meetings had 3000 or more registrants; the largest of these was the Washington meeting of 1924, with 4206 registrants. Of the 16 meetings since 1945, ten have exceeded 3000 registrants. The six largest were the two Chicago meetings of 1947 and 1959 (with registration totals of 4940 and 4636, respectively); the 1956 New York meeting (5327); the 1958 Washington meeting (5368); the 1949 New York meeting (7014); and now the 1960 meeting (7389).

Mere size, however, is not the best criterion of a successful meeting. Rather, it is the quality of the programs, the importance of the business transacted, and the impact and stimulus of the conversations exchanged that make a scientific meeting significant and memorable. These considerations and the size of the meeting, of course, are positively correlated.

It was apparent early in 1960, from the developing programs, that the 127th meeting almost certainly would have several thousand more registrants than the large meetings of the past three years. Prospective exhibitors heeded this prediction, and the original exhibit area was sold out months in advance of the opening day. Throughout the fall, advance registration was heavier than ever before; more than 2100 registered before the meeting began. When the last registration slip had been counted, it was found that, for the second time, the number of paid registrants, usually in the range of 5000, had exceeded 7000.

Fortunately, the over-all capacity of the Grand Central Zone hotels was now such that no serious congestion, like that of 1949, developed. Nor was it necessary, as it was then, to hold one-third of the daytime sessions at Columbia University. Also, it was possible to schedule more programs in the first two days of the week.

Most of the sessions had rooms of appropriate size, and almost every program had at least as large an audience as had been anticipated; indeed, there were instances where sessions overflowed—an obvious tribute to their quality. This is almost inevitable when program chairmen have been too modest in their estimates of attendance, or when added sessions are interpolated after all large session rooms have been assigned.

The demand for projection facilities was heavy, but it was possible to meet last-minute requests because the Committee on Physical Arrangements wisely had provided extra equipment and not only had scheduled an operator for every session that had originally requested lanterns but had projectionists in reserve. Such aspects of the meeting as registration, traffic in the exhibit and Science Theatre areas, and the various social functions, in general, went smoothly.

The four hotels that housed the 18 sections and the 91 participating organizations were so near to one another that, it is believed, virtually all registrants saw the exhibits at least once. Incidentally, the now-established policy of restricting admission to the Exposition to those with registration badges, and of registering no one younger than 16, met with approval from all but a few disappointed parents who felt that the rules should be waived for their exceptionally talented young children. No exceptions, however, were authorized. Most people realized that the exhibits were designed for professional scientists and other science-minded adults. This policy does not imply any lack of interest on the part of the Association in science-minded young people. The separate Junior Scientists Assembly, arranged by the Association's Academy Conference, and the Science Library Program (now modified for, and circulated to, elementary schools as well as high schools) provide ample evidence to the contrary.

The New York meeting's total of 352 sessions, summarized in Tables 1, and 2, included programs sponsored by the Association as a whole, by all 18 AAAS sections, by two AAAS committees, by four recurrent conferences, and by 48 societies that arranged programs varying from 1 to 36 sessions in length. In addition, there were 37 *other* participating organizations that officially cosponsored programs of appropriate sections and societies.

Since all 18 AAAS sections had programs, there were sessions of interest to specialists in all the principal fields of science as well as interdisciplinary symposia for those aware of the contributions that one science may make to another. There were some 39 luncheon or dinner or other social functions, exclusive of small private parties. The trailer with the many books for the book lounge of the So-

ciety of Systematic Zoology was snowbound in Illinois, but the demonstration room of the American Society of Zoologists, the room of Sigma Delta Epsilon, and other headquarters rooms where business meetings, conferences, or spontaneous discussions could be held in comfort were welcome features of the meeting.

The AAAS had two headquarters hotels. The Biltmore was the site of the Annual Exposition of Science and Industry, the Science Theatre, the Visible Directory of Registrants, and the AAAS Office. Located at the Commodore were the business sessions of the Association, most of the large evening events, the general events, and the AAAS pressroom. In general, these two hotels housed the biological and medical groups, including the many sessions of the zoologists; the Roosevelt housed the American Astronomical Society, the sessions on education, the science teaching societies, and the series of societies in the economic and social sciences; the geologists, the geographers, the anthropologists, and the History of Science Society and other Section L affiliates were based at the Belmont Plaza; and the American Society of Criminology and a number of the geographical sessions were quartered at the Waldorf-Astoria. The facilities and location of these hotels made for a particularly convenient meeting. Indeed, by using the underground concourse of Grand Central Station it was possible to walk between the Biltmore, the Commodore, and the Roosevelt without hat or coat.

Arrangements for the Meeting

Compliments on the physical arrangements for the 127th AAAS meeting have been numerous—but not unanimous. No meeting as large and uniquely complex as a AAAS meeting can be entirely without problems or minor frustrations. That the meeting presented no serious difficulties and was as smooth-running and pleasant as it was is a tribute to many individuals—from program chairmen, research scientists, teachers, and AAAS office personnel to skilled workmen, porters, and students. Literally hundreds of persons, in one way or another, contributed their thought and services.

In general, the hotels had enough session rooms of the right sizes, and these were adequately furnished and equipped. The hotel personnel, from managers to bellboys, were capable and cooperative. There were no known instances of failure of microphones, and nearly all the projection facilities worked smoothly. Comments on this latter phase have ranged from "abominable" to "superb," but on the whole, a difficult job was done in adequate-to-superior fashion.

Table 1. Analysis of sessions at the eighth New York meeting.

Sessions for symposia, invited papers, and panels	152
Sessions for contributed papers	57
Sessions for addresses or lectures	29
Business sessions	51
Meals and social functions	39
Tours and field trips	8
Sessions for motion pictures	10
Demonstration periods	6
Junior scientists assembly	1
Total number of sessions	353

The local Committee on Physical Arrangements always has one of the most taxing assignments. For the New York meeting, well over 200 sessions required one or more types of lanterns and an operator. The basic equipment used (all borrowed) was as follows: 44 2- by 2-inch projectors, 45 standard lanterns, five opaque projectors, and 27 16-millimeter motion-picture projectors. Relatively few of the hotel rooms had screens in their session rooms, so 48 screens, ranging in size from 4 by 5 feet to 6 by 6 feet, were brought in. In addition, five large beaded screens, ranging from 8 by 10 feet to 14 by 16 feet, were rented for the larger rooms. Some flashlight pointers and slide adapters were also assembled. Most of the equipment came from the Board of Education of the City of New York, but New York University, Hunter College, Brooklyn College, Queens College, and Long Island University also contributed.

In each hotel there were rooms for the storage and distribution of lanterns and the assignment of operators. Projection operation was also the responsibility of the local committee, under the direction of Harry A. Charipper (head of the department of biology, New York University) and cochairman Samuel Schenberg (supervisor of science, Board of Education of the City of New York). Professional projectionists serviced the Science Theatre and the larger sessions, but a large part of the operation was handled principally by volunteer science students.

Projection requirement forms were issued in September and collated in October and November, so that the Committee on Physical Arrangements could know how many lanterns and screens would be needed, could plan for the collection, storage, and utilization of equipment as needed, and could recruit operators. Invariably there are last-minute requests for projection facilities, but seldom are there as many as there were at the 1960 meeting. The Committee received no less than 65 to 70 unexpected requests for projection equipment after the meeting had started —a new high for such requests and still another record-breaking aspect of the meeting.

The magnitude of the debt of all the participants to all members of the Committee on Physical Arrangements and their projectionists is apparent. I herewith express the deep appreciation of the staff of the Association.

Housing and registration were ably handled by experienced staff members of the New York Convention Bureau. I am indebted to the heads of these departments—Miss Sylvia Peltonen and Mrs. Myrtle Nicholas, respectively—and to Mrs. Margaret Jedlicka, who supervised the activities of the registration clerks. I am also greatly indebted to Royal W. Ryan and Walter R. Potts, executive vice president and convention

Table 2. Comparison of AAAS-sectional programs and society programs.

Session	AAAS, its sections, committees, and conferences	Participating societies	Total number of sessions with papers	Total number of speakers
Sessions for symposia, invited papers, panels	69 (399 speakers)	83 (439 speakers)	152	838
Sessions for contributed papers*	13 (91 papers)	44 (372† papers)	57	463
Sessions with addresses or lectures‡	20 (35 speakers)	26 (41 speakers)	46	76
Total			255	1377

* Each paper is assumed to have been presented by a single speaker. † The figure does not include 51 papers read only by title. ‡Addresses at meal functions are included.

manager, respectively, of the New York Convention and Visitors Bureau, for their invaluable advice and assistance before and during the meeting.

The layout of booths on the ballroom floor of the Biltmore was arranged by Show Services, Inc., who handled the layout in 1956. Since Monday, 26 December, was a legal holiday, labor, even at double and triple wages, was in short supply. The ballroom, the foyer, the other rooms, and the relatively narrow corridors on this 19th floor were a scene of confusion from 3:00 A.M. on. Decorations for a wedding reception had to be removed, electric cables for outlets for the 120 booths had to be laid, and the booths had to be set up. Then came the delivery of the exhibitors' crates and smaller packages. From the street level these were brought through a crowded and undermanned receiving department and then upstairs by means of one set of slow-moving freight elevators. After the crates had been delivered they had to be unpacked and removed. Not until the corridors were clear could the Visible Directory of Registrants be installed. At last the aisles were cleared and cleaned, the directional signs were hung, and the furniture for the booths was delivered. Somehow, almost miraculously, almost every booth was manned and functioning by 7 P.M. the first evening. But there were some freight and express shipments that had been misrouted or caught in the holiday holdup. A few parts of exhibits did not come until January, days after the Exposition had closed.

The professional guard service supplied men who did their jobs with understanding and courtesy. The AAAS office, the AAAS pressroom, the two information centers, and the AAAS booth were principally manned by AAAS staff members who had come from the Washington office between 21 and 25 December. In addition, there were volunteers from the Committee on Physical Arrangements and the McCann-Erickson organization, two representatives from the New York advertising office of *Science*, and several friends from out of town who dropped in to give their time for anywhere from an hour to several days. We are grateful to all of them for their devoted services, which so greatly contributed to the meeting's success.

Registration slips were collected from four registration points at intervals throughout each day. The slips were sorted into alphabetical order and carefully posted in the Visible Directory of Registrants in two corridors of the exhibit area. Paid workers and volunteers handled the posting, and a graduate student was engaged to answer the Directory telephone. These workers and volunteers also assisted registrants in locating names or adding hotel-room data to their slips. For the first time, the capacity of the Directory appeared to be inadequate, and three additional sets of Kardex pockets had to be inserted.

Pattern of the Meeting

Since its formation in 1955, the Association's Committee on Meetings has devoted much thought to the arrangement of the general events, the interdisciplinary symposia, and the distinguished evening lectures throughout the meeting. The section secretaries now meet jointly with the committee early in the year and often reflect the needs and views of the participating societies.

The pattern that was adopted for the 1960 meeting was the most successful yet. The two parts of the "Moving Frontiers of Science" program—in which able specialists interpret some of the more recent findings in their fields in terms intended to interest and inform all scientists—were scheduled on the first night and the third afternoon. Three strong interdisciplinary programs (in the physical, biological, and social sciences, respectively), in which sections and societies may cooperate, were scheduled concurrently on the third morning. The second evening was reserved for some exceptional event, and the fourth evening, "Honor Societies Night," was reserved for the joint address of the Society of the Sigma Xi and the United Chapters of Phi Beta Kappa and for the second annual address of the Tau Beta Pi Association.

With the three interdisciplinary symposia in the morning, part 2 of "Moving Frontiers of Science" in the afternoon, and the AAAS presidential address in the evening, Wednesday, 28 December, became "AAAS Day." Division of the week in this manner facilitated the scheduling of programs of appropriate length in two two-day blocks (26–27 and 29–30 December, respectively) by the sections and societies. The results were less demand for session rooms on one or two peak days in the middle of the week, fewer conflicts between programs of interest to the same potential audience, and, in general, more time for people to see each other.

There was balance between programs of appeal to specialists, programs in interdisciplinary areas, and programs concerned with matters of import for all scientists. In addition, there were sessions for the science-minded public, and there was an afternoon event—the 14th Junior Scientists Assembly—especially for high school science students.

There was also an excellent balance among the physical, biological, social, medical, and other sciences. In general, the multisessioned programs of 18 different sections ensure that no principal field of science is neglected, and the sectional programs expand or contract according to the number and identity of the societies that meet with the AAAS in a particular year.

Within the limits of the available physical facilities, societies affiliated with the AAAS are welcome to meet with the Association on any scale they wish—in a full national meeting, in a special or regional meeting, or simply as cosponsors of a program arranged by a section or another society. There is a tendency for more societies to participate each year (91 such organizations took part in the New York meeting), but, typically, no one society's meeting requires an excessively large number of session rooms at one time, nor does any large bloc of societies within one discipline take up a disproportionate part of the entire program. Most of the societies find it possible to keep free, for the general events, the same portions of the meeting period that the sections do.

Highlights of the Meeting

One program that started promptly on the morning of 26 December, and attracted world-wide attention, was the four-session symposium, "The Sciences in Communist China," sponsored jointly by the Conference on Scientific Communication and the AAAS as a whole and cosponsored by the National Science Foundation and ten major scientific organizations. National Science Foundation grants paid for all the laborious work of making microfilm reprints and for translations, where necessary, of ten years' files of Chinese scientific journals and covered other expenses connected with the bringing

of some 28 experts to New York for two days. The cosponsoring societies were the American Chemical Society, American Geological Institute, American Geophysical Union, American Institute of Biological Sciences, American Institute of Physics, American Mathematical Society, American Meteorological Society, Engineers Joint Council, Federation of American Societies for Experimental Biology, and Social Science Research Council. Since George R. Harrison was unable to preside as scheduled, Elmer Hutchisson (American Institute of Physics) and Douglas Whitaker (Rockefeller Institute) consented to chair the sessions of the first and second days, respectively. The papers of the four sessions will appear as a AAAS symposium volume as soon as editing, typesetting, and binding permit.

Another program that began the first morning of the meeting was that of the Section on Medical Sciences, a five-session symposium on "Biophysics of Physiological and Pharmacological Actions."

The four invited lectures of "Moving Frontiers of Science" are discussed below, under "AAAS General Symposium."

On the second evening, Sir Charles P. Snow (British scientist-novelist and visiting professor of English at the University of California, Berkeley) addressed a capacity audience in the large ballroom of the Commodore, after an introduction by the presiding chairman, Warren Weaver. The Reverend Theodore M. Hesburgh (president of the University of Notre Dame) and W. O. Baker (vice president-research, Bell Telephone Laboratories) commented. This program has already appeared in *Science* [**133**, 255 (27 Jan. 1961)].

Concurrently, the first George Sarton Memorial Lecture, endowed by the George Sarton Memorial Foundation, was given by Rene Dubos of the Rockefeller Institute before an audience that filled the Baroque Room of the Belmont Plaza.

On Honor Societies Night, 29 December, the annual joint address of the Society of the Sigma Xi and the United Chapters of Phi Beta Kappa was given by Polykarp Kusch (Nobel prize winner and professor of physics, Columbia). He was introduced by Mina Rees, and his address, "Scientists and laymen," was heard by an appreciative audience. The concurrent address, "The increasing significance of energy in an expanding world," given under the auspices of the Tau Beta Pi Association by Walker Lee Cisler (president, Detroit Edison Company, and president, American Society of Mechanical Engineers), deserved a larger audience.

The annual illustrated lecture and film of the National Geographic Society ("Finding the World's Earliest Man"), presented on 30 December by Matthew W. Stirling, member of the NGS Committee for Research and Exploration, concluded the week's impressive list of special sessions.

Fourteen of the 18 AAAS sections sponsored vice-presidential addresses (one of these was cancelled with cancellation of the physicists' luncheon), and other presidential addresses were given under the auspices of the participating societies. Most of these are mentioned in the separate reports which appear elsewhere in this issue (page 482). Other highlights of this year's meeting were the general sessions and the AAAS Presidential Address and Reception.

AAAS Presidential Address and Reception

On the customary evening, 28 December, the traditional address of the retiring (112th) president of the Association, Paul E. Klopsteg, was given before an audience that nearly filled the large Grand Ballroom (capacity 2000) of the Commodore Hotel. President Chauncey D. Leake presided and introduced Eger V. Murphree (president, Esso Research and Engineering Company), general chairman of the eighth New York meeting, who graciously welcomed all registrants to the scientific community of New York. Also introduced were Sir George V. Allen, secretary of the British Association for the Advancement of Science, and Edward Anders (associate professor, department of chemistry and Enrico Fermi Institute, University of Chicago), winner of the Newcomb Cleveland Prize for his paper "Meteorites and asteroids," given before the Section on Astronomy at the 1959 AAAS meeting of the Association. Retiring president Klopsteg's scholarly paper, "The indispensable tools of science," has already been published [*Science* **132**, 1913 (30 Dec. 1960)].

Members of the platform party included all those mentioned above and all but two members of the Board of Directors, Dael Wolfle and Raymond Taylor. The AAAS reception which followed was well attended. The receiving line included members of the platform party and a number of their wives. For those in the receiving line, it was, as always, a pleasure to be able to greet so many members and friends of the Association.

AAAS General Symposium

The general symposium of the Association, "Moving Frontiers of Science V," planned annually by the Committee on AAAS Meetings, was held the evening of 26 December and the afternoon of 28 December in the Grand Ballroom of the Commodore Hotel. Part 1 consisted of two lectures, "Recent work on meteorites," by Edward Anders, and "Development of present concepts of the organization of the brain," by H. W. Magoun (professor of anatomy, University of California, Los Angeles).

In the second session, George Wald (professor of biology, Harvard) spoke on "The molecular basis of vision" and Herman H. Goldstine (Lamb Estate Research Center, IBM Corporation), on "Recent developments and the current status of information theory." Thomas Park, president-elect of the Association, presided at both sessions. It is expected that all of these addresses will appear in *Science*.

Other AAAS General Sessions

For the first time, as planned by the Committee on Meetings and the section secretaries, the morning of 28 December, "AAAS Day," was reserved primarily for the three interdisciplinary symposia mentioned above, held concurrently. Details of these excellent, well-attended programs are given below.

The interdisciplinary symposium in the physical sciences, "Plasma—The Fourth State of Matter," was the joint program of the AAAS sections on Physics and Astronomy, cosponsored by the American Astronomical Society, Sigma Pi Sigma, and the Division of Plasma Physics of the American Physical Society and arranged by Stanley S. Ballard (University of Florida). Lyman Spitzer, Jr., (Princeton) pre-

sided, and the speakers were Melvin B. Gottlieb, Stirling A. Colgate, and James A. Van Allen.

The interdisciplinary symposium in the biological sciences, "Life under Extreme Conditions: Human Studies," was the program of the AAAS Section on Zoological Sciences, cosponsored by the American Society of Zoologists and arranged by J. P. Marbarger (University of Illinois), who also presided. The speakers were Hubertus Strughold, Fred A. Hitchcock, James D. Hardy, and Steven M. Horvath.

The interdisciplinary symposium in the social sciences, "The Urban Frontier: A Conquest of Inner Space," was the joint program of the AAAS sections on Geology and Geography, Social and Economic Sciences, Agriculture, and Industrial Science and the Association of American Geographers. Charles C. Morrison, Jr. (American Geographical Society), Firman E. Bear (Rutgers), and Frank C. Whitmore, Jr., (U.S. Geological Survey) arranged the program. James E. Lash (Action, Inc.) presided, and the speakers were A. Ross Eckler, Martin Millspaugh, Coleman Woodbury, Dorothy A. Muncy, Paul Busse, and George M. Raymond.

The Association is deeply grateful to all who prepared papers for these and also for the other, more specialized, symposia.

On the afternoon of 26 December, the AAAS Committee on Science in the Promotion of Human Welfare sponsored a symposium, "The Scientist's Role in the Community: New Responsibilities in the Nuclear Age," that attracted a large attendance. Committee member Margaret Mead presided. The speakers were Edward Baylor, Jules Hirsch, Barry Commoner, Irving Michelson, and David Barry, and discussants were Judson Hardy and Victor Cohn.

Another symposium of this committee was "Psychological and Sociological Implications of Nuclear Arms"; Harold Lief presided, and Kenneth E. Boulding, Jerome D. Frank, Ralph E. Lapp, and Charles Osgood spoke. The Committee held two open hearings—one on problems related to the expansion of medical research, the other on the effects of the present status of science on the integrity of science.

The AAAS Cooperative Committee on the Teaching of Science and Mathematics had two well-attended sessions, both arranged by John R. Mayor. One was on "Progress in Teacher Certification in Science," the other, on "Science Education in the Elementary and Junior High Schools."

Other Symposia

At AAAS meetings, for the past ten years, there has been an increasing emphasis on symposia and a relative reduction in the number of sessions for contributed papers, on the part both of sections and of participating societies. At the eighth New York meeting, six sections and societies had a total of 57 sessions for submitted short reports of current research. (The American Society of Zoologists, alone, had 19 such sessions, with 163 papers.) In contrast, however, the AAAS, its sections and two committees, and the participating organizations sponsored a grand total of 152 sessions for symposia (of one to six parts), panels, or groups of invited papers on chosen subjects. In planning these symposia, more and more care is given to choice of topic, selection of speakers, and provision for discussion.

As Table 1 shows, there were almost three times as many sessions devoted to programs of the symposium type as to sessions for contributed papers, although 25 organizations were holding national meetings with the Association. The total of 838 symposium participants markedly outnumbered the 539 other speakers.

Conferences

At each AAAS meeting four recurrent conferences are held. The Academy Conference, composed of the official delegates of the 46 (now 47) academies of science affiliated with the Association and of others interested in academy affairs, after an afternoon session on junior academies, arranged by E. M. Gurr (Central High School, Phoenix, Arizona), had a day of sessions which included routine reports and business, a panel discussion on "The Utilization of National Science Foundation Grants by the Academies of Science," and a dinner at which John G. Arnold, Jr., (Loyola) gave the Academy Conference presidential address.

The 14th annual Junior Scientists Assembly—a program especially for high school students, sponsored by the Association through the Academy Conference—arranged by Evelyn Morholt (Fort Hamilton High School, Brooklyn), consisted of an afternoon session, 27 December, in the auditorium of the American Museum of Natural History. Selected projects and exhibits were on display. The program is reported in this issue, in reports of sections and societies (X1), by Miss Morholt, to whom the Academy Conference and the Association are much indebted.

The two-day joint program of the Conference on Scientific Communication and of the AAAS, with 11 cosponsors, on "The Sciences in Communist China," was mentioned above.

The program of the Conference on Scientific Manpower, cosponsored by the Engineering Manpower Commission, the Scientific Manpower Commission, the National Research Council, the National Science Foundation, and the AAAS Section on Engineering and arranged by a committee of which Thomas J. Mills (National Science Foundation) was chairman, consisted of five invited papers on "Developing Student Interest in Science and Engineering." It is described in the reports of sections and societies (X7).

The Conference on Encouraging the Participation of Women in Science, again jointly sponsored by the American Council on Women in Science and Sigma Delta Epsilon, was held 27 December. Mary Louise Robbins (George Washington School of Medicine), John R. Cortelyou (De Paul), and Margaret Mead (American Museum of Natural History) each spoke; after the addresses there was spirited general discussion.

AAAS Business Sessions

As required by the constitution, the Association's board of directors held its fourth regular meeting of the year at the annual meeting. Two of the sessions, as usual, preceded the two sessions of the Council (27 and 30 December), which are reported elsewhere in this issue. It is gratifying to note that the Council sessions were well attended and that four past presidents of the Association were present. The AAAS section officers' luncheon and business meeting, held on 28 December, was also well attended. Three AAAS presidents and several members of the

Committee on AAAS Meetings were present, to hear a brief survey of plans for this year's Denver meeting.

Smokers

The traditional Section E Smoker for geologists and geographers was held the evening of 27 December, and the AAAS Smoker for all registrants was held the evening of 29 December, immediately after the joint address of the Society of the Sigma Xi and the United Chapters of Phi Beta Kappa. The crackers and cigarettes on the tables at the entrances to the east and west ballrooms were donated by the National Biscuit Company and Philip Morris, Inc. The Association gratefully acknowledges these generous and recurrent donations. It had been hoped to have free Coca-Cola as in former years, but though free "cokes" had been available each day at the Biltmore, at the Annual Exposition of Science and Industry, it was found that distribution of free "cokes" was not feasible at the Commodore because of an unresolved problem of corkage. The Commodore contributed the labor to unpack the crackers and to dispense water. (In earlier days, beer and ale were donated for the Association's Smoker, but the pyramiding number of requests and the complication of state and local taxes have made gratuitous distribution of such beverages difficult, and it has been discontinued. It is hoped, however, that this may not always be the case.)

Attendance

As mentioned early in this report, in number of registrants (7389) the eighth New York meeting was the largest in the 113-year annals of the Association. The number of paid registrations exceeded those of the previous record-breaking meeting of 1949. It was also pointed out that, in general, AAAS meetings are getting larger. To date, though only 15 of the 127 AAAS meetings have had more than 3000 registrants, nine of these 15 have been meetings held in the past 12 years. With its present pattern of strong sectional symposia and other AAAS features and the varied and attractive programs arranged by the many participating societies, the Association should be able to count on its meetings being well attended wherever they are held.

Moreover, it is always true that the total attendance at any national meeting of the Association is greater than the number of registrants, since all programs and most events are open to everyone. This year nearly 100 percent of the professional scientists and teachers registered. Incidentally, members of the American Astronomical Society paid a "double registration"—the regular AAAS registration of $3 plus a record fee of like amount for the Society. The History of Science Society had its own registration, but many of its members also registered with the AAAS. These latter are included in the total AAAS registration.

In addition, however, there are always several thousands of science-minded members of the general public who attend the evening lectures or some other event who do not register at all. Even a technical program for specialists may be attended by several times the number of individuals registered for that discipline (see Table 3). It is probable that at the New York meeting at least an additional 5000 individuals attended one or more of the 353 sessions. Finally, the registration total of 7389 does not include 23 guests, 456 individuals connected with the exhibits, and 362 press representatives.

As Table 4 shows, 2896 registrants, or almost exactly 40 percent, came from New York State. On the basis of an analysis of registration made at the previous New York meeting, it may be estimated that some 1943, or about 26 percent, were from New York City itself and that registrants from the nearby suburban counties of Westchester, Nassau, and Hudson (in New Jersey) can be estimated to have totaled about 500. Thus, about one-third of the total registration came from metropolitan New York—the nation's most populous educational and scientific center—and the remaining two-thirds came from areas beyond convenient commuting distance. Except for Alaska, Idaho, and Nevada, each of the 50 states in the nation was represented. There were 85 registrants from Canada, and there were 43 scientists who represented 25 other countries. Most, but not all, of these were visiting scholars at American institutions.

The large attendance from so many geographical areas and the excellent representation at programs of each of the sections again demonstrated that, when programs of the symposium type are well chosen with respect to subject and are of high quality, a gratifying number of scientists and members of societies not meeting with the Association will travel long distances to attend them.

Table 3 shows an analysis of the 7389 registrants by subject fields, except for 412 instances where the "field of interest" line on the registration slip was left blank and where no other clues were available. Undoubtedly some of those who gave no field of interest were individuals who had registered hastily on their way to programs for which they were late. Of the remainder, 132 were wives of registrants. Between 400 and 500 wives attended the meeting, but many of these listed scientific interests. The "sciences in general" category includes a sub-

Table 3. Registrants by subject fields.

Mathematics and computers	199
Physical sciences	
Physics	282
Astronomy and astrophysics	267
Space science	62
Chemistry (other than medical)	460
Geology	213
Geography	92
Engineering	182
Industrial science	38
Biological sciences	
Botanical sciences	219
Ecology	141
Evolution	30
Genetics	145
Microbiology	68
Zoological sciences	698
Biology (in general, and other)	661
Medical sciences	
Bacteriology	18
Biochemistry (including nutrition)	271
Clinical chemistry	29
Biophysics (including muscle physiology)	69
Neurophysiology	30
Physiology (in general, and other)	271
Psychiatry	130
Pharmacology	76
Pharmaceutical sciences	147
Dental research	57
Medicine (in general, and other)	490
Social and economic sciences	
Criminology	20
Economics and sociology	170
Land use, city planning, and agriculture	120
Anthropology and archeology	135
Psychology	334
History and philosophy of science	99
Science teaching	197
Education	207
Sciences in Communist China	66
Sciences in general and administrative	284
Wives (fields unspecified)	132
Students (fields unspecified)	84
No field indicated	196
Total	7389

stantial number of research and other administrators.

In this analysis of subject fields, every effort was made to record each individual's primary interest. For example, high school science teachers who indicated their *major* interest as teaching or science education were not classified as biologists or chemists, and, conversely, science teachers who stressed disciplines were tallied accordingly. If the data on disciplines are grouped under still broader headings than those in Table 3, the composition of the registered attendance is as follows: Physical sciences and applications, 1795 (24 percent); biological sciences, 1962 (27 percent); medical sciences, 1588 (21 percent); psychology and social and economic sciences, 878 (12 percent); science teaching and education, 404 (6 percent); general interest and other, 762 (10 percent).

The percentages for these groups have remained much the same in recent years. Over the past 12 years (except in 1957 in Indianapolis and in 1952 in St. Louis, when the physical sciences were first by a slight margin), the biological sciences have been the largest single group represented at each meeting, with, however, the physical and the medical sciences (in that order) following closely. Usually, both the social sciences and science teaching and education have ranged from 5 to 9 or 10 percent each year. This year, however, the strong program of the Section on Agriculture on land use and city planning and strong sessions in economics, sociology, and statistics, the symposium of the Section on Social and Economic Sciences, and the program of the Committee on Science in the Promotion of Human Welfare apparently combined to raise registration in this subject area to 12 percent of the total registration.

Annual Exposition of Science and Industry

The 1960 Annual Exposition of Science and Industry was one of the most varied and attractive ever held. In addition to the "core exhibits" of publishers, supply houses, instrument companies, and laboratory-equipment firms, there were a number of special and large-scale industrial exhibits—some especially built for this AAAS meeting—which were of decided interest to the thousands who saw them. The 120 booths filled the Ballroom and the adjacent Fountain, West, and Key Rooms of the Biltmore Hotel and overflowed into two additional rooms, which the hotel enlarged and remodeled from rooms never before made available to the public. The AAAS Science Theatre, filled to capacity throughout, was located at one "elbow" of the exhibit area. Necessarily, the Visible Directory of Registrants was placed in two corridors within the exhibit area. Signs were placed at the entrance to every session room in the five hotels, reminding participants to see the exhibits during the four and a half days they were open.

The local Committee on Exhibits, headed by W. O. Baker (vice president-research, Bell Telephone Laboratories), enlisted the interest and support of large firms in the New York area. The exhibits of the International Business Machines Corporation and the American Telephone and Telegraph Company, the latter showing future transcontinental and intercontinental telephone service facilitated by artificial satellites, were striking. Grateful acknowledgment of the work of the Exhibits Committee is made on behalf of the Association and of all those who enjoyed the exposition.

The names of nearly all of the 99 exhibitors and descriptions of their exhibits appeared both in the General Program and in the preconvention issue of *Science* [**132**, 1634 (2 Dec. 1960)]. Additional exhibitors, accommodated after the preconvention issue had gone to press, were as follows: Affiliated Publishers, Inc.; Applied Science Laboratories, Inc.; A. C. Gilbert Company; Great Books of the Western World; Hg^n Incorporated; International Business Machines Corporation; Professional Tape Company, Inc.; Royer and Roger, Inc.; and Servonuclear Corporation.

AAAS Science Theatre

At each meeting since the Chicago meeting of 1947, the AAAS Science Theatre has shown a selection of the latest foreign and domestic scientific films. It is now an established feature of the annual meeting of the Association. At the eighth New York meeting, 16-millimeter films were shown in seven 4-hour programs and in an abbreviated eighth session. Most films were shown

Table 4. Distribution of registrants by states and countries.

Alabama	13	Texas	34
Arizona	10	Utah	7
Arkansas	8	Vermont	18
California	147	Virginia	169
Colorado	21	Washington	17
Connecticut	291	West Virginia	19
Delaware	33	Wisconsin	63
District of Columbia	260	Wyoming	20
Florida	48		
Georgia	26	Total U.S.	7261
Hawaii	3		
Illinois	195	Argentina	1
Indiana	98	Australia	2
Iowa	28	Brazil	2
Kansas	27	Canada	85
Kentucky	19	Chile	2
Louisiana	48	Denmark	1
Maine	18	Eire	1
Maryland	315	Egypt	1
Massachusetts	376	England	6
Michigan	178	Finland	2
Minnesota	39	France	1
Mississippi	16	Germany	3
Missouri	50	Honduras	1
Montana	4	India	3
Nebraska	19	Israel	1
New Hampshire	31	Italy	2
New Jersey	791	Jamaica	1
New Mexico	11	Japan	2
New York	2896	Liberia	2
North Carolina	64	Nepal	1
North Dakota	5	Netherlands	2
Ohio	164	New Zealand	1
Oklahoma	9	Scotland	1
Oregon	10	Switzerland	1
Pennsylvania	503	Thailand	2
Puerto Rico	10	Venezuela	1
Rhode Island	68		
South Carolina	12	Total foreign	128
South Dakota	12		
Tennessee	38	Total registration	7389

twice, and many a third time. The cooperation of the lending agencies is appreciated. Inevitably, there were a few changes from the scheduled program. Three films did not arrive, and two had magnetic tapes and could not be used. For such emergencies we had on hand, and used, the following: "Survie du Coeur," produced by Société Nouvelle Pathé Cinema; "The Chick Embryo" and "Sand Dune," produced by Encyclopaedia Britannica Films; and "Sea Urchin" and "Sound Research with *Vulpes vulpes*," obtained through the American Scientific Film Association. All the films have now been returned to their sources; inquiries about them should be directed to the producers.

Work of the Local Committees

As has been said before, a scientific meeting as large and as complex as the annual meeting of the AAAS does not just happen. It cannot take place, nor can it succeed, without the cooperation and assistance of a great many agencies and persons. Of critical importance among these are the local committees and the general chairman and other chairmen who appoint them.

Thus, the Association and all who attended the eighth New York meeting are greatly indebted to Eger Vaughan Murphree (president, Esso Research and Engineering Company), who, as general chairman, made distinguished appointments of chairmen of the local committees, kept in close touch with all phases of the meeting, and graciously welcomed members and friends of the Association on the evening of 28 December. On behalf of the Association, a grateful acknowledgment of the indebtedness of all of us to Mr. Murphree is made here.

The strenuous work of the Committee on Physical Arrangements and the contribution of the Committee on Exhibits are acknowledged above. The other committees, in their respective fields, also contributed greatly to the meeting.

The Committee on Public Information, again headed by Marion Harper, Jr., (McCann-Erickson, Inc.), as in 1956, provided expert advice and assistance in publicizing the meeting locally. Richard H. Van Horne (Communications Counseling Incorporated), throughout the planning, and James A. Wicht, in the pressroom during the meeting, were immeasurably helpful.

Premeeting announcements in the press are not readily secured (probably because a meeting is not news until it happens), but in New York the local scientific societies and the local press did provide a reasonable amount of advance information. The coverage *during* the meeting—front-page features and inside stories on two or more pages each day—was exceptional, both in quantity and quality. The Association expresses its grateful appreciation. Additional details on this, and on the splendid national coverage during the meeting, both in the press and on radio and television, will be found in the report, "Public Information Service," by Sidney S. Negus on page 480 of this issue.

The Association acknowledges with deep appreciation the work of the Finance Committee, which, through its chairman, Frank A. Howard (Sloan-Kettering Institute for Cancer Research), most effectively raised funds to eliminate the deficit. The firms and individuals who have made contributions include the following:

Air Reduction Company, Inc.
Allied Chemical Corporation
Amerada Petroleum Corporation
American Cyanamid Company
American Electric Power Company, Inc.
American and Foreign Power Company Inc.
The American Tobacco Company
T. Roland Berner
Bristol-Myers Company
Cities Service Company
Colgate-Palmolive Company
Consolidated Edison Company of New York, Inc.
Consolidated Natural Gas Company
Eastman Kodak Company
The Equitable Life Assurance Society of the United States
Esso Research and Engineering Company
Ethyl Corporation
General Dynamics Corporation
General Electric Company
General Motors Corporation
General Telephone and Electronics Corporation
W. R. Grace and Company
William S. Gray
Hooker Chemical Corporation
Frank A. Howard
International Business Machines Corporation
International Telephone and Telegraph Corporation
Irving Trust Company
Johnson and Johnson
Lazard Frères & Cie.
Lever Brothers Company
Merck and Company, Inc.
Minerals and Chemicals Philipp Corporation
Morgan Guaranty Trust Company
National Lead Company
Olin Mathieson Chemical Corporation
Otis Elevator Company
Owens-Corning Fiberglas Corporation
S. B. Penick and Company
Pfizer Foundation, Inc.
David Rockefeller
Laurance S. Rockefeller
Rockefeller Foundation
Schering Foundation Inc.
Shell Oil Company
Sinclair Oil Corporation
Alfred P. Sloan, Jr.
Smith Kline and French Laboratories
Socony Mobil Oil Company, Inc.
Stauffer Chemical Company
Texaco Inc.
Union Carbide Corporation
U.S. Rubber Company

The Honorary Reception Committee included heads of public and private agencies concerned with science and education. Many were able to be present during the meeting or made a point of attending the AAAS presidential address and reception.

The Association is greatly indebted to the local Committee on Women's Events for its devoted and able services in welcoming wives and other visitors and in arranging a luncheon with a speaker—Edith Quimby (College of Physicians and Surgeons, Columbia). Mrs. Eunice Thomas Miner (New York Academy of Sciences), chairman, and the members of her committee devoted many hours to making the luncheon program the success that it was. Grateful appreciation for their help is herewith expressed.

Other Acknowledgments

In concluding this report of the 127th meeting, besides thanking all members of the local committees, I personally wish to thank the key executives of all five hotels which provided professional assistance and friendly help throughout —especially Charles Quain and Ralph S. Burkowsky, of the Commodore; Xavier Lividini and Joseph Choplinski, of the Biltmore; and their counterparts at the Roosevelt, Waldorf-Astoria, and

Belmont Plaza Hotels. Their courtesy and assistance were essential for the success of the meeting.

The secretaries and program chairmen of the sections and participating organizations cooperated ably, especially in providing copy and galley proof for the 300-page General Program, published by the Horn-Shafer Company of Baltimore. Finally, the debt to W. Gilbert Horn, Jr., of that firm for his able and sympathetic cooperation in seeing the program through the press is more than nominal.

Awards and Prize Winners

A list of the recipients of the awards announced at the Association's eighth New York meeting appeared in *Science* [**132**, 1938 (30 Dec. 1960)] and need not be repeated here.

Public Information Service

Sidney S. Negus

As usual, the 127th meeting of the AAAS in New York afforded the Association one of its means for trying to increase public understanding and appreciation of the importance and promise of the methods of science in human progress. The initial step in this effort was taken in midsummer by Eger V. Murphree, president of the Esso Research and Engineering Company and general chairman of the New York meeting, when he invited Marion Harper, Jr., president of McCann-Erickson, Inc., to be chairman of the committee on public information on a volunteer basis. Most fortunately for the Association, Harper accepted this invitation, as he had done once before for the 1956 New York meeting, and soon had working with him as members of his committee the following: Leonard H. Goldenson, president, American Broadcasting-Paramount Theatres, Inc.; Robert Kintner, president, National Broadcasting Company, Inc.; James A. Linen, president, *Time*, Inc.; Daniel D. Mich, editorial director, *Look* Magazine; Malcolm Muir, chairman of the board and editor-in-chief, *Newsweek* Magazine; Robert W. Sarnoff, chairman of the board, National Broadcasting Company, Inc.; Frank Stanton, president, Columbia Broadcasting System, Inc.; and William L. Wheeler, Jr., secretary, Medical Society of the State of New York. The responsibility of this committee was to help set the stage for the formidable task of informing the public throughout the world of the newsworthy reports to be made concerning the progress of science in all its branches at this great gathering of scientists from nearly 300 organizations in this country and abroad. Never, in our experience, has a public information committee worked toward this end more effectively.

The next step was taken at the Medical College of Virginia, Richmond, in late August when active preparations were begun for this meeting in which 18 AAAS sections and 100 other organizations participated. Various preliminary details had been cleared during the summer months. Then the usual premeeting procedures, which had been found more or less successful in the past, were followed [*Science* **127**, 409 (1958)].

Three hundred and sixty-two accredited representatives of the press, radio, and television registered in the press room at New York. Only 23 individuals were denied press privileges because of inadequate credentials. Fifty-four other reporters in the United States and fourteen abroad, who could not be present, presumably reported the meeting from nontechnical abstracts and from complete papers mailed to them upon request before and during the meeting. This press room registration was by far the largest ever in the history of the Association, 200 more than in Chicago last year and 280 more than in Washington in 1958. Only 11 science writers covered the Richmond meeting in 1938. The fact that a total of 430 newsmen representing mass-media communication of all types were assigned to cover this scientific meeting must mean that there is an upward swing of interest on the part of the public in reports having to do with scientific research and development.

The New York city newspapers published reports about the meeting every day. On several occasions, full pages were devoted to it. For this outstanding job of science reporting, thanks go especially to experts like Robert Dwyer, William L. Laurence, Robert K. Plumb, Harold M. Schmeck, Jr., Walter Sullivan, Robert C. Toth, and Earl Ubell.

International coverage by reporters for the wire services and science writers for newspapers and magazines, including those abroad, was unusually good as far as can be determined from clippings and letters sent to the Association by friends. A clean-cut analysis of this coverage cannot be made since the AAAS does not subscribe to a clipping service. Since the meeting, requests have been received from individuals in 42 countries for more information about specific papers on the program. This fact alone is indicative that news of the reports made at the meeting was published world-wide.

Weekly magazines which devote some or most of their space to science reporting covered the meeting well in most cases. *Newsweek*, for example, featured the meeting with three full pages, *Business Week* with five, *Chemical and Engineering News* with one, *The New Yorker*, with nearly a page, with innumerable others following suit. Feature stories in monthly magazines having to do with various papers presented at the convention are now beginning to appear. There were many representatives of magazines registered in the press room principally for the purpose of picking up ideas for future articles. It is hoped, if and when these are published in the weeks and months to follow, that a credit reference will be given to the Association.