

IV THE BULLETIN

For two years the New York Mathematical Society had been meeting regularly, almost every month, when, at its regular meeting on 5 Dec. 1890, with the new president, Dr. Emory McClintock, in the chair, extracts were read from a letter in which Dr. H. J. Messenger gave an account of a recent meeting of the London Mathematical Society and made reference to its *Proceedings*. The president invited suggestions from any of the members present with regard to changes in the conduct or policy of the Society. Mr. Harold Jacoby, later head of the Department of Astronomy at Columbia U., proposed that a mathematical bulletin should be established by the Society. After a general discussion it was moved by Prof. Van Amringe, the Society's first president, and voted, that the Society publish a bulletin, the arrangement of the times and details of the publication together with the necessary changes in the rules of the Society to be referred to the Council. And thus, as in connection with our founding, the London Society was suggestive. At the meeting on 9 Jan. 1891 President McClintock reported for the Council that the proposed bulletin should not enter into any sort of competition with the *AJM*, or with the *AM*, but that it should certainly contain, primarily, historical and critical articles, accounts of advances in different branches of mathematical science, reviews of important new publications, and general mathematical news and intelligence. He indicated the expense connected with the proposed enterprise, and showed the necessity of extending the membership of the Society, as well as of an increase in annual dues from two to five dollars. In chapter I we have described the extraordinary achievement of Dr. Fiske who, in the space of a few months, changed the local organization with only 23 members into a Society, national in all but name, with over 200 members. By June 1891 the way was thus paved for a new Constitution, going into effect on July 1, and providing that:

1. "The Society shall publish a periodical of a critical and historical nature, called the *Bulletin of the New York Mathematical Society*.
2. "The Council shall appoint annually a committee of two members, who shall have charge of the publication of the *Bulletin*.
3. "The committee of publication may associate with itself other members of the Society whose editorial assistance it may require."

Members of the "committee of publication" were also designated as officers of the Society after Apr. 1892, and hence were members of its Council. It was not until 1907 that the editors of the *Transactions* were even ex-officio members of the Council, and not until 1924 that they also

became officers. From the first the *Bulletin* has been sent to every member of the Society.

Dr. Fiske and Mr. Jacoby constituted the first committee of publication and the first number of the *Bulletin*, 32 p., appeared in Oct. 1891. Thus Dr. Fiske became the first editor-in-chief of the *Bulletin*¹ while he was still the first secretary and treasurer of the Society. He devoted seven years of the finest kind of service to firmly establishing a new type of mathematical journal, which was very intimately in touch with mathematics of the time in this country, and informing as to important directions of thought in Europe. He was ever willing to benefit by constructive criticism, always mindful of high scholastic standards, unremitting in attention to every editorial problem, such as refereeing, and inspiring in winning cooperation. Prof. Ziwet, scholar of delightful personality, displayed his interest in the enterprise, and his special aptitude for editorial work, from the first. Hence when Jacoby's term of office ended after two years, Fiske gladly arranged for Ziwet to become his successor on the committee of publication, where he continued to serve for the next 14 years. The Society's archives reveal that E. R. Hedrick, Ziwet's gifted young student at U. Michigan, was pressed into the *Bulletin's* service in 1895, to prepare copy for the lists of "New Publications." The elections for 1895 called for three instead of two members of the editorial committee of the *Bulletin*, and so it has remained ever since. Prof. Morley thus became an associate of Fiske and Ziwet.

Fiske established another early friendly contact at the U. Michigan in the person of F. N. Cole, then an enthusiastic assistant prof. of math., later to occupy such an important place in the Society's development. It is worthy of record that as early as 1890 a Mr. Moran, of The Register Publishing Co., Ann Arbor, felt that the lack of works on the higher branches of mathematics in the English language was in painful contrast to the vast number of elementary text books, good, bad, and indifferent, which great publishing houses were continually turning out; he let it be known that he was "disposed to risk the publication of advanced works so far as his means permits." It was in this way that Cole's new edition of Netto's *Theory of Substitutions* finally (1892) appeared in print. Fiske had evidently been consulted by Mr. Moran and gave every encouragement to the undertaking. When this came to Cole's knowledge he sent to Fiske, on 17 Jan. 1891, a letter of appreciation, from which the following quotation may be made:

One matter in particular I feel encouraged to consult you about. Some of us here in the University of Michigan have felt that it would be desirable to issue a new Mathematical Journal of

¹ The external appearance of the *Bulletin* was copied from that of the *Messenger of Mathematics*, edited by Fiske's friend, Dr. J. W. L. Glaisher; but its character was influenced chiefly by Darboux's *Bull. des Sciences Mathém.*, and by the *Zeitschrift f. Mathematik u. Physik* (Schlömilch).

a type somewhat similar to the *Annals of Mathematics*, although differing in many features, in particular in time and punctuality of appearance.

At present there is no Mathematical Journal published north of Baltimore. The field is free and I think the time will be ripe. I should like to see a Journal representing the elementary portion of the *modern* mathematics. My own particular interest would lie in the direction of the presentation in clear and intelligible form of the pure mathematics of the present German school.

I would be glad to correspond with you on this subject, present my views more fully, and benefit by your suggestions.

You may be interested to learn that we have founded a Mathematical Society here, which has at present twenty-four members, all teachers of mathematics and the allied branches. We should be greatly pleased, if any members of your Society should at any time be in our vicinity, to have them meet with us and address us on such mathematical topics as they might elect.

This letter is signed "F. N. Cole, Sec. of the Math. Soc. of the Univ. of Mich." It indicates that the need for a new type of journal had been felt independently in another part of the country than New York, and also suggests Cole's fitness, later made more certain through correspondence and cooperation, for directing the affairs of the AMS. He was appointed prof. of math. at Columbia U. and Barnard C. in 1895, and immediately relieved Fiske of his burden as secretary of the Society; two years later he became an assoc. editor of the *Bulletin*. In the following spring Fiske was appointed chm. of a comm., whose recommendations later led to the founding of the *Transactions*. Work on this comm. demanded so much of his time and thought, that he resigned as editor-in-chief of the *Bulletin*, and Cole assumed this office in Feb. 1899 and continued as both secretary and editor to the end of 1920.

The *Bulletin* started out with the title, *Bulletin of the New York Mathematical Society. A Historical and Critical Review of Mathematical Science*, and the only change in title during the next thirty years was the substitution of the word "American" for "New York," beginning with the fourth v. Even the first v. was distributed to members of a national, or even international Society, since such men as Cayley, Glaisher, and Mendizábel-Tamborrel were members. The change of the Society's name had no special significance, so far as the character or size of the organization was concerned. There was a steady growth in membership from 210 in 1891 to 308 when Fiske resigned as editor after seven years. The growth made possible the enlargement of the *Bulletin* from the modest first v. of 246 p. to the seventh of 580 p. During those years there had been more than 60 meetings of the Society, including five summer meetings and two colloquia, the Intern. Congress of Mathems. had been held at Chicago, and the colloquium at Evanston, and the Chicago Section had been founded; it was therefore only natural that the quantity and quality of material desirable for publication kept increasing. In the first three v. of the *Bulletin* (1891-94) reviews, articles on pedagogy even in secondary schools, and history of mathematics, translations, reports of meetings, notes, and lists of new publications (classified under higher, elementary and applied mathematics) predominated. Many of the reviews were excellent, such as Bolza's

(23 p.) of Cole's translation of Netto. Among the translations was one by Haskell of Klein's famous Erlangen program of 1872. Among historical papers were Fine's beautiful tribute to Kronecker, "Note on the history of the rules of convergence in the eighteenth century" by Eneström of Sweden, "Lobachevsky as an algebraist and analyst" by Vasiliev of Russia and Craig's "Some of the developments in the theory of ordinary differential equations between 1878 and 1893." Klein's inaugural address at the International Congress in Chicago, and Newcomb's address before the Society on "Modern mathematical thought" are features of the third v. The "notes" often signed by "T.S.F." or "A.Z." were valuable. Interesting annual lists of published papers read before the Society appeared in each of these v. as they have even to the present day.

Retiring presidential addresses were first published in AMS *Bull.* (v. 1-2) (a) "The past and future of the Society," by McClintock, the second president, and (b) "Remarks on the progress of celestial mechanics since the middle of the century" by the third president, Hill. With the enlargement of the v. scientific articles increased in number and importance. Translations of significant addresses such as Poincaré's "The relation of analysis and mathematical physics" by C. J. Keyser, and Klein's "Riemann and his significance for the development of modern mathematics" by A. Ziwet, continued to appear. The extensive contents of the first seven years of the *Bulletin* included eight arts. and five reviews by Bôcher, eight revs. by E. W. Brown, six arts. by Dickson, four by McClintock, fourteen by G. A. Miller, seven by E. H. Moore, six by Morley, four by Osgood, six by Pierpont, seven by H. S. White, and the paper "On the stability of a sleeping top" which Klein presented to the Society when it met at Princeton in Oct. 1896, in connection with the sesquicentennial celebration of the U. At this same meeting of the Society Prof. J. J. Thomson gave an address on "Mathematical questions connected with the Röntgen rays and kindred phenomena." These notes must suffice for suggesting the excellence of the periodical which was established under Fiske's direction, and which had become a very potent factor in the evolution of the American mathematical school.

Cole's twenty-two years of joint service as secretary of the Society and editor-in-chief of the *Bulletin*, began just as the decision had been made to publish the *Transactions*, twenty-one v. of which were issued during his régime, and added not a little to the load that he carried as secretary. The first four published v. of Colloquium Lectures and part of the fifth also came out in this same period, which further presented for solution many problems resulting from the World War. By the end of the period mathematical America was very different from what it had been thirty years before. It had made many notable contributions to knowledge and developed a vigorous individuality, for all time freed of foreign domination. Except for changes which would naturally result from such activity, the general

style of the *Bulletin* was simply a continuation of the features so thoughtfully developed by Prof. Fiske. Cole (as Fiske before him) suppressed any reference to himself as editor-in-chief, and put in one group the names of assist. editors and members of the committee of publication. Reviews occupied considerably less space and were usually briefer, but the annual list of papers read before the Society, and subsequently published was much more extensive—82 authors being represented in Cole's last list, while there were only 35 in the last list published by Fiske. During the 22 years of Cole's chief editorship the v. of the *Bulletin* were fairly constant in size, about 370–600 p. The only other members of the committee of publication were Ziwet, Morley, D. E. Smith, Snyder, E. W. Brown, and J. W. Young. The minute care and wisdom exercised in their editing is noticeable in every v. For the "committee of publication," long listed among the officers of the Society in its Constitution, was substituted, in By-Laws of Oct. 1923, "two editorial committees,"—a change more than twenty years overdue. The frontispiece of *AMS Bull.*, v. 27 (1920–21) is an excellent likeness of Cole at that time, and the Council ordered that the v. be dedicated to him, "in appreciation of his devotion to the Society during his twenty-six years as Secretary and in recognition of his leadership in the editorial work of the *Bulletin* for the past twenty-four years."

Beginning with 1921, a period of many changes was initiated. The tremendous load carried by Cole was first divided between Prof. Richardson, the new secretary, and Prof. Hedrick, the new editor-in-chief of the *Bulletin*. W. A. Hurwitz and J. W. Young were associated with the latter as members of the comm. of publication. Levi-Civita was carried over as an "assistant" editor, along with four others newly appointed.

As a result of the World War, financial and publication problems multiplied. Some relief was found through having v. 30–31 (1924–1925) of the *Bulletin*, and certain other Society publications, printed in Germany. But difficulties still accumulated for all scientific publications in this country. The General Education Board took cognizance of this and placed \$10,000 annually at the disposal of the National Research Council for dispensing relief. In this way \$1100 came to the Society during 1925–26 to enable the *Bulletin* once more to be printed in this country. Slightly smaller amounts were received for the next two years, then \$500 annually, until the last grant in 1935–36. Meanwhile the Society had taken steps to provide a substitute for the considerable sum it had been annually receiving, from the General Education Board fund, for various publications.

Since the sixteen years during which Hedrick served as editor-in-chief constituted a period of unparalleled mathematical development in America his problems as editor were also unparalleled earlier in the Society. But with characteristic energy and thoroughness he dealt effectively with all of them. In one direction especially, through many conferences with the printer, and careful study of the possibilities of the machines, he estab-

lished a style-sheet, which, for all printing of the Society, was the means of saving considerable annual amounts. With all changes in type Hedrick always demanded proper spacing of letters and lines so as to make the page easily readable. Experience gained through his long connection with printers was here invaluable. The *Bulletin* as he left it in March 1937 little resembled the journal as he found it, quite apart from being nearly doubled in size. Some of the changes were the following: from 1922 new volumes began with the calendar year, Notes and Reviews were in smaller type than that used in reports of meetings and scientific papers, abstracts of papers presented at meetings were printed in a new form which was also changed later; beginning with 1923 "New Publications" were no longer classified as "higher," "elementary," and "applied" but listed under the headings "Part I. Pure mathematics," "Part II. Applied mathematics," many titles of current elementary publications not being listed at all, as formerly. Up to the end of 1929 one could find in each issue of the *Bulletin* something for each of its departments. Beginning with 1930 (12 nos.) the even-numbered issues were devoted only to scientific papers, including long addresses, and the list of new publications; the odd-numbered issues contained the rest of the material. In 1931 the Department of "New publications" was transferred to the odd-numbered parts.

During Hedrick's administration the standard for the acceptance of material became necessarily high, and the effective presentation of the complex contents notable. The Society's debt to Hedrick in this regard alone is great, calling as it did for an enormous amount of personal attention to details. By order of the Council the *Bulletin*, v. 44, 1938, was dedicated to him, and has his portrait as frontispiece. For the 45 v. of the *Bulletin*, 1891-1936, there were only three editors-in-chief; with Hedrick's resignation this term was changed to "managing editor."

The names of the editors and associate or assistant editors of the *Bulletin*, together with their periods of service, from the first up to the present, are given below. Some of the information was gleaned from the *Bulletin* covers; the names of editors first appeared on a cover of v. 2, no 6, Mar. 1893.

For the 30 years, 1891-1920, the annual dues for members of the Society were five dollars, and this was also the charge for a v. of the *Bulletin*, sent free to every member. During 1921-1930 the dues were six dollars and the charge for a v. seven. Beginning with 1931 these amounts were increased to eight and nine dollars respectively, except as indicated below. In 1930 the following clause was introduced into the By-Laws, because of regulations of the United States Post Office: "Five dollars of the dues of each member shall be for a year's subscription to the *Bulletin*." In 1934 and 1935 the Council voted that, with certain specified exceptions, the annual dues of persons elected by the Council to ordinary membership shall be eight dollars, but that during the first three years of membership

the annual dues shall be six dollars, a person being considered to have completed his first year of membership on January 1 following his election; four dollars and fifty cents of the dues of each member shall be for a year's subscription to the *Bulletin*. This last clause was again required by Post Office regulations.

In chapter III, on finances, are set forth the various annual "receipts" and "disbursements," 1891-1937, in connection with the *Bulletin*. The receipts do not include any portion of the dues, but do include amounts received for reprints; the disbursements include cost of reprints, expenses of the New York office which may properly be charged to the *Bulletin*, editorial expenses, etc. The grand total for "receipts" is \$42,696.00 and for "disbursements" \$174,074.26. A large portion of the "receipts," which during 1930-37 varied from about \$1800.00 to \$2200.00 per year, were for the sale of back numbers of the *Bulletin*, the stock of which represents assets of very considerable value to the Society.

COMMITTEES OF PUBLICATION OR EDITORIAL COMMITTEES

T. S. FISKE, Oct. 91-July 99 (ed.-in-chief to Jan. 99)	E. R. HEDRICK, 21-37 (ed.-in-chief except Mar.-Dec. 37)
H. JACOBY, Oct. 91-Dec. 93	W. A. HURWITZ, 21-23
A. ZIWET, 94-07	A. DRESDEN, 24-27
F. MORLEY, 95-98; Oct. 99-02	W. R. LONGLEY, 26-37
F. N. COLE, Feb. 99-20 (ed.-in-chief)	D. R. CURTISS, 28-38 (managing ed., Mar. 37-38)
D. E. SMITH, 03-09	L. M. GRAVES, 38
V. SNYDER, 08-20	P. A. SMITH, 38
E. W. BROWN, 10-13	
J. W. YOUNG, 14-25	

ASSOCIATE OR ASSISTANT EDITORS

A. ZIWET, 93; Jan. 08-July 20	H. L. RIETZ, Jan. 21-37
F. N. COLE, Oct. 97-Dec. 98	D. N. LEHMER, Jan. 21-Mar. 37
F. MORLEY, Jan.-Sept. 99; Jan. 03-Jan. 10	E. KASNER, Jan. 21-Dec. 24
E. O. LOVETT, 99-July 02	R. W. BURGESS, Jan. 23-Dec. 25
C. L. BOUTON, Nov. 00-July 02	T. H. HILDEBRANDT, Jan. 26-38
D. E. SMITH, Apr.-Dec. 02; Feb. 10-Dec. 20	H. W. KUHN, Jan. 26-38
V. SNYDER, Feb. 04-Dec. 07	CAROLINE E. SEELY, Jan. 25-Dec. 34
H. S. WHITE, Oct. 04-Jan. 07	W. R. LONGLEY, 25
J. W. YOUNG, May 07-Dec. 13	J. H. M. WEDDERBURN, Jan. 27-Dec. 29
W. B. FORD, June 07-Nov. 10	J. R. KLINE, 30-38
A. RANUM, Dec. 10-Dec. 14	H. T. DAVIS, 30-38
T. LEVI-CIVITA, Oct. 11-Dec. 29	P. A. SMITH, Mar.-Dec. 37
R. C. ARCHIBALD, Oct. 14-July 20	T. FORT, 38
D. JACKSON, Jan. 21-Dec. 25	G. A. HEDLUND, 38

The first v. of NYMS *Bull.* was printed by J. J. Little Co., Astor Place, New York City. Beginning with the next v., through AMS *Bull.*, v. 15 (08-09), it was printed for Macmillan Co., New York, by Little Co., Oct. 92-Feb. 93; by Robert Drummond, New York, Mar. 93-Oct. 95; by J. J. Cushing Co., Norwood, Mass., Nov. 95-Feb. 96; by The New Era Printing Co., later Lancaster Press, Lancaster, Pa., from Mar. 96-July 09. From AMS *Bull.*, v. 16 (09-10) to 29

(23) The New Era or Lancaster Press was the printer for the Society. Lütcke & Wulff, Hamburg, Germany, were the printers of v. 30–31 (24–25). Banta Publishing Co., Menasha, Wis., has been the printer since v. 32 (26).

From Oct. 91 to July 21, each of the volumes of the *Bulletin* contained 10 monthly nos. Oct.–July inclusive. In v. 28 (22) there were 9 nos. in 8, and this v., as well as each succeeding v. began in January; in v. 29 (23) 10 nos.; in v. 30–31, each 10 nos. in 6; in v. 32–35, each 6 nos.; in v. 36–43 (30–37) each 12 nos. But v. 37, no. 9 was in two parts, one being “supplement to list of officers and members as published October 1930,” (12 p.); v. 40, no. 9, pt. 2 (80 p.), was a list of officers and members 33–34; v. 41, no. 1, pt. 1 (31 p.) was an annual list of published papers and index of v. 40; v. 42, no. 1, pt. 1 (35 p.), annual list of pub. papers and index of v. 41; v. 42, no. 7, pt. 2, was a general index v. 31–40, 25–34 (71 p.); v. 42, no. 9, pt. 2 (80 p.), list of officers and members 35–36; v. 43, no. 1, pt. 1 (38 p.), annual list of pub. papers and index to v. 42; v. 44, no. 1, pt. 2 (37 p.), annual list of pub. papers and index to v. 43. From the first through 1930 the title of the *Bulletin* bore the subheading “Historical and Critical Review of Mathematical Science”; this was dropped in 1931.

For each of the 46 completed v. of the *Bulletin*, the total number of pages (apart from the supplements listed above) is indicated, and also in brackets, when known, the total number of copies printed. When the editions are larger for some numbers of a v. than for others, both the smallest and largest numbers are given. Of v. 1, no. 1, Oct. 1891, 2000 copies were printed for wide free distribution as sample copies but the normal edition for other numbers of the v. was 600.

NYMS: v. 1, 91–92, 246 p.; v. 2, 92–93, 276 p.; v. 3, 93–94, 272 p.

AMS: 1, 94–95, 274 p.; 2, 95–96, 356 p.; 3, 96–97, 424 p.; 4, 97–98, 580 p.; 5, 98–99, 520 p.; 6, 99–00, 498 p.; 7, 00–01, 474 p.; 8, 01–02, 518 p.; 9, 02–03, 602 p.; 10, 03–04, 546 p.; 11, 04–05, 586 p.; 12, 05–06, 532 p.; 13, 06–07, 550 p.; 14, 07–08, 580 p.; 15, 08–09, 540 p. (925); 16, 09–10, 572 p. (925–950); 17, 10–11, 576 p. (950–1000); 18, 11–12, 544 p. (1000–1050); 19, 12–13, 570 p. (1050); 20, 13–14, 576 p. (1050–1078); 21, 14–15, 554 p. (1075); 22, 15–16, 540 p. (1100); 23, 16–17, 492 p. (1125–1150); 24, 17–18, 520 p. (1125); 25, 18–19, 502 p. (1100); 26, 19–20, 500 p. (1100); 27, 20–21, 518 p. (1100–1300); 28, 22, 506 p. (1475–1525); 29, 23, 506 p. (1600–1700); 30, 24, 602 p. (1800–1900); 31, 25, 602 p. (2000–2200); 32, 26, 762 p. (2300); 33, 27, 834 p. (2400); 34, 28, 834 p. (2500); 35, 29, 930 p. (2500); 36, 30, 938 p. (2500); 37, 31, 938 p. (2500); 38, 32, 938 p. (2500); 39, 33, 1018 p. (2500); 40, 34, 922 p. (2500); 41, 35, 938 p. (2500); 42, 36, 946 p. (2500); 43, 37, 888 p. (2500); 44, 38, (2500).

In 1900 two nos. of the *Bull.* (NYMS, v. 3, no. 1, and AMS, v. 4, no. 4) were reprinted by Macmillan and Co. Of NYMS, v. 2, nos. 5, 6, 7, 8, 10 and v. 3, nos. 2, 3, 4, 5, 6, 8 the Society purchased 100 facsimile copies of each number from G. E. Stechert and Co., New York. So also for AMS, v. 1, nos. 1, 6, 7; v. 2, no. 10; v. 3, no. 5; v. 5, no. 10; v. 26, nos. 3, 4; v. 27, no. 1. These were made in 1935. Similarly in 1937 for: NYMS, v. 3, no. 1; AMS, v. 1, nos. 8, 10; v. 2, no. 9; v. 4, nos. 1, 2, 4; v. 5, nos. 1, 2, 3, 4, 5, 7, 9; v. 9, no. 2; v. 10, no. 8.

A General Index 1891–1904 of the *Bulletin* was compiled by Dr. Emilie N. Martin, and was published at New York in 1904 (80 p.). There are four main parts of the Index: 1. authors; 2. reviews; 3. subject-index; 4. authors of papers read before the Society 1891–1904. Three later decennial indexes compiled in the Society’s offices, were for: (a) v. 11–20, 1904–1914, 48 p., 1914; (b) v. 21–30, 1914–24, 48 p., 1925; (c) v. 31–40, 1925–1934, 72 p., 1936. The main headings are: 1. authors; 2. reviews; 3. summer meetings, colloquiums, notes, etc.; 4. authors of papers read before the Society.