

The corrected total number of groups of degrees 2-8 is as given below:

No. of letters . .	2,	3,	4,	5,	6,	7,	8.
No. of groups . .	1,	2,	7,	8,	37,	40,	199.
Transitives . . .	1,	2,	5,	5,	16,	7,	48.

ANN ARBOR, *April*, 1893.

MATHEMATICAL BIBLIOGRAPHY.

Revue semestrielle des publications mathématiques rédigée sous les auspices de la Société mathématique d'Amsterdam par P. H. SCHOUTE (Groningue), D. J. KORTEWEG (Amsterdam), W. KAPTEYN (Utrecht), J. C. KLUYVER (Leyde), P. ZEEMAN (Delft), avec la collaboration de MM. C. VAN ALLER, F. DE BOER, J. CARDINAAL, D. COELINGH, R. J. ESCHER, W. MANTEL, P. MOLENBROEK, P. VAN MOURIK, M. C. PARAIRA, A. E. RAHUSEN, G. SCHOUTEN, J. W. TESCH, J. VERSLUYS, J. DE VRIKS et de Madlle. A. G. WILTHOFF. Tome I. (Première partie). Amsterdam, W. Versluys, 1893. [8vo. 104 pp. 4 florins or 8.50 francs per year.]

At the international congress for mathematical bibliography held at Paris, in July 1889, under the auspices of the French mathematical society, a detailed classification was adopted to serve as a basis for a general bibliography of the mathematical sciences. It was resolved to prepare a *répertoire bibliographique* of the mathematical literature of the present century (1800-1889) arranged by subjects in logical order. This bibliography was to be continued by supplements issued at intervals of ten years.

The execution of this work was entrusted to a permanent commission composed of five French members (H. Poincaré, D. André, Humbert, d'Ocagne, Charles Henry) and twelve foreign members (Catalan, Bierens de Haan, Glaisher, Teixeira, Holst, Valentin, Em. Weyr, Guccia, Eneström, Gram, Liguine, Stephanos). It is not known to the present writer what progress may have been made with this undertaking which will no doubt require several years for its completion.

The *Revue semestrielle*, whose complete title is given above, is a new bibliographical journal of the current periodical literature of mathematics based on this classification. The number now at hand (part 1 of vol. 1) covers the period from March 1 (why not April 1?) to October 1, 1892, and is supposed to have appeared January 1, 1893; the second part will report the period from October 1, 1892, to March 1, 1893, and is to appear

July 1, 1893. If it be found practicable to keep up this prompt appearance of the journal,—and the large number of collaborators would seem to make this possible,—it will prove a feature of decided superiority over the German *Jahrbuch über die Fortschritte der Mathematik*, of which only the first part of the volume for 1890 has just been announced as ready. While it is to be regretted that the non-periodical literature is entirely excluded from the *Revue semestrielle*, it is probably only owing to this limitation of the scope of the work that it becomes possible to issue it so promptly.

Another very wise restriction that the editors have imposed upon themselves consists in giving, not reviews of the papers and memoirs recorded, but, in addition to the name of the author and the title, nothing but a brief synopsis of the contents, generally in not more than 5–10 lines. These synopses are written in French, German, or English, in conformity with the language of the paper reported; for all papers written in languages different from English and German, French is used for the synopsis, while the title is of course always given in the original language.

The arrangement is not by subjects, as in the *Jahrbuch*, but by countries and journals, the countries being given in alphabetical order, so that America leads. At the end we find a list of the periodicals recorded, a subject index, and an alphabetical index of authors. The subject index deserves special mention. It is not alphabetical, but based on the classification of mathematics adopted by the Paris congress of 1889. This classification is given on pp. 91–99, with references by page numbers to the papers recorded in the preceding pages. Every paper is marked with one or more symbols indicating the subject or subjects of which it treats and thus assigning its place in the classification.

This whole system if once understood is very simple and convenient. But a note explaining the meaning of the various letters and numbers used might well have been added for the benefit of the reader not familiar with the system. It must be remembered that the plan of classification adopted by the Paris congress of 1889 has never before been applied in practice on a large scale and is therefore little known to the general mathematical public. Moreover it differs widely from the more familiar classification used by the *Jahrbuch*. This difference is very much to be regretted. The general plan followed by the *Revue* for recording the current mathematical literature appears to the writer to be decidedly preferable to the plan adopted in the *Jahrbuch*. It is perhaps too much to hope for a radical change of system in a publication which has done such excellent service for over twenty years. But it may be allowed to express a *pium desiderium*. Assuming

that the *Revue* is firmly established and will continue its work as promised, it would seem best if the *Jahrbuch* would leave the whole range of *periodical* literature entirely to its younger rival and devote itself in the future, i.e. beginning with the year 1892, exclusively to the far more difficult work of recording and reviewing the non-periodical literature of mathematics. It would then be best to do this in the main according to the plan of the Paris congress of 1889.

A few minor objections to this plan brought forward by Eneström (*Bibliotheca mathematica*, new series, vol. 4 (1890), pp. 41-42) and Favaro (*Rivista di matematica*, vol. 1 (1891), p. 72) seem to have been overcome satisfactorily by the editors of the *Revue semestrielle*.

The list of journals and transactions of societies (120 entries) given on pp. 87-90 is perhaps as complete as might reasonably be expected. The editors of periodical publications not yet represented in the list are requested to communicate with M. P. H. Schoute, Groningen.

We miss in particular the journals of the Russian mathematical societies at Moscow and Odessa and the *Vierteljahrsschrift der Naturforschenden Gesellschaft* at Zürich. Perhaps it might also be advisable to include such more technical journals as the *Civilingenieur* and *The Electrician*, as they frequently contain papers of great value, if not in pure mathematics at least in theoretical mechanics and mathematical electricity, subjects that are professedly included in the scope of the *Revue*.

The members of the Amsterdam Mathematical Society, who have undertaken the arduous task of compiling this record of the mathematical literature of the day, deserve the thanks of every working mathematician. The new journal cannot fail to prove extremely useful to the ever increasing number of those engaged in mathematical research.

It would be captious criticism to find fault with occasional slight inelegancies of expression in the English and German notices, or with the few misprints and inaccuracies to be found in this number. In general the work is remarkably well done; the typographical execution is pleasing, and the proof, considering the difficulty of the constant use of at least three languages, is read carefully.

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