

**MATHEMATICAL PUBLISHING AND SPECIALIZATION OVER THE LONG TERM
IN 18TH TO 20TH CENTURY JOURNALS:
THE AUDIENCES**

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The theme of this 6th ESHS conference (conference website) :

- Communicating science, technology and medicine has always been central to the scientific and technological enterprise, but across ages and spaces agents, audiences, means, aims and agendas behind this complex process have varied considerably
- The interpretations put forward by historians of science, technology and medicine have also changed considerably. Historians have been compelled recently to move away from former historiographical categories

This session as will show our opening contribution:

Resume the traditional history of specialisation of journals in mathematics

With two majors assests:

Take this history **over the long term** (18th to 20th century)

Considering **different geographical and cultural spaces**

A research carried out by a group of historians of maths within the framework of international projects

=> change historical perspective

Traditional historiography and specialization of journals

* A linear history

- beginning with the creation of the learned journals (17th century),
- first stage of specialization with the advent of journals devoted to only mathematics - at the end of the 18th century or at the beginning of the 19th century
- second stage: the creation of journals devoted to sub-disciplines (from the end of 19th century onwards)

* A history built on an *a priori* conception of specialization:

- the academic research agenda, however the time or the place
- an *a priori* conception of what is mathematics,
- an *a priori* conception of what are the mathematical life and its actors valuable for the history of maths

=> an implicit bias for the corpus studied

mostly limited to mathematical academic “research journals”

* Hence, a history where specialization is restricted to professionalization

Yet recent research has shown **weaknesses in such a narrative**

No consideration of the concrete circumstance of mathematical practices, uses and circulation in given spaces and times

Some questions about this historiography

What is to be done with the great diversity of journals publishing mathematics?

- In the 18th (before what would be the first stage of specialisation)

- * the learned journal the *Giornale de'Letterati d'Italia* (1710 – 1740): promoting Leibnizian calculus
- * British almanacs *The Ladies' Diary* and *Ladies and Gentleman Diary* : their mathematical questions

- In the 19th (for segments of the production different -even separated- from academic research)

- * *Nouvelles Annales de mathématiques, journal des candidats aux écoles polytechnique et normale* (1842-1927), devoted to intermediate and school mathematics
- * *Comptes rendus annuels de l'Association française pour l'avancement des sciences*, created in 1872, and its mathematical sections promoting a useful and curious science

What is to be done with the great diversity of audiences who published, read, use mathematics in those journals?

What is to be done with the variety of long term editorial histories in different areas?

Adopting a different perspective

1. Considering a journal not from some “*a priori* criterion of specialization” but according to the aims of its editors and to the uses the target audiences could have.

2. Specialization is “local”

3. The category of “mathematical journal” diversifies, according to the diversity of editorial projects and to the segmentation of target audiences, communities of authors and readers who take hold of the journals.

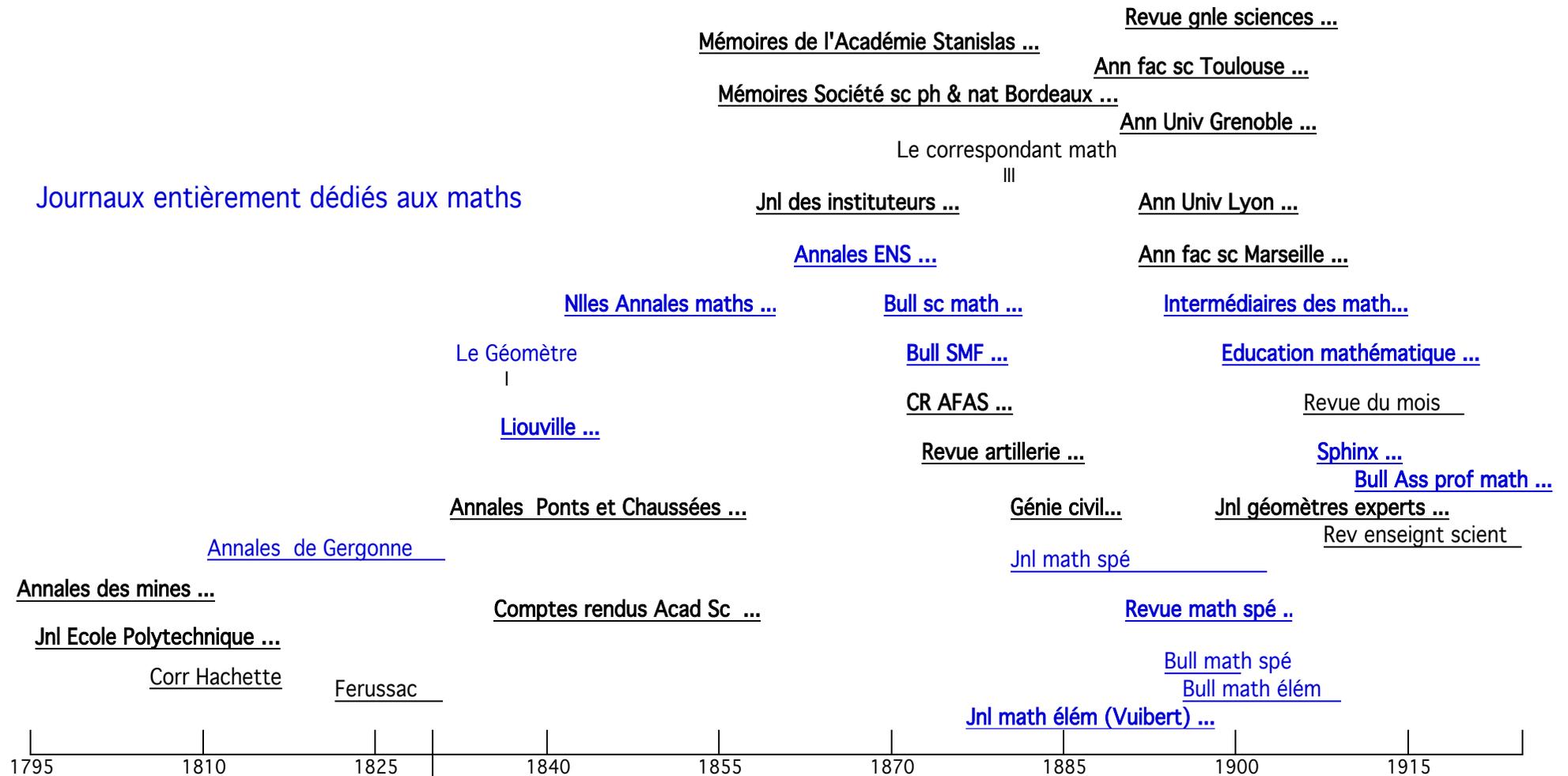
=> The history can be any more, in no way, a linear history.

Three examples of the range of journals and uses to write, read, learn, practice, utilize mathematics

- mathematical publishing in French 19th century journals
- mathematical publishing in Italian 18th century journals
- the editorial form questions-réponses on 18th and 19th century

What is a mathematical journal in 19th century France?

A view on the variety of the editorial supply



The Questions –Answers form

Aims of a journal: an audience and specific editorial forms

A diversity of forms to take into account :

articles, reports about other journals, books, discussion in academies or societies, bibliographical section, readers letters, editorials, ...

=> going through the journals page after page

An interesting case study: the Questions-Answers form in different editorial contexts

18th century: Ladies' Diary within the framework of “amateurs” ' practice

19th century:

- *Annales de Gergonne*: a target audience of mathematics teachers who can contribute to the journals
- *Journal de Crelle*: Q-A, present in the beginnings of the journal, disappears when it is well established among academic mathematicians
- *NAM*: a training practice for students and their teachers.

Contributions to the session

Mathematical specialization in 18th century-journals: early attempts and the question of the audience

Jeanne Peiffer

Mathematical Work and Mathematical Publics as Reflected in German-Language Periodical Literature, 1785-1830.

Tom Archibald

A journal for sailors and mathematicians practitioners: the Nautical almanac and astronomical ephemeris (1767-1828)"

Martina Schiavon

Adapting publishing strategies to the diversity of editorial offer. The case of mathematics in France (1810-1835).

Caroline Ehrhardt

Searching for mathematics within French engineering journals in the 19th century

Kostas Chatzis

Teaching and divulgation of mathematics in Savoyard and Italian pedagogic periodicals (1845-1920)

Chiara Pizzarelli