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HISTORY OF THE CZECHOSLOVAK JOURNAL OF ACTUARIAL SCIENCES

The journal Actuarial Sciences (verbatim translation of the official title “*Aktuárské vědy*” was established in 1929. As it attempted to become international research journal, the title was translated to the main scientific languages of the time, i.e.

- French: Journal Tchecoslovaque pour les sciences actuarielles,
- German: Tchechoslovakische [sic!] Zeitschrift für die Aktuarwissenschaft,
- English: Czechoslovak Journal of Actuaries.

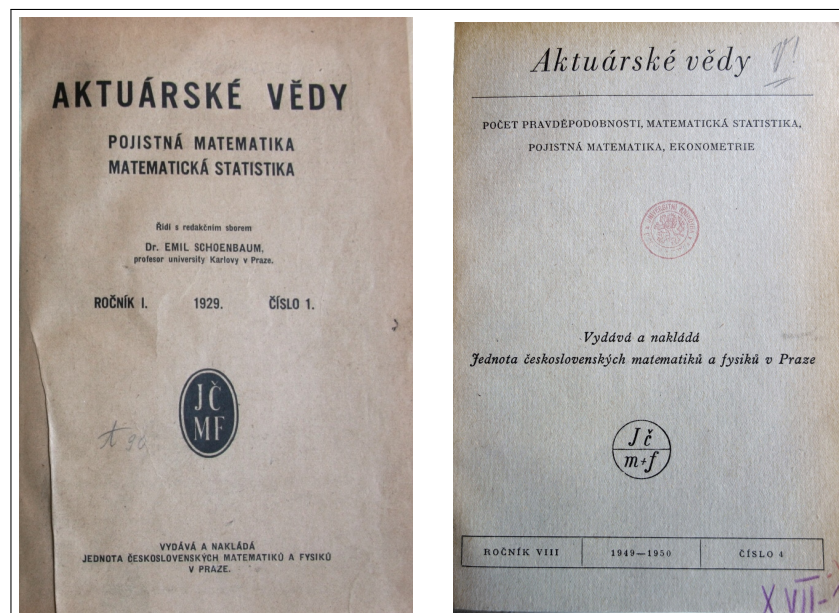


Fig. 40.1 Covers of the first issue from 1929 and the last issue from 1950

Source: National Library of the Czech Republic, sign. 54 G 9144

First of all, we remind the reader that actuary was a person concerned with applications of mathematics in various branches of national economy and natural sciences. Journal subtitle makes the field more specific: insurance mathematics and mathematical statistics. After the WW2, probability theory and econometrics was added.

In the preface, the main aims of the journal are made clear. It should have been devoted

- to promote dissemination of exact mathematical methods to various scientific branches, especially insurance, probability theory, statistics, national economy, political arithmetics, etc.,
- to introduce domestic scientific results to foreign researchers,
- to internationalize Czechoslovak community (young scholars should get used to the “review from abroad”, i.e. international comparison) and draw their attention to relevant new literature.

The journal was published in the years 1929–49 by Union of Czechoslovak Mathematicians and Physicists in Prague. In comparison to others journals it was more theoretical and mathematical than *Pojistný obzor* (Insurance Horizon), unlike *Statistický věstník* (Statistical Bulletin) it was focused on mathematical readership and assuming their mathematical education. Finally, in contrast to *Časopis pro pěstování matematiky a fyziky* (Journal for the Cultivation of Mathematics and Physics) it was essentially focused on applications. Hence, it found its place among other journals and filled a gap in field of mathematical applications in social insurance.

40.1 EDITORIAL BOARD

The founding editor was Dr. Emil Schoenbaum (1882–1967), Professor of the insurance mathematics at the Faculty of Science of Charles University in Prague, cf. [3]. The members of the editorial board before the World War II are not known. Josef Bílý, Jaroslav Janko and Ladislav Truksa were officially mentioned members only after 1945.

The editorial office was run by Schoenbaum’s pupils, Jaroslav Stránský (1902–1942) and Vilém Havlík (1898–1944) before the WW2. They were, similar to many other members of the so-called Schoenbaum school, persecuted by the Nazi regime as political opponents or by virtue of the racial Nuremberg laws, cf. their obituaries in the first post-war issue. Therefore, the duties were taken over by Miloš Vacek and Jiřina Frantíková.

40.2 DOCUMENTS OF THE EDITORIAL OFFICE

Unfortunately, the bulk of documents of the editorial office did not survive to these days. Only a fragment of 30 pieces is held in the Collection of the Union of Czech Mathematicians and Physicist, cf. [1].

In 1929–39 seven full volumes (4 issues per year) appeared. In 1939 it was stopped, officially due to reduced readership. Indeed, the number of sold copies went down by some 14% of the press run (fig. 40.2). However, anti-Semitic measures and boycott of Jewish journals as a part of Nazi propaganda played a crucial role. Emil Schoenbaum was released from the service and forced to flee from the Nazi-ruled territory.

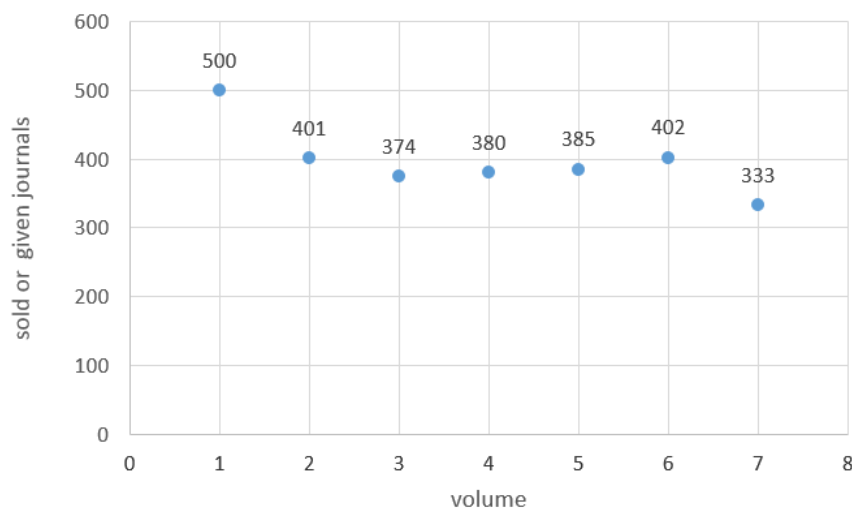


Fig. 40.2 The chart of sold or given journals.

Source: own elaboration based on [1]

In December 1945, Schoenbaum reclaimed his position and tried to re-establish also the Journal. The documents in [1] illustrate probably only some of the administrative complications. Ministry of Information gave it the permission only in April 1947. Nevertheless, the publication was gradually delayed. In spring 1947, full eighth volume was planned for the year 1947/48. However, the first issue came out only in the spring 1948, more precisely on 15 April 1948, cf. impressum in the flyleaf of the issue. The second number was sent to the printing house in December 1948, and publishing was stopped by the administrative intervention at the publisher in September 1950, after Ministry of Education accused Schoenbaum of “leaving the state service and manifesting a hostile attitude to the people’s democratic regime in Czechoslovakia”, cf. [2].

40.3 CIRCLE OF AUTHORS

The biggest group of authors consists of Schoenbaum’s pupils and collaborators (V. Havlík, J. Stránský, A. Zelenka, V. Lenz, J. Podlipský, V. Šupík, M. Vacek, etc.), who published on the then current questions of Czechoslovak social insurance legislation. In the first volume it forms about half of the papers. Later, the ratio decreased and more theoretical topics were included. Altogether, more than 30 papers on the topics were published on the Czechoslovak legislation and some 30 more on topics connected with computations necessary for social insurance legislation.

In 1932–37 a lengthy dispute over covering and financial reserves of the Czechoslovak social system took place. Argument of opponent, Dr. Gustav Rossmanith (1865–1954), Professor of the German Technical University in Prague was refuted in a series of papers of Schoenbaum and Lenz. After WW2, there were again published reports on the post-war reform of the Czechoslovak social legislation.

Next group of authors dealt with theoretical/mathematical questions. The main topics of such articles were application of difference equations (linear type), linear integral equations and Volterra integral equations. Apart from domestic authors of some reputation, e.g. B. Hostinský, J. Janko, O. Pankraz, L. Truksa or A. Zelenka, famous Austrian Alfred Tauber (1866–1942) published there as well.

There are some renowned mathematicians also in the last group we mention here, e.g. Maurice Fréchet (1878–1973), Emil J. Gumbel (1891–1966) or Eugen Bunický (1874–1952), and younger pupils of Schoenbaum, e.g. M. Vacek or K. Tříška. Altogether, there are 33 articles on applications of probability and theory of distributions, or applications of statistics to actuarial sciences and financial mathematics in this group.

40.4 STATISTICS

In the journal, there were published altogether

- 128 articles,
- on 1510 pages,
- by 60 authors,
- in 5 languages (fig. 40.3):

french - 51 articles,
 german - 49 articles,
 english - 16 articles,
 czech - 6 articles,
 spanish - 1 article.

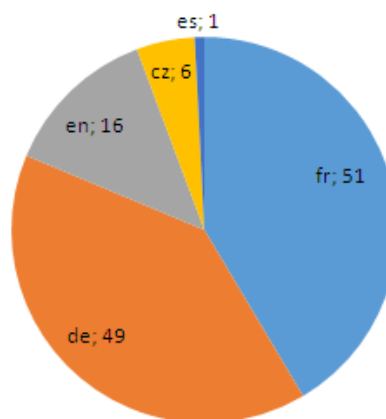


Fig. 40.3 The share of languages in the Journal.
 Source: own elaboration

40.5 DIGITIZATION

The journal as a whole was digitized in 2015 within the project “Interdisciplinary education of junior historians of mathematics” supported by norway grants, contract no. NF-CZ07-ICP-3-237-2015. In cooperation with the Czech Digital Mathematical Library, [4], cf. fig. 40.4. Foreign readers can find it also in the European Digital Mathematics Library (EuDML.org), see [5]. Moreover, we provided the papers with metadata (MSC,

keywords, links to reviews in Zentralblatt), which provide further benefits for interested reader and enable its use in the current research, cf. [6].

The screenshot shows the Czech Digital Mathematics Library (DML-CZ) website. The main heading is "Czech Digital Mathematics Library". Below it, there is a navigation bar with links: "About DML-CZ", "FAQ", "News", "Conditions of Use", "Math Archives", and "Contact Us". The page is titled "Aktuáské vědy". On the left, there is a search bar and a "Browse" menu with links to "Collections", "Titles", "Authors", and "MSC". Below the menu, it says "Partner of EUDML". The main content area features a book cover for "AKTUÁRSKÉ VĚDY" and provides the following information:

- Publisher:** Union of Czechoslovak Mathematicians and Physicists
- Publication place:** Prague, Czech Republic
- Description:** Actuarial Science was a journal devoted to actuarial and mathematical statistics. It was published in the years 1929-1949 by the Union of Czechoslovak Mathematicians and Physicists. The Editor-in-Chief was Emil Schoenbaum, a professor at the Charles University in Prague.
- Description:** Časopis Aktuáské vědy byl věnován pojistné matematice a matematické statistice. Vydávala ho v letech 1929-1949 Jednota československých matematiků a fyziků. Hlavním redaktorem byl Emil Schoenbaum, profesor Univerzity Karlovy v Praze.
- Published:** 1929 - 1949

Below this information, there is a "Volumes (Years)" section with a table of links for each volume:

| Volume | Year | 1 | 2 | 3 | 4 |
|-----------|--------|---|---|---|---|
| Volume 01 | (1930) | 1 | 2 | 3 | 4 |
| Volume 02 | (1931) | 1 | 2 | 3 | 4 |
| Volume 03 | (1932) | 1 | 2 | 3 | 4 |
| Volume 04 | (1933) | 1 | 2 | 3 | 4 |
| Volume 05 | (1935) | 1 | 2 | 3 | 4 |
| Volume 06 | (1936) | 1 | 2 | 3 | 4 |
| Volume 07 | (1938) | 1 | 2 | 3 | 4 |
| Volume 08 | (1948) | 1 | 2 | 3 | 4 |

At the bottom, there is a note: "Digitization of this journal was financed from the project 'Interdisciplinary education of junior historians of mathematics' supported by a grant from Norway, contract no. NF-CZ07-ICP-3-237-2015." Below this is the "norway grants" logo and the text "Supported by a grant from Norway". At the very bottom, there is a search box with the text "Full Text Search (within this journal):" and a "Go" button, with links to "Browse by Titles" or "Authors".

Fig. 40.4 The Czech Digital Mathematical Library website.

Source: <http://dml.cz/handle/10338.dmlcz/144495>

REFERENCES

1. Archive of the Academy of Sciences of the Czech Republic, coll. Union of Czech Mathematicians and Physicist, Inv. No. 459, Actuarial Science 1947–1951.
2. Archive of the Charles University in Prague, coll. Faculty of Science, Inv. No. 128, Emil Schönbaum, personal folder.
3. J. Kotůlek. “Emil Schoenbaum and Czech school of actuarial mathematics”, paper presented at 6th winter workshop on history of mathematics, Tři Studně, 21–24 January 2016, to be published.
4. *Czech Digital Mathematical Library* [online]. [cit. 20.3.2017]. Available from <http://dml.cz>
5. *The European Digital Mathematics Library* [online]. [cit. 20.3.2017]. Available from <https://eudml.org>
6. P. L. Butzer, T. H. Koornwinder. “Josef Meixner: his life and his orthogonal polynomials”, arXiv:1609.02588v2 [math.HO], 3 January 2017.

HISTORY OF THE CZECHOSLOVAK JOURNAL OF ACTUARIAL SCIENCES

Abstract: *In this article we apprise with the history of the Czechoslovak Journal of Actuarial Sciences that was published in the era of the first republic before the World War II. We show its influence on the development of the insurance mathematics in Czechoslovakia and describe the circle of its authors. We show how the old proverb historia magistra vitae is useful for understanding the current development in actuarial sciences or, more generally, in social insurance.*

Keywords: *actuarial sciences, social insurance.*

HISTORIE ČASOPISU AKTUÁRSKÉ VĚDY

Abstrakt: *V tomto článku studujeme historii časopisu Aktuárské vědy, který vycházel v letech 1929–49. Ukazujeme, jaký vliv měl na rozvoj pojistné matematiky v tehdejší Československu a představujeme okruh jeho autorů. Nakonec také ukazujeme, jak může díky digitalizaci přispět k dnešnímu vývoji v oboru.*

Klíčová slova: *aktuárské vědy, sociální pojištění.*

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