

WOMEN IN SCIENTIFIC AND TECHNICAL ASSOCIATIONS (1930-1997)

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In two earlier studies¹ I analysed women's access to, and role in, scientific and technical associations in Hungary between 1830-1930.

In the 1830s it roused indignation if a woman dared to publish a paper in a scientific journal. In the 1870s scientific associations started modifying their statutes in a way that made it possible for women to become full-right members. The first paper was presented by a woman at a session of a scientific association in 1901².

The years after World War I brought about an expansion in women's scientific activities. From 1927 on women were entitled, with restrictions, to carry on studies at the Technical University. From 1930 on the first female university *Privatdozents* appeared in the world of natural and technical sciences. Simultaneously, women's activities in associations became more apparent. However, we can find very few women in leading positions in the industry even after the second World War.

A review of women's role in scientific associations till today is necessary not only for making possible the analysis of those nearly 170 years in their entity, but also for disclosing some surprising data of the present.

1. É.K. Vámos, "Women's participation in the work of scientific societies in the 19th century in Hungary", *International Conference on the Role of Women in the History of Science, Technology and Medicine in the 19th and 20th centuries, Proceedings*, 165-175; É.K. Vámos, "Ungarische Frauen in naturwissenschaftlichen Vereinen am Anfang des 20. Jh. Naturwissenschaften und Technik doch Frauen-sache?", in M. Fuchs (ed.), *Vorträge und Berichte von der Tagung im Kerschensteiner Kolleg/Deutsches Museum*, 1986, 70-74.

2. É.K. Vámos, "Women and scientific recognition (between 1895-1930 in Hungary)", *Women in Science: Options and Access. National Museum of Science and Technology*, Budapest, 1987, 218-232.

TABLE 1.

Number of engineers employed in the Hungarian manufacturing industry
(October 1, 1945)³.

Position held	Men	Women
Factory manager	729	2
Official at factory site	1327	18
Official at central office	256	1
Shop-manager	39	-

The first scientific association in Hungary was founded as early as 1848. This was the Hungarian Geological Society. Seven more were established before the outbreak of World War I and only three more till 1930.

TABLE 2.

Scientific and technical societies founded before 1930⁴.

Name of association	Year of foundation
Bolyai János Mathematical Society	1891
Eötvös Loránd Physical Society	1891
Hungarian Chemical Society	1907
Hungarian Electrotechnical Association	1900
Hungarian Forestry Association	1866
Hungarian Geological Society	1848
Hungarian Hydrological Society	1917
Hungarian Meteorological Society	1925
Hungarian Mining and Metallurgical Society	1892
Hungarian Speleological Society	1910
Scientific Society of the Leather, Shoe and Allied Industries	1930

No more scientific societies were founded before the outbreak of World War II. This shows the deleterious effect of the dissolution of the Austro-Hungarian Monarchy, World War I and its consequences on scientific public life in the country. These twelve associations were working separately. After having done away with the devastations, World War II brought about in the industry of Hungary, the technical and scientific intelligentsia of the country soon became active. In 1948, the Federation of Technical and Scientific Associations came into being. It was immediately joined by 14 associations, the twelve existing

3. J. Németh, "A műszaki értelmiség a felszabadulás után 1945-1948" (The Technical Intelligentsia after World War II), *Akadémiai Kiadó*, Budapest, 1982, 48.

4. Compiled by the author from "Federation of Technical and Scientific Societies MTESZ - Hungary", *MTESZ*, Budapest, 1996, 22-24.

before, and two more founded after World War II. The total number of their membership amounted to 9.500⁵. The coming into being of the Federation initiated the foundation of 16 more associations, which made a total of 30⁶. The foundation of the Federation was originally imposed on the societies by the centralising aspirations of the government then in power and meant a kind of nationalisation of scientific and technical public life. However, in the course of time the Federation established a serviceable infrastructure and a useful framework for activities in scientific and technical communities with 27 Houses of Science and Technology all over the country, providing for a vivid society life⁷. As a result of the beneficial activities of the Federation, 22 more associations affiliated to it were founded in the course of time. In 1995, the Federation had 41 member societies.

TABLE 3.

Women in the societies affiliated to the Federation of Technical and Scientific Associations (1995)⁸.

Name of association	Year of foundation	Number of Members		
		total	women	(%)
Association of Hungarian Geophysicists	1954	624	97	15.5
Association of Hungarian Scientific, Company and Industrial Editors	1990	320	~10	~3.1
Bolyai János Mathematical Society	1891	1690	~50	~3.0
Eötvös Loránd Physical Society	1891	1547	442	28.6
Geographic and Cartographic Society	1956	1222	~50	~4.1
Hungarian Association for Copyright and the Protection of Industrial Property	1962	1324	n.d.	n.d.
Hungarian Astronautical Society	1956	758	~30	~4.0
Hungarian Biochemical Society	1949	952	427	44.9
Hungarian Biological Society	1952	1833	~100	~5.5
Hungarian Biomass Association	1991	109	4	~3.7
Hungarian Biophysical Society	1961	441	143	32.4
Hungarian Chemical Society	1907	5260	2420	46.0
Hungarian Electrotechnical Association	1900	7150	265	3.7
Hungarian Energetic Society	1991	266	13	4.9

5. J. Németh, *A műszaki értelmiség társadalmunkban* (The Technical Intelligentsia in Our Society), Budapest, 1977, 19.

6. Compiled by the author from "Federation of Technical and Scientific Societies MTESZ - Hungary", *MTESZ, op. cit.*, 22-24.

7. *Idem*, 8-20.

8. Compiled by the author from *Tables of the Simplified Statistical Reports of the Federation of Technical and Scientific Societies*, Budapest, 1996, 41.

Name of association	Year of foundation	Number of Members		
		total	women	(%)
Hungarian Federation of Building Material Industry	1991	108	~5	~4.6
Hungarian Forestry Association	1866	4203	281	6.7
Hungarian Genetics Association	1992	109	~5	~4.6
Hungarian Geological Society	1848	n.d.	n.d.	n.d.
Hungarian Hydrological Society	1917	2450	528	21.6
Hungarian Meteorological Society	1925	378	159	42.1
Hungarian Mining and Metallurgical Society	1892	4134	~200	~4.8
Hungarian National Committee of the European Organization of Quality	1994	837	~80	~9.6
Hungarian Scientific Society for Food Industry	1949	3859	1453	37.7
Hungarian Society for Agricultural Sciences	1951	6949	1338	19.3
Hungarian Society for Regional Planning and Renovation	1992	159	~10	6.3
Hungarian Society of Textile Technology and Science	1948	1395	819	58.7
Hungarian Speleological Society	1910	903	143	15.8
John v. Neumann Society for Computing Science	1968	5100	~300	~5.9
Optical, Acoustical, Filmtechnical and Theatrical Society	1933	484	~30	~6.2
Postal Association	1995	n.d.	n.d.	n.d.
Scientific Society for Building	1949	3517	699	19.9
Scientific Society for Energy Management	1949	3786	~100	~2.6
Scientific Society for Management	1992	221	69	31.2
Scientific Society for Telecommunication	1949	2618	811	31.0
Scientific Society for Timber Industry	1950	610	~30	~4.9
Scientific Society of Measurement and Automation	1952	2170	~100	~4.6
Scientific Society of Mechanical Engineers	1949	10631	835	7.9
Scientific Society of Silicate Industry	1949	900	~50	~5.6
Scientific Society of Leather, Shoe and Allied Industries	1930	250	n.d.	n.d.
Society for Organization and Management Science	1970	2311	~100	~4.3
Technical Association of the Paper and Printing Industry	1948	2512	~100	~4.0

Women's activities in the scientific and technical associations became apparent mainly after World War II, but federation statistics began asking for data about women only from 1985.

TABLE 4.

Number of total and of women members in the Federation of Technical and Scientific Societies 1985-1995⁹.

	Women	Women %	Total number
1985	20,420	12	167,188
1986	22,610	14	165,524
1987	26,450	16	163,722
1988	33,106	21	157,692
1989	23,409	16	147,330
1990	14,300	12	116,877
1991	17,700	16	109,617
1992	17,650	17	103,113
1993	16,000	17	96,875
1994	13,100	15	88,557
1995	12,300	14	89,731

The table shows a gradual decrease in the total number of members and a temporary increase in the number of women members. The reasons of the dramatic decrease by 46% were the political changes. Many scholars, who wanted to serve their country had as only means, during socialism, the active work in a scientific or technical society. With the advent of democracy the possibilities expanded and many of the scholars became full-time politicians or entrepreneurs.

The Federation of Technical and Scientific Associations encompassing 41 member associations and 25 regional organisations, had 89,731 members in 1995. Out of these 12,320, *i.e.* 14% were women (see Table 3). The reason for this low percentage is, of course, partly the fact that work in associations is to be carried out outside the working hours and without compensation, which women find difficult to assume.

9. Compiled by the author from *Tables of the Simplified Statistical Reports of the Federation of Technical and Scientific Societies*, Budapest, 1985-1995.

It is characteristic, however, that in the associations representing traditionally female professions, women experts play an important part. Thus, out of the 5.260 members of the Hungarian Chemical Society, 2.420 are women, and the number of women members in the Scientific Association of the Textile Industry amounts to 819 within a total of 1.395.

It is equally characteristic that the traditionally non-female professions preserved this character till today. Out of the 10,631 members of the Scientific Association of the Mechanical Industry only 835 are women, and the respective figures for the Hungarian Association of Mining and Metallurgy are 4,134 and 200 (see Table 3).

The astonishingly low number of women members in scientific societies does not tell us anything about their activities and achievements. Much more information can be gained by the analysis of their publications and work in society life. Two societies, in which the number of female members about equals that of males, shall be analysed in detail from this aspect. One of them is a technical, and the other one a scientific society.

The Hungarian Society of Textile Technology and Science is the society of an industrial branch and the pertinent research direction, which are considered as a typically female profession. The ratios of women's employment, for the whole textile industry, irrespectively of the degree of education.

TABLE 5.

Women employed in the textile and clothing industry as percentage of total employees and workers 1949-1980¹⁰.

Industrial branch	1949	1960	1970	1980
Textile Industry	58.8	63.9	67.3	66.3
Clothing Industry	34.6	70.0	78.6	83.2

The increasing figures show that, especially in the clothing industry, there remains hardly any room for male workers and employees. One of the reasons of this feminisation is, of course, that the textile and clothing industries altogether have been gradually losing their importance in Hungarian economy for decades and are facing serious problems at present. Table 6 shows the decreasing importance of the textile and clothing industries in women's employment within the whole Hungarian industry.

10. K. Koncz, "Nők a munkaerőpiacon" (Women on the labour market), *Közgazdasági és Jogi Könyvkiadó*, Budapest, 1987, 370.

TABLE 6.

Distribution of women employed in the industry 1949-1980¹¹.

Industrial branch	1949	1960	1970	1980
Mining, Metallurgy, Electric Energy Production	10.0	7.4	6.9	7.3
Machine Production	10.0	21.5	24.5	24.8
Building Materials Production	3.7	4.1	4.1	3.8
Chemical Industry	5.8	4.7	6.1	6.2
Timber Industry	2.2	2.4	2.8	2.2
Paper Production	2.0	0.9	1.0	0.9
Leather, Fur and Shoe Industry	1.2	1.6	4.9	5.0
Printing Industry	3.3	4.0	1.3	1.3
Textile Industry	30.5	15.4	12.9	10.1
Clothing Industry	16.5	11.8	6.7	7.9
Food Industry	11.7	9.4	11.0	11.1
Other Industries*	1.3	10.2	10.7	10.4
Building Industry	1.8	6.6	7.1	9.0
Total	100.0	100.0	100.0	100.0

* Including crafts and domestic production.

The Hungarian Society of Textile Technology and Science was founded 1948 with the aim to improve the professional knowledge of the specialists, engineers and technicians working in the textile industry and to serve thereby the development and the modernisation of the same. It played and still plays a serious role in the stimulation and development of scientific life within the textile industry. The association has 14 sections and 21 district groups. The relative importance of the sections as reflected by the ratios of their members is shown in Figure 1. As it can be seen, the main sections are those of clothing, knitting and knitwear, and textile chemistry. Nearly 20% of the total membership are grouped in the two sections dealing with cotton processing and products. It has to be noted, however, that with the changing importance of the textile branch in Hungarian economy, the number of the society's membership underwent remarkable changes. While the respective figure in 1948, the year of foundation, was 1.600, it reached the impressive value of 9.345 in 1980 and went rapidly decreasing thereafter as shown in Figure 2 for the following four years to reach the value of 1395 in 1995¹².

At the time of its foundation, the economic background of the society was the nationalized textile industry. By now, this industry has been privatized

11. K. Koncz, "Nők a munkaerőpiacón", *op. cit.*, 370.

12. Compiled by the author from the Central Archives of the Federation of Technical and Scientific Societies "Number of the Members of the Associations", 1975-1995.

again. Its scientific environment was given by the Research Institute of the Textile Industry, the Institute of Textile Technology of the Technical University Budapest and the College for the Light Industry.

The role of women in the scientific and organizational life of the society increased gradually from a very low initial level. The management of the society paid attention to this fact, and they considered it as a proof that women were not only working in the textile industry as semi-skilled workers but complied with problems and tasks of engineering and economics. However, in spite of the high membership participation of women in the society (e.g. 58% in 1995), in the leading bodies women's representation has surpassed 10% since 1974 only. This is shown in Table 7.

TABLE 7.

Women members in the presidium of the Hungarian Society of Textile Technology and Science 1948-1980¹³.

Year	Number of Members		Responsibilities of Women Members
	total	women	
1948	11	1	organization of tuition
1949	16	4	co-president, secretary, foreign relations, trade union questions
1950	18	4	member
1951	23	3	co-president, member
1955	36	3	secretary general, member
1958	25	4	member
1961	33	4	deputy secretary general, member
1964	40	3	deputy secretary general, member
1968	37	3	deputy secretary general, member
1971	41	3	deputy secretary general, member
1974	58	6	deputy secretary general, member
1980	60	8	deputy secretary general, member

The growing input of women in the society's life can be best demonstrated by the publishing activity of women in the society's monthly journal *Magyar Textiltechnika* (Hungarian Textile Technology) (Figure 3). The total yearly number of papers published in the journal varied, in the 4 decades analysed (from 1948 to 1988), between 76 (1957) and 167 (1978). In spite of the considerable fluctuation, a slight increasing trend in the number of publications

13. Compiled by the author from the reports of the Secretary General to the General Assembly of the Hungarian Society of Textile Technology and Science, 1948-1980.

might, perhaps, be observed till the maximum, which is followed by a kind of plateau at the level of around 140 papers a year. This means an average of about 12 papers per issue. The participation of women in this publishing activity was hardly perceptible at the beginning. In the first four issues no woman author can be found, women are only present as title page decoration. Altogether, in the first two years the names of only two women each can be found in the twelve issues published a year. However, being present in the industry's scientific as well as economic life, they soon found the way to make themselves noticed. Apart from local maxima and minima, the graph shows a steady increase in the number of women authors till the early eighties, the maximum being 58, *i.e.* 5 women authors per issue, on the average. The composition of the editorial board did not reflect this high ratio. The number of its members varied, in general, between 15 and 18 with 2 or 3 female members only.

Many of the women published papers as sole authors, as shown in Figure 4. Being a co-author did not necessarily mean a secondary role. Throughout the four decades studied we find many women as first authors of a mixed-gender team. It is not rare that a team is composed by women only. Towards the end of the period women publishing alone are, in some years, more frequent than those publishing in teams.

The topics dealt with by women in their papers are shown in Figure 5. Such a classification is somewhat arbitrary as, *e.g.*, a paper describing experience gained with a new type of spinning machine might equally be classified under the heading of technical development and that of spinning. In fact, the topics dealt with by women in the papers range from "weather resistant, water-removable marker dyes for sheep"¹⁴ to "study into the reasons of the corrosion of building elements of textile finishing plants"¹⁵. The distribution of the papers reflects, in a way, the priorities set by the industry. These change in time, which is not reflected in the graph, but might be an interesting study in itself. What I wanted to show here was, that women in the textile branch not only dealt, and are dealing, with topics thought in general to suit them as, *e.g.*, quality control or clothing but are interested in so-to-say the whole palette of this very broad and varied branch of industry. Besides clothing, which in itself is a complex topic ranging from computer aided cutting to the physiological effects of a given type of stockings on people wearing them, knitting and looping and the products obtained by these technologies, the ever increasing variety of new raw materials such as synthetic fibbers, glass, *a.s.o.*, technical development comprising testing of new equipment, automation of processes and the

14. F. Péter, K. Oláh-Kalmár, "Időjárásálló, kimosható, juhjelzőfesték előállítása és alkalmazása" (Production and application of weather-resistant washable marker stains for sheep), *Magyar Textiltechnika*, 20 (1968), 10-12, 295-298 ; (1969), 32-34.

15. A. Székely, E. Farkas, "Az épületelem korrózió okainak vizsgálata textilkészítő üzemekben" (Investigation into the reasons of corrosion of elements of buildings in textile finishing plants), *Magyar Textiltechnika*, 11 (1958), 453-457.

use of computers as well as all kinds of finishing seem to be among the favourite topics of women authors in this branch. Great attention is paid also to problems of management and industrial economics, including marketing, advertising, organisation of the industry. Most of the papers are devoted to quality control, comprising also the development of new, reliable, quick and, possibly, on-line methods.

In Hungary, chemistry has been a fashionable direction of women's studies in science at the Faculty of Philosophy of Budapest University since 1895 (when women started studying at universities in Hungary at all)¹⁶. Thus it is natural to look for women's achievements and role in the Hungarian Chemical Society.

This was founded in 1907 (see Table 2) with the aim of developing the social life and faculty spirit of chemists and of safeguarding their interests. Its program included the fight against the underrating of chemistry and the improvement of chemical education. It spoke up for adequate payment of chemists and the abolition of the difference between payment in public service and private laboratories. Before the association could consolidate itself World War I broke out, ruined the economy, and paralyzed scientific and social life. Two thirds of Hungary's territory were allotted to the surrounding countries by the Trianon peace treaty in 1920, and 55 % of the chemical industry remained outside the present borders of the country¹⁷. The first post-war National Conference of Chemists was organized as late as 1923¹⁸. The rising inflation and difficult economic conditions were not favorable for the chemist's work at the society. Nobel-prize winners as George Hevesy, Michael Polányi and Irwing Langmuir had to be invited to attract the attention of chemists to the society¹⁹. A journal of the association was launched in 1940²⁰. Again the time was not well chosen. After four years of existence, the journal was discontinued, this time because of World War II. The journal was re-launched in 1946 under the

16. É.K. Vámos, "Hungarian women researchers in universities and research institutes during the interwar period", *Higher Education in Europe*, vol. 17, n° 2, 1992, 100-107; É.K. Vámos, "Nők megjelenése a természettudományok és a technika világában Magyarországon" (Women's appearance in the world of science, technology and medicine), *Tanulmányok a természettudományok, a technika és az orvoslás történetéből. A természettudományok, a technika és az orvoslás a millenniumtól a millicentenáriumiig*, Budapest, 1997, 37-42; É.K. Vámos, "Nők műszaki és természettudományos oktatása" (Women's technological and scientific tuition), in B. Nagy, M.S. Sásdi (eds), *Szerep és alkotás. Női szerepek a társadalomban és az alkotóművészetben* (Role and Achievement. Women's Roles in Society and in Creative Arts), Debrecen, 1994, 205-213.

17. F. Szabadváry, Z. Szőkefalvi Nagy, "A kémia története Magyarországon (History of Chemistry in Hungary)", *Akadémiai Kiadó*, Budapest, 1972, 220-222; L. Móra, "A Magyar Kémikusok Egyesületének 90 éve" (The 90 years of the Hungarian Chemical Society), *Magyar Kémikusok Lapja*, 52 (1997), 221.

18. J. Árvay, *A magyar ipar* (Hungarian Industry), Budapest, 1941, 406.

19. L. Móra, "A Magyar Kémikusok Egyesületének 90 éve", *op. cit.*, 221.

20. F. Szabadváry, Z. Szőkefalvi Nagy, "A kémia története Magyarországon (History of Chemistry in Hungary)", *op. cit.*, 325.

name of *Hungarian Chemical Journal*. This proved to be lasting. In 1948 the society joined the Federation of Scientific and Technical Association. After World War II, in the years of disposing of the debris of factory buildings and equipment, the society's activities were restricted to a minimum and thus, on joining the Federation, the number of its members was only 360. In the ten following years this figure nearly trebled. In this society, the number of women members was always elevated. In 1995 out of a total of 5.260 members, 2.420 were women (46%) (see Table 3).

The society's official bulletin, the *Hungarian Chemical Journal*, was always a high-ranking publishing organ and enjoyed wide publicity among Hungarian chemists. The numbers of papers published in it in the period of 1947-1994 along with those of their women authors and co-authors, respectively, are shown in Figure 6. The number of papers published yearly varied between 53 (1992) and 152 (1967), *i.e.* between 4 and 12 per issue, on the average. Apart from some fluctuations and outstanding values, the number of the papers shows a definite increasing trend till the early eighties. From then on a steady decline can be observed. In the nineties the number seems to have been stabilized around 60, *i.e.*, it returned, more or less, to the initial level. As far as women authors are concerned, their participation in the papers of the journal was, apart from the years 1947 and 1949, very slight during the first decade (it shall be noted that in 1946, when the journal was re-started, only 8 issues appeared and there was no woman author. However, a column dealing with patent problems was started under the editorship of a woman, Ms. Magda Tavy-Bernauer, first female patent attorney in Hungary. The column was discontinued after a few years). Women authors showed an increasing activity from 1958 on, their number followed, in rough lines, that of the publications, only at a much lower level. The number of women authors reached its maximum in 1977 with the impressive figure of 32. In that year, 110 papers were published in the journal, *i.e.*, statistically seen, one out of three papers must have had at least one woman co-author. Women publishing in the *Hungarian Chemical Journal* showed a much greater readiness to being a co-author in a team than those publishing in *Hungarian Textile Technology*. This is shown in Figure 7. This phenomenon can be readily understood as chemistry has long ceased to be regarded as a single science, it is much more a conglomerate of disciplines, if we may say so, an interdisciplinary discipline. Thus it is unavoidable that people practising different aspects of this interdisciplinarity, often at different institutions, join to achieve a pre-set goal. This particularly applies to small and not too wealthy countries, like Hungary, where expensive equipment is scarce. Another aspect of the necessity of team-work is that operating some of today's more sophisticated instruments as, *e.g.*, a mass spectrograph, needs special training. A person handling such complex equipment often does so during all his/her active time and is used, so-to-say, as a tool, but an indispensable tool by other researchers, who reward his/her efforts by

including him/her in their pertinent publications. The papers published in the *Hungarian Chemical Journal* frequently have 4 or 5 authors. Women authors, if there are any among them, are not necessarily mentioned last, sometimes, and with progressing time more and more frequently, they are the first author of a paper. In 1985, which was an outstanding year for women authors and co-authors, they were the first in as many as 14 papers out of 25 written by them as members of a team. Some papers were written by female teams, consisting of up to three persons. Papers written by a single author — male or female — are mainly review articles or reports on conferences, industrial fairs, etc.

The distribution of the 579 papers written by women authors or co-authors in the 47-year period considered (Figure 8) shows the prevalence of analytical chemistry with nearly one third of all the papers, whereby instrumental analysis including chromatography, thermal analysis and radiochemical methods made up the greater part. Organic chemistry including plastics, rubber and ion-exchangers was another major topic practised by women. Physical and inorganic chemistry including colloidal and radiochemistry ranged also among the leading topics. Engineering, which is in general thought to be a male profession, accounts for 10 percent of the papers written by women. These papers include computer controlled technologies. Some of the industrial branches, whose female representatives regularly contributed to the journal, were treated separately. The petroleum industry including lubricants and corrosion, the pharmaceutical industry together with its special analytical methods, and environmental chemistry comprising pesticides production and testing, waste water disposal and various pollution problems are the topic of nearly 20% of the papers written — partly or entirely — by women. Thus we can say that women authors practically covered the fields treated in the *Hungarian Chemical Journal*. The title Miscellaneous stands for patents, reviews, reports and also commemorations of important persons or events in the history of chemistry.

Just as a contrast I wish to mention briefly a society with traditionally low female membership. This is the Hungarian Mining and Metallurgical Society, founded in 1892 among the first twelve societies that existed in Hungary (see Table 1). Interestingly, the society's journal existed before the society itself. It was founded in 1868 and published by the Mining Academy in Selmec (today Banská Štiavnica). From 1868 to 1950 3,490 papers were published in it without a sole woman author. The first women authors appeared after this period. However, between 1951 and 1967, out of a total of 2,772 papers, women participated in 19 only, in 15 of them as co-authors²¹. The papers dealt with typically female topics such as chemical and physical analysis of raw materials of the industry, history of science and technology, organization and education.

Summarizing, one can conclude that, however the scientific societies promoted women's activities in their specialities, they could provide presentation

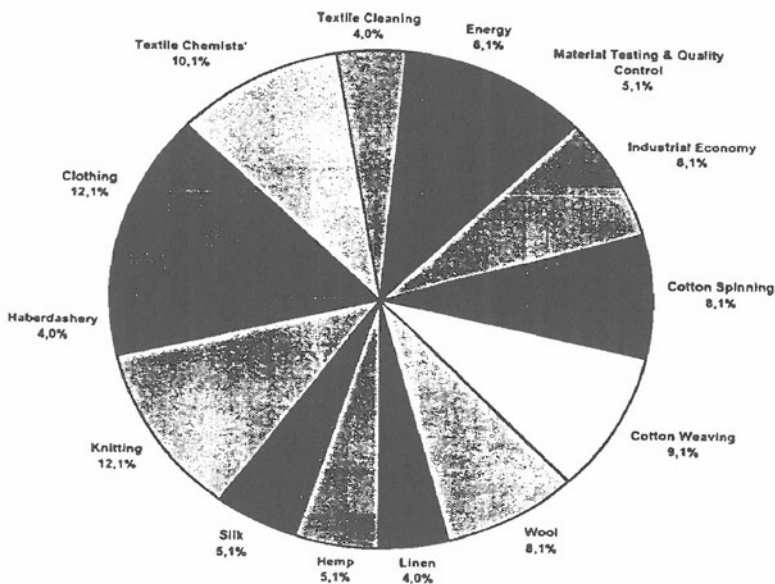
21. Compiled from the volumes of *Bányászati Lapok* (Mining Journal), 1951-1967.

facilities but for results already achieved. Thus women's role in individual scientific societies can, at best, only reflect their positions and achievements at work.

ACKNOWLEDGEMENT

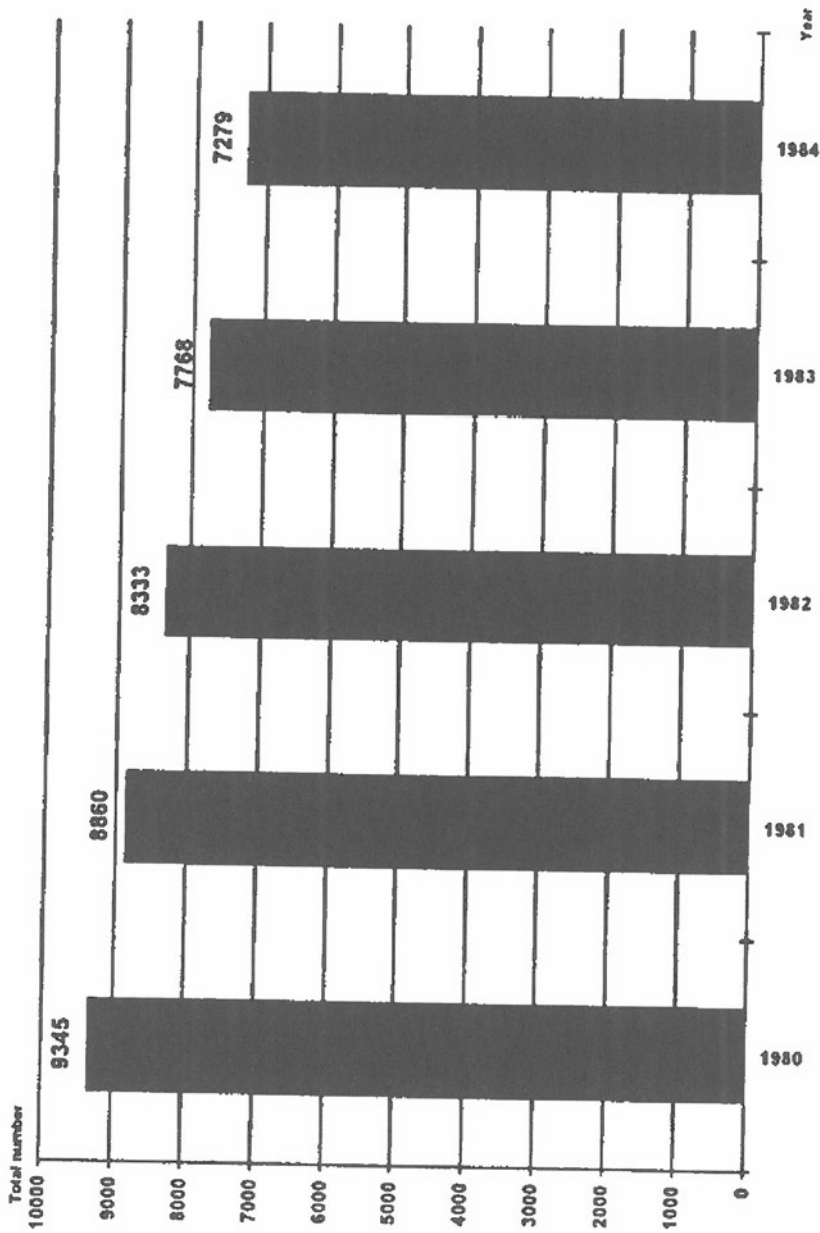
I wish to thank my colleagues Ilona Gönczy and Judit Ijjas-Rácz for their help in compiling statistics.

FIGURES

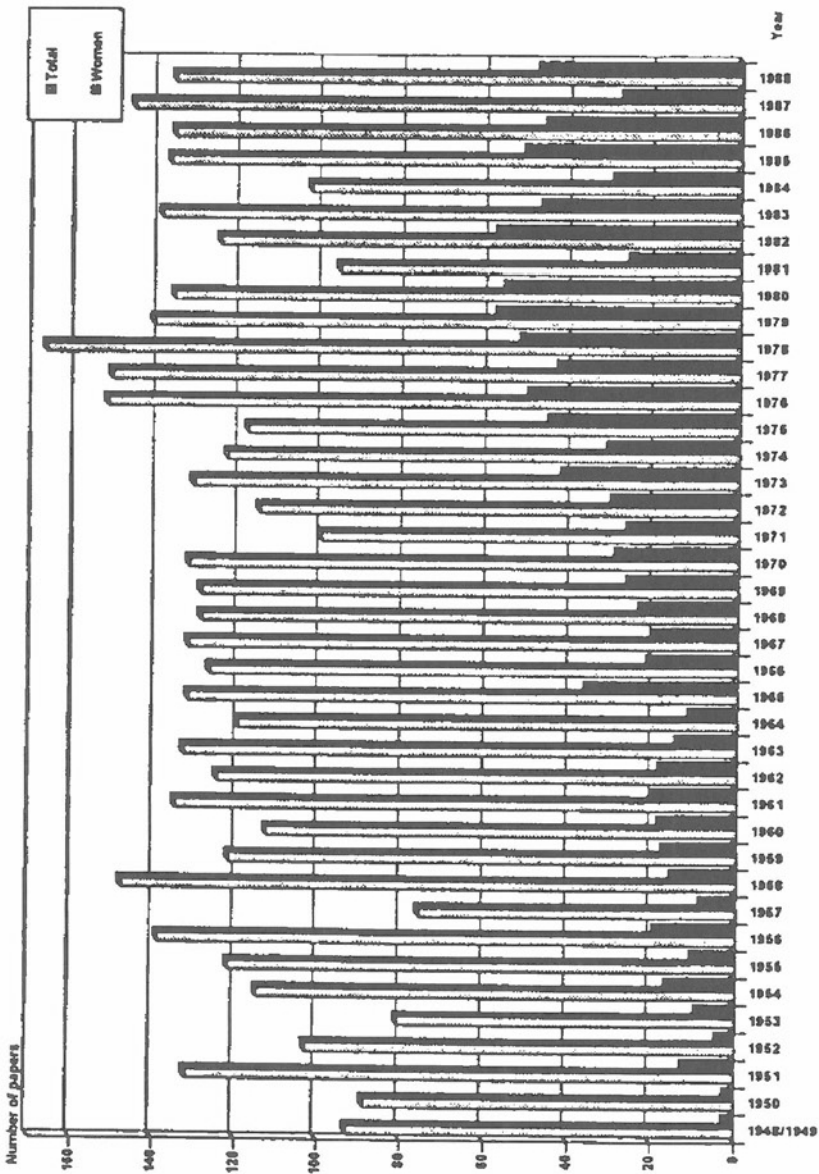


1. Sections of the Hungarian Society of Textile Technology and Science according to the percentage of the members (1985)²².

22. J. Cseh, "A Textilipari Műszaki és Tudományos Egyesület Elnökségének beszámolója" (Report of the Presidium of the Hungarian Society of Textile Technology and Science), *Magyar Textiltechnika*, vol. 38, 334.

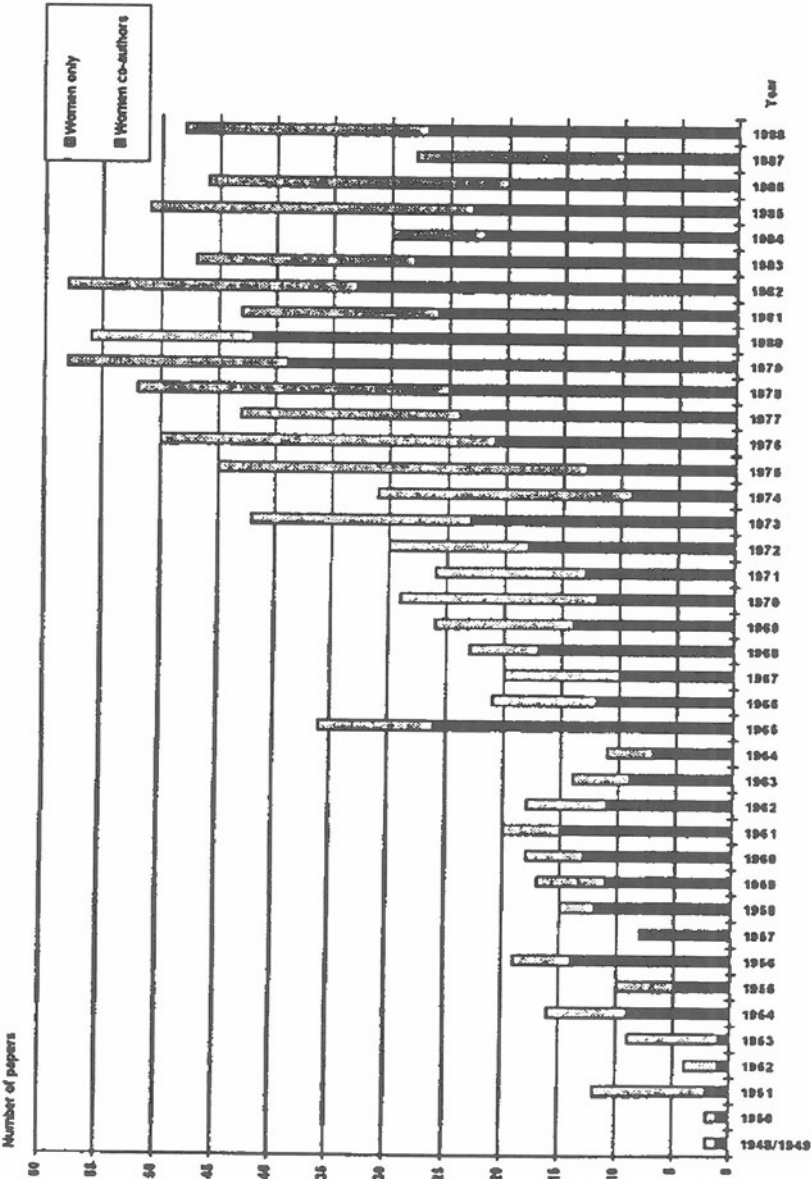


2. Changes in the number of members of the Hungarian Society of Textile Technology and Science between 1980 and 1984.



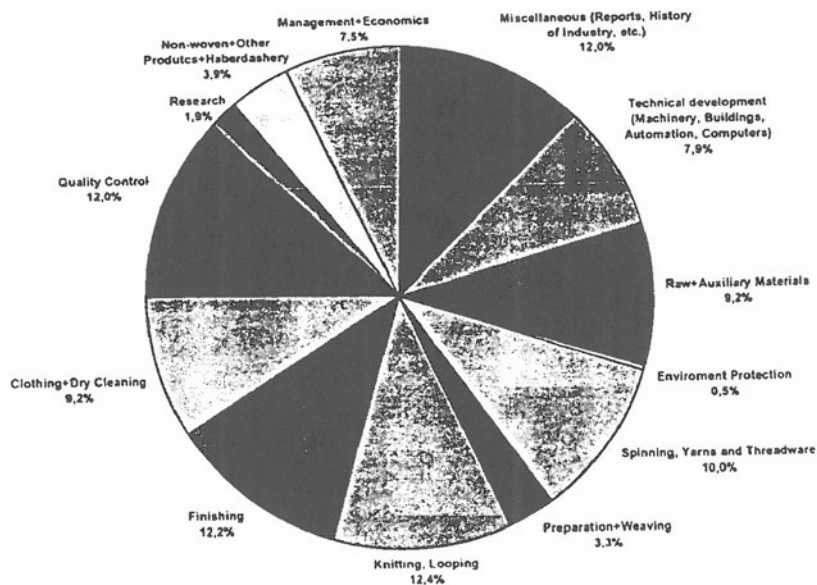
3. Papers published in *Hungarian Textile Technology* and women authors (1948-1988)²³.

23. Compiled by the author from the volumes of *Magyar Textiltechnika* (Hungarian Textile Technology), 1948-1988.



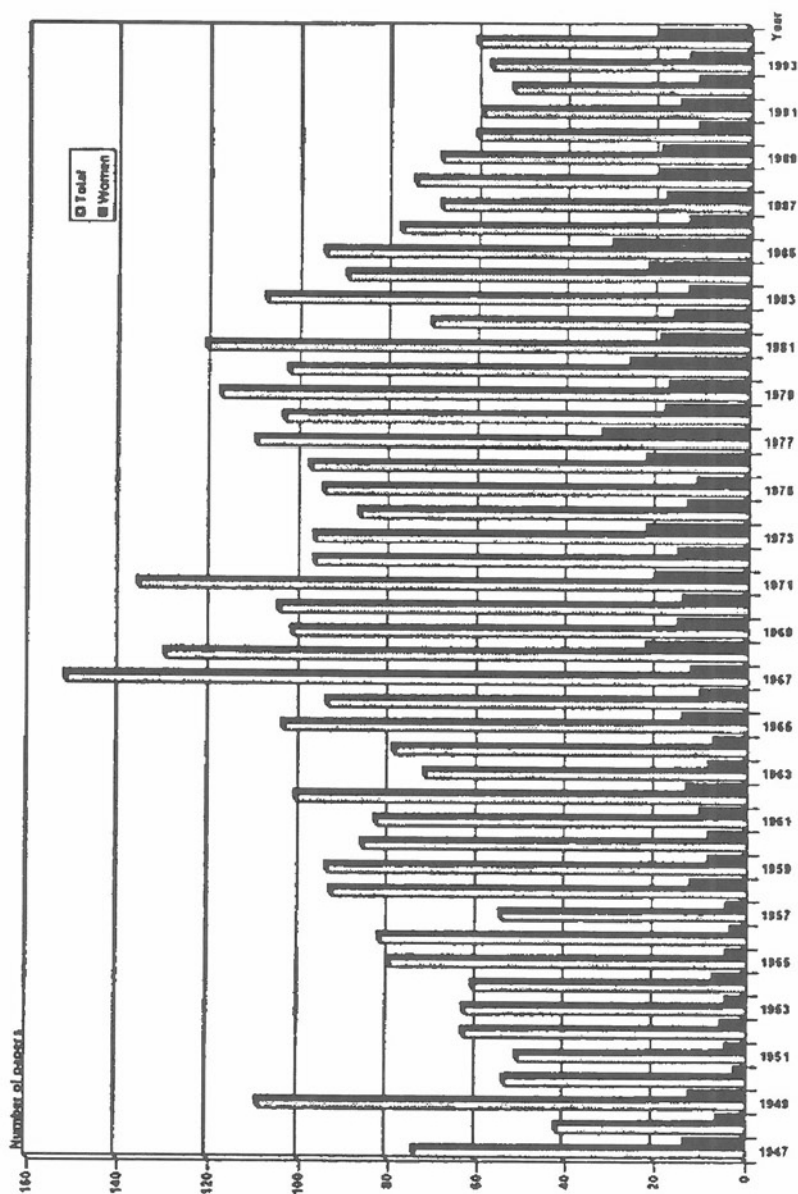
4. Papers published in *Hungarian Textile Technology* with women authors or co-authors (1948-1988)²⁴.

24. Compiled by the author from the volumes of *Magyar Textiltechnika* (Hungarian Textile Technology), 1948-1988.



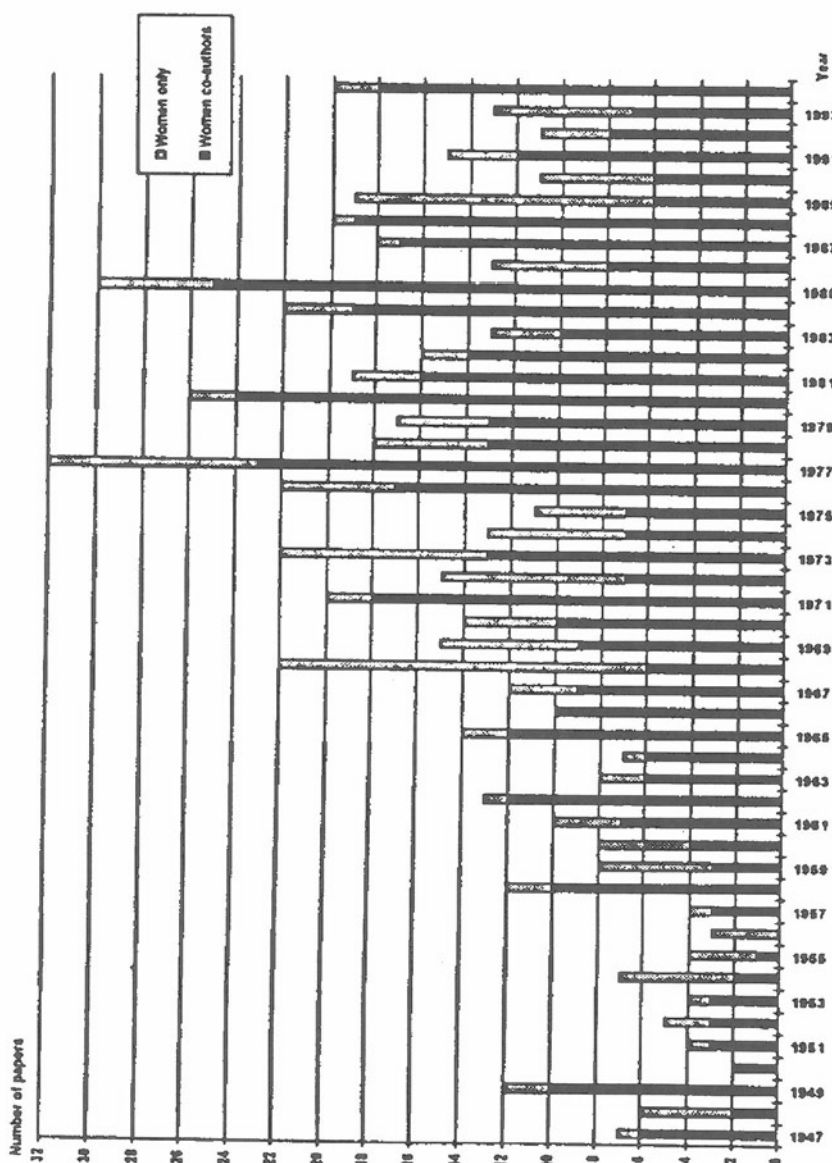
5. Distribution, according to topics, of papers with women authors published in *Hungarian Textile Technology* (1948-1988)²⁵.

25. Compiled by the author from the volumes of *Magyar Textiltechnika* (Hungarian Textile Technology), 1948-1988.



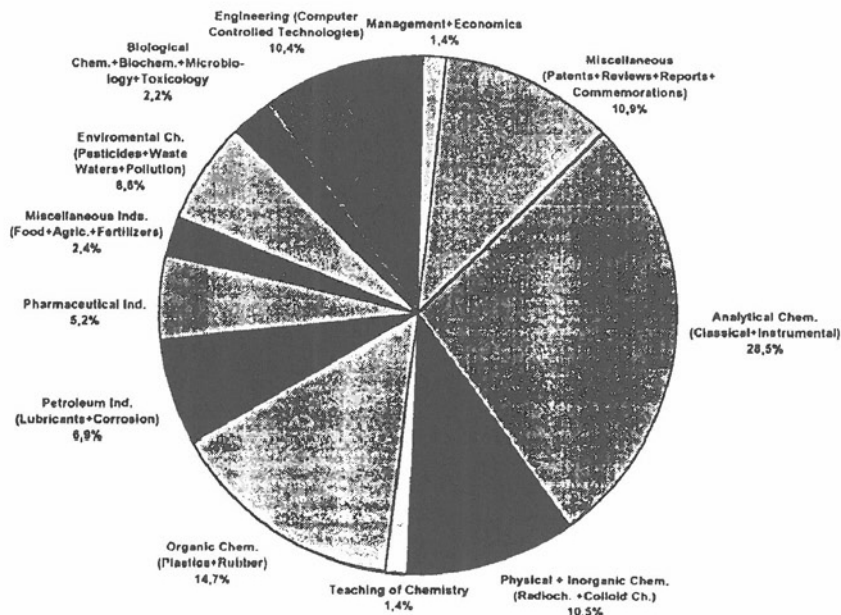
6. Papers published in the *Hungarian Chemical Journal* and women authors (1947-1994)²⁶.

26. Compiled by the author from the volumes of *Magyar Kémikusok Lapja* (Hungarian Chemical Journal), 1947-1994.



7. Papers published in the *Hungarian Chemical Journal* with women authors or co-authors (1947-1994)²⁷.

27. Compiled by the author from the volumes of *Magyar Kémikusok Lapja* (Hungarian Chemical Journal), 1947-1994.



8. Distribution, according to topics, of papers with women authors published in the *Hungarian Chemical Journal* (1947-1994)²⁸.

28. Compiled by the author from the volumes of *Magyar Kémikusok Lapja* (Hungarian Chemical Journal), 1947-1994.