

Editing around the World

Scientific publishing in a small country: an Estonian perspective

Jüri Engelbrecht

Estonian Academy of Sciences, Kohtu Str 6, 10130 Tallinn, Estonia; je@cens.ioc.ee

Abstract This article gives a brief overview of the history and present situation in the field of scientific publishing in Estonia, one of the smallest countries in the European Union. Two streams of scientific publishing in Estonia can be distinguished: (i) scientific and scholarly journals with high quality requirements striving to excellence (mostly in English) and (ii) scholarly publications reflecting the studies on national heritage and nature (mostly in Estonian). The publications of the first group are all listed in international databases, as are many but not all of the second group. The high-level peer reviewed publications demonstrate the potential of a country's research and highlight the achievements of its research centres. These publications are also a part of quality requirements for public funding decisions. Thus, the journals of the first group reflect new scientific knowledge, while the second group, which is mostly meant for the Estonian community, has, beside its scientific value, also an important cultural aspect.

Keywords: national journals, cultural aspect of research, national funding decisions

Introduction

Scientific journals are the major resource for reporting and disseminating scientific information. Initially, around the 17th century, academies started to report new scientific results. Later the professional societies and unions joined in and now there is an enormous number of scientific journals around the world. Although there are journals in many languages, the lingua franca is English. Some journals have gained a very high reputation through history, now generally supported by bibliometric indicators. The crucial factor for all the journals is that in principle a manuscript undergoes a strict peer review before it is published. It might be said that the reputation of a journal depends very much on how the process of peer review is organized but surely this is not all. The reputation of a journal or, in other words, its importance as a leading source of information, is also related to the reputation of its publisher, the pool of authors, management of the work, visibility and certainly also the language. However, new knowledge belongs to the whole of mankind, research is not the prerogative of larger countries (what is large?) and the diversity of the world must be supported. That is why questions about the importance of scientific journals in smaller countries (what is small?) are asked.

This paper describes the situation in Estonia, one of the smallest countries in the EU. It is quite clear that with its 1.35 million inhabitants, Estonia really is a small country. First a brief overview of how scientific research started in this part of Europe is given, followed by a brief description of the modern research structures. Then scientific publishing in Estonia is described and finally, its importance is discussed.

Brief historical overview

Formal scientific activities in Estonia began with the establishment of the University of Tartu by the King of Sweden, Gustavus II Adolphus, in 1632. After hectic changes in the 18th century due to several wars, which passed over the territory of contemporary Estonia, the University of Tartu gained an international reputation in the 19th century. Astronomer Wilhelm von Struve, the embryologist Karl Ernst von Baer, chemist Wilhelm Friedrich Ostwald and others who worked at the University are known for fundamental contributions in their fields. Learned societies, the forerunners of the present Academy of Sciences, were formed during this period, as they were throughout Europe. In Estonia, these included the Estonian Learned Society (1838), the Literary Society of Estonia (1872) and the Estonian Naturalists' Society (1853). The earliest scientific periodical published in Estonia was the *Astronomische Beyträge* (1806–1807). From the 19th century, the periodicals of Learned Societies are known, like *Verhandlungen der Gelehrten Estnischen Gesellschaft* (1840–1943, 34 vols); *Sitzungsberichte der Gelehrten Estnischen Gesellschaft* (1861–1938, 72 vols). As it was easily understood, the language of publications of that time was German.

In 1919, after Estonia became independent, professors of Tartu University started teaching in Estonian. Scientific terminology in Estonian and the education of the Estonian people in their native language was developed. At the same time, scientific and scholarly research prospered in several fields. In the 1920s and 1930s Estonian research in astronomy, medicine, geobotany and oil shale chemistry gained worldwide recognition. The periodical published by L.Puusepp, a neurosurgeon with an international reputation, *Folia Neuropathologica Estoniana* (1923–1939) was an excellent scientific publication of that time. Actually this was the first journal in the world for this field of science.

The period of World War II and the Soviet annexation until 1991 was characterized by ideological pressure and therefore the publications of that time have a historical significance rather than showing the normal developmental progression of publications.

Present situation

The leading research centres in Estonia are the University of Tartu, Tallinn University of Technology, the Estonian University of Life Sciences and other public universities (six altogether) and several specific research institutes like the Tartu Observatory, the Institute of the Estonian Language, and the National Institute of Chemical and Biological Physics. Research funding comprised 1.42% of the GDP in 2009 (from Statistics Estonia); the public part was distributed mostly using peer review and quality requirements.^{1,2} Estonian researchers have been rather successful in the EU's Framework Programmes and other international programmes, including

the highly competitive Wellcome Trust grant scheme. The number of scientific papers authored by Estonian researchers and published in highly valued journals is constantly increasing.³ The research highlights are described in a special overview.⁴

Scientific publishing

The brief overview above shows that there is a tradition of scientific publishing in Estonia and nowadays this tradition is continuing.

The main publisher of scientific journals is the Estonian Academy Publisher (www.kirj.ee) which acts under the aegis of the Estonian Academy of Sciences. The Publisher is funded from the State budget through the Academy and publishes: *Acta Historica Tallinnensia*; *Estonian Journal of Archeology*; *Estonian Journal of Earth Sciences*; *Estonian Journal of Ecology*; *Estonian Journal Engineering*; *Linguistica Uralica*; *Oil Shale*; *Proceedings of the Estonian Academy of Sciences*; *Trames*, *A Journal for Humanities and Social Sciences*.

This list is the result of several changes of publication policy in the Estonian Academy of Sciences during the 1990s when from the previous journals only the best were preserved and their profiles restructured, some with the cooperation of public universities. One of the essential changes was launching *Trames* in 1997 by merging *Acta et Commentationes Universitatis Tartuensium* (1893) and *Proceedings of the Estonian Academy of Sciences, Humanities and Social Sciences* (1952). All of the journals, except *Proceedings of the Estonian Academy of Sciences*, are published together with main Estonian public universities. The predominant language is English but the journals of humanities and social sciences also accept papers in German; *Linguistica Uralica* also accepts papers in Russian in order to offer possibilities for smaller Finno-Ugric language groups from Russia to publish their papers in linguistics. Short summaries in Estonian are added to papers; for authors from abroad these are written by technical editors. All journals have international editorial boards, the papers are internationally peer reviewed and they are indexed and abstracted in international databases and reviews. Strict peer reviewing for Academy journals was introduced as early as the 1980s. The editors are appointed by the Estonian Academy of Sciences and the editorial boards are regularly renewed. Characteristically, most of the science journals publish special issues collecting the papers from international conferences organized in Estonia but also in other countries. Naturally, the reviewing process for manuscripts is just the same as for regular papers, only guest editors are invited to help with the process.

Seven of the journals mentioned above are indexed by the ISI Web of Science, seven by Scopus, and three journals of humanities and social sciences by ERIH. In addition, they are indexed in many other specific databases, depending on the profile of the journal. All texts are also available electronically at the homepage of the Publisher and from EBSCO.

The Estonian Literary Museum publishes the journal *Folklore: An Electronic Journal of Folklore* which is also indexed by the ISI Web of Science. There are other scholarly publications like *Journal of Ethnology and Folkloristics*. One journal published by Tartu University Press is the oldest semiotics journal worldwide – *Sign Systems Studies* established in 1964 in Russian, and since 1998 in English. In addition, many societies publish their yearbooks in Estonian, usually

with English abstracts. The Estonian Naturalists' Society, for example, started to issue *Sitzungsberichte der Naturforschergesellschaft zu Dorpat* in 1853 and nowadays the Yearbooks of the Society are thematic (vol 83 was published in 2011). *The Yearbook of the Estonian National Museum* has been published since 1925, while several universities publish their results either in some series or as single publications like *Acta Universitatis Tallinnensis*.

It must be mentioned that some journals in Estonian that are aimed at professionals also use a peer review system like the *Estonian Medical Journal* for research papers. *The Journal Language and Literature* published by the Estonian Writers Union (predecessor of the journal from 1908, under the present name since 1958) is also peer reviewed and indexed in international databases like Modern Language Association, Central and Eastern European Online Library, and Linguistics and Language Behaviour Abstracts.

Final remarks

In most European countries, large or small, scientific publishing started after the founding of academies or societies for fostering research. Beside scientific research, the intention was often to publish the results of studies on national heritage. Estonia followed the same track – periodicals of societies have been published since the mid-19th century. Now, in the 21st century, two streams of publishing can clearly be distinguished: (i) scientific and scholarly journals with high quality requirements striving for excellence (mostly in English) and (ii) scholarly publications reflecting the studies on national heritage and nature (mostly in Estonian). The publications of the first group are all listed in international databases and many but not all of the second group follow the same mode. The high-level peer reviewed publications demonstrate the potential of a country's research and highlight the achievements of its research centres. These publications are also a part of quality requirements for funding decisions. In general, beside the journals of the first group which reflect the new scientific knowledge, the second group is needed because of its cultural aspect. Taken together, all scientific and scholarly publications contribute to the enhancement of a vernacular terminology which in its turn is a basis for education of both scientists and non-scientists. It depends very much on the community how all these aspects (excellence in research, culture and heritage, terminology and education) are interwoven into a whole – knowledge.

References

- Engelbrecht J. Quo vadis: research in Estonia. Estonia: member state of NATO and the EU: International Business Handbook, 2007-2008. Tallinn: Euroinform, 2007.
- Masso J, Ukrainski K. Competition for public project funding in a small research system: the case of Estonia. Science and Public Policy 2009;36(9):683-695. doi: 10.3152/030234209X479502
- Allik J. Quality of Estonian science estimated through bibliometric indicators (1997-2007). Proceedings of the Estonian Academy of Sciences 2008;57(4):255-264. doi: 10.3176/proc.2008.4.08
- J.Engelbrecht (ed). Research in Estonia. Tallin: Estonian Academy of Sciences, 2011.