

# WHO BELONGS TO A LEARNED SOCIETY?

A REPORT ON THE FINDINGS  
OF THE MEMBERSHIP SURVEY  
AMONG LEARNED SOCIETIES

## AUTHORS

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Federation of Finnish  
Learned Societies

## **Who belongs to a learned society? A report on the findings of the membership survey among learned societies**

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# ABSTRACT

## OBJECTIVE

- The objective of the report was to collect information on the membership of Finnish and international learned societies and practices in terms of reading scientific journals.

## METHOD

- The material was collected for the report in spring 2022 through an electronic questionnaire sent to the membership of Finnish learned societies and researchers working in Finland. The survey material consists of 1,655 responses.

## FINDINGS

- The membership of the learned societies represents the Finnish science and research community across a broad spectrum. The typical learned society member is a highly educated person who works in a research organisation, utilises or produces research-based knowledge and is over 50 years old. The membership of the societies comprises different organisations, educational backgrounds and age groups. More than half of the members live outside of the Helsinki metropolitan area.
- Membership of learned societies is motivated by communality, the promotion of science and an interest in learning new things. The membership makes active use of the publication and event-related services and member benefits offered by learned societies. The membership also regards traditional forms of operation, such as networking, publications, events and the popularisation of science as highly important parts of the societies' operations.
- The members regard the promotion of responsible science as a key task of learned societies. The members see the openness of research-based knowledge, influence on science policy and society, the defending of researchers and the promotion of research integrity and responsible evaluation as significant areas of the societies' operations.
- The learned societies must actively communicate about their operations. The most common reason for not being a member of a learned society was that the respondent had not been invited to join a society or the respondent's unawareness of learned societies to join. Membership of a learned society is given up in connection with changing life or work situations. The possibility to read societies publications without a membership was an uncommon reason for giving up membership.

- International and Finnish scientific journals are important publication channels for the members of learned societies. Finnish journals are most commonly read in the humanities and social sciences. In their open-ended responses, the member's wishes regarding scientific journals were openness of content, quality and accessibility. Scientific journals are typically read in digital form, but Finnish journals in particular are also read in printed form.

# INTRODUCTION

**THERE ARE HUNDREDS OF ACTIVE LEARNED SOCIETIES** in Finland with the aim of promoting the conditions for their field of research and conveying research data. The learned societies play a significant role as publishers of Finnish and international scientific journals, organisers of conferences and other scientific events and providers of cooperation opportunities for researchers and other parties. The Finnish learned societies have at least 270,000 members to whom they offer various member benefits in return for a membership fee. The societies provide their members with a network through which they can find support and cooperation partners both in Finland and elsewhere.

The membership of learned societies has been scarcely researched, and in Finland this kind of research work has not been done at all. During the last few years, learned societies have become worried about the development of their number of members (Korkeamäki et al., 2019). The question is, how can a society attract new members to join its operations, when the previously exclusive scientific journal it publishes has been made available to the public on the internet? Indeed, it is important for the societies to know who their members are, what motivates them and what they want from the societies. It is also important to find out the reasons for giving up membership and why researchers and other potential persons do not join as members of the learned societies. As the majority of scientific journals published in Finland are published by Finnish learned societies, it is also important to understand the role and importance of Finnish journals for readers in comparison to international journals.

Considering the above, the Federation of Finnish Learned Societies started to work on a report on the membership of learned societies in 2022. The material for the report was collected through a questionnaire named 'Who belongs to a learned society', which was sent to the members of learned societies and researchers working in Finland. The completion of the report was guided by the following research questions:

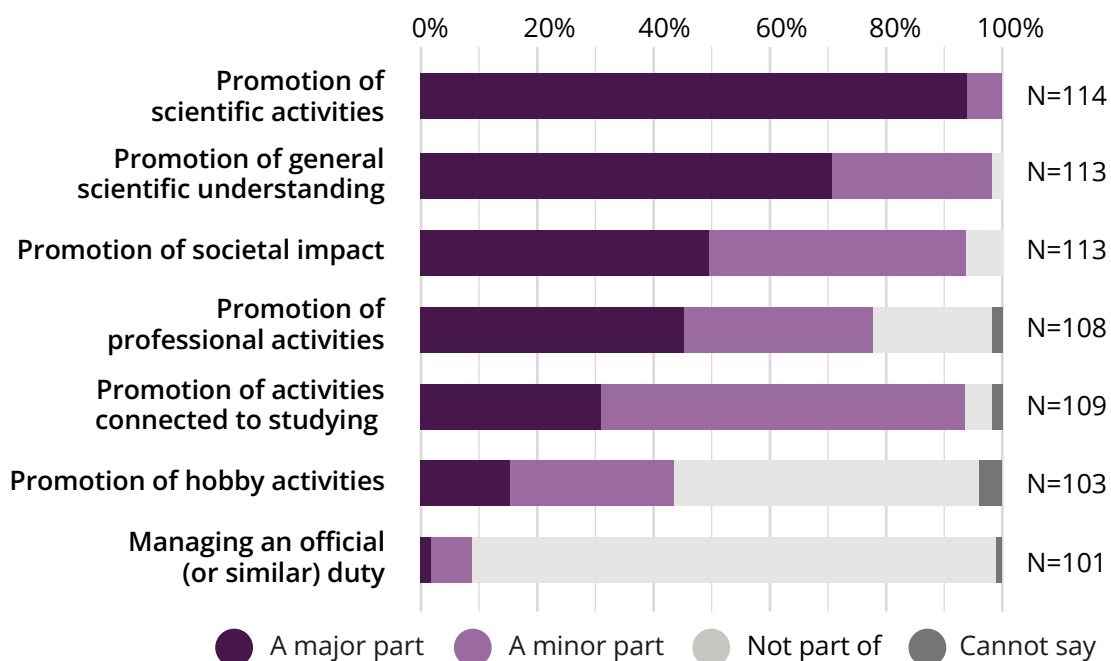
1. Who are the members of Finnish and international learned societies?
2. What motivates the members to be involved in Finnish learned societies?
3. What activities of the Finnish learned societies do the members participate in?
4. What tasks of the Finnish societies do the members consider as important?
5. Why are respondents not members of Finnish and international learned societies or why have they left a society?
6. What is the significance of Finnish and international scientific journals as publication channels?
7. How often and for what purposes are Finnish and international scientific journals read?
8. In what format are Finnish and international scientific journals read?

# LEARNED SOCIETIES

**LEARNED SOCIETIES ARE MAINLY** non-profit organisations aiming to promote the operating conditions for science and their field of research. The history of learned societies can be traced back to the 17<sup>th</sup> century, when the first science academies were established, including the Accademia dei Lincei (1603) in Rome, the Royal Society (1660) in London and the Académie royale des sciences (1666) in Paris. The oldest still active Finnish societies are Societas pro Fauna et Flora Fennica (1821), Suomalaisen Kirjallisuuden Seura (The Finnish Literature Society, 1831) and Finska Läkaresällskapet / Suomen Lääkärisseura (The Finnish Medical Society, 1835). At the moment there are at least 300 active learned societies in Finland, and their estimated total number in Europe amounts to several thousand (Late & Pölönen, 2021).

A comprehensive report was drawn up on the operations of Finnish learned societies in 2019 (Korkeamäki et al., 2019). Another report published in 2022 (Late, Pölönen & Pylvänäinen, 2022) examined the operations of learned societies related with responsible research. The activities of the societies have also been studied in other countries. For example, in Portugal (Delicado et al., 2014), a study was conducted about the operations of learned societies in the country, while in the UK the operations of societies active in the field of social sciences has been examined (Hewitt et al., 2017).

Figure 1 presents the objectives of Finnish learned societies based on the earlier report by the Federation of Finnish Learned Societies (Late, Pölönen & Pylvänäinen, 2022). The main objectives of the societies are the promotion of scientific activities, general scientific understanding and societal impact. However, versatility is characteristic of the societies' operations; some of the societies have also focused for example on promotion of professional or hobby activities.



**FIGURE 1.** The operational objectives of the learned societies.

Source: Late, Pölönen & Pylvänäinen, 2022.

Learned societies typically promote these objectives by publishing research data and arranging events for different audiences. Some societies also have own research operations, such as collecting research materials, maintenance of premises and equipment and distribution of research funding. In addition to this, the societies perform several other tasks, but the methods they use vary. The societies operate at both national and international level and actively cooperate with different parties, particularly research organisations. Many societies also are members of international learned societies. Many societies regard the support of young researchers' careers as a key task. The societies may indeed fill voids that exist outside the scope of operations of other research organisations. (Korkeamäki et al., 2019)

Finnish learned societies are mainly run by volunteers. Although the majority of the societies does not have paid employees, a large proportion of them pay fees for work. However, the extent to which voluntary work for the societies is carried out in spare time or during working hours, for example at universities, is not known. The membership fees of society members and subsidies from the state and other parties play a significant role as sources of income for the societies. Due to their small budgets, many societies are vulnerable to economic adversities. On the other hand, some Finnish societies have a bigger budget and can afford paid employees. (Korkeamäki et al., 2019)

Founded in 1899, the Federation of Finnish Learned Societies is the cooperative body of Finnish learned societies. In 2021, the federation had a total of 291 member societies. However, not all Finnish learned societies are members of the federation, which means that the actual number of societies operating in Finland is bigger. The disciplines of the federation's member societies vary extensively. In table 1, the societies have been classified by their main discipline based on information provided by the societies to the federation. About 30 per cent of the societies are active in the field of social sciences, and the proportion represented by humanities is almost as large. About 17 per cent of the societies are active in the field of natural sciences, 14 per cent in the field of medical sciences and 10 per cent in the field of technical sciences. The Finnish Academy of Science and Letters and the Finnish Society of Sciences and Letters have been classified to represent all disciplines. However, this classification must be treated with some caution, as many societies declaredly represent more than one discipline, while this classification assigns each society to one main disciplinary group.

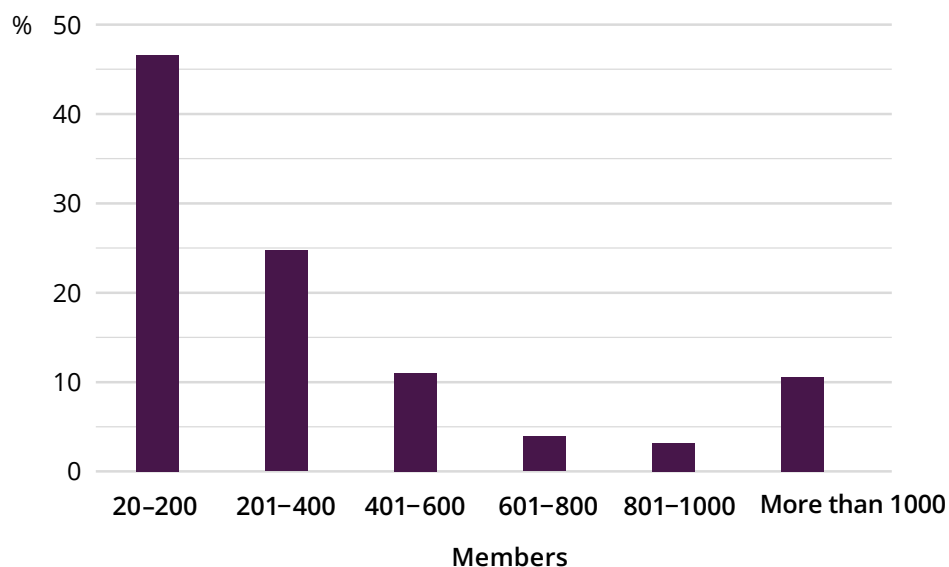
**TABLE 1.** *The number of member societies in the Federation of Finnish Learned Societies and the main disciplines of the societies. Source: The member society database (2021) of the Federation of Finnish Learned Societies.*

Main discipline	Number of societies	%
Social sciences	87	30
Humanities	84	29
Natural sciences	49	17
Medical sciences	40	14
Technical sciences	29	10
All disciplines	2	0.3
In total	291	100



## THE MEMBERS OF FINNISH LEARNED SOCIETIES

The majority of the learned societies have individual members and some of them also have institutional members. In 2021, the total number of members in the 291 member societies of the Federation of Finnish Learned Societies was 269,847. However, the number is not necessarily exact, as some member societies might have provided an approximation, and the data are not necessarily up to date in the case of all societies. Many member societies of the Federation of Finnish Learned Societies have small member person counts (Figure 2). The average of the member person counts of the societies was 954 (median 221, mode 100). However, the member person counts of the societies vary greatly. In 2022, the smallest society in terms of member count had 20 members and the biggest had 72,000 members. Almost half of the societies had 20–200 members (Figure 2). About 10 per cent of the societies had more than 1,000 members. Some member societies (N=8), such as foundations and institutes, do not have members at all. Some societies, such as science academies, operate a ‘by invitation only’ policy for membership, in which case access to the society’s operations is limited.



**FIGURE 2.** Member societies of the Federation of Finnish Learned Societies (N=283) classified by number of members. Only societies with individual members have been considered.

If member person counts are considered based on the main discipline represented by the society, it can be noticed that many societies active in the fields of social sciences and humanities are small in terms of member count, while the fields of technical and natural sciences in particular display a more centralised profile (Table 2). More than one third of the members belong to societies active in the field of technical sciences, one quarter to societies active in the field of natural sciences and 16 per cent to societies active in the field of medical sciences. About 10 per cent of the members belong to societies that are active either in the field of humanities or social sciences.

The average member count is considerably smaller in societies active in the fields of social sciences and humanities in comparison to societies active in the field of natural, medical and technical sciences. The average member count of societies in these fields is increased by societies with a large member count, such as Ursa Astronomical Association (18,293 members), the Finnish Medical Society Duodecim (19,500 members), the Finnish Association for Nature Conservation (30,000 members) and Academic Engineers and Architects in Finland (72,000 members).

**TABLE 2.** *The main discipline and number of members of the member societies of the Federation of Finnish Learned Societies. Source: The member society database (2021) of the Federation of Finnish Learned Societies.*

Main discipline	Member count	%	Mean	Median
Social sciences	26,609	10	313	212
Humanities	31,090	12	394	172
Natural sciences	71,302	26	1,486	299
Medical sciences	44,423	16	1,111	270
Technical sciences	95,222	35	3,284	250
All disciplines	1,201	0.4	601	601
In total	269,847	100	954	221

The total number of individual members of the member societies have not seen large changes over the last few years, although more than 60% of the responding societies in 2018 worried about losing members (Korkeamäki et al., 2019). The majority of the societies are actively recruiting members for example through social media and by advertising at various events, companies and educational institutions (Korkeamäki et al. 2019). The member count of societies is negatively correlated (Pearson  $-0.188$ , sig. 001) with their year of foundation, i.e., older societies are likely to have more members. Vehkalahti (2014) has indeed put forward that while older societies have had more time to gain a larger membership, new ones are ever more specialised in smaller disciplines, and are therefore smaller.

Membership fees are the most important source of income for the societies. In Finland, the average annual membership fee of the societies was 35 euros in 2018 (median 28.5 euros). The annual membership fee, however, varied between 0 and 280 euros. In addition to membership fees, the societies fund their activities through publication subsidies, capital income, state subsidies, grants and conference income. However, societies' activities are mostly non-profit, and a significant proportion of the work is carried out without salaries or fees. (Korkeamäki et al., 2019).

The most common member benefits offered by the societies are newsletters and the opportunity to participate in the society's events. Other typical member benefits are discounts and exemptions from event participation fees and subscription fees of publications. Some societies also award grants to their members. Looking after professional interests is rarely included in the societies' operations. Support for young researchers is typical. (Korkeamäki et al., 2019).

## MEMBERSHIP OF THE LEARNED SOCIETIES

Members and membership of learned societies have not previously been studied or reported on in Finland from the viewpoint of the members. The scientific publisher Wiley has conducted an international survey as of 2014 on membership of learned societies. Although the findings of these surveys have not been systematically reported in publications, information on the survey findings can be found on Wiley's website (see Wiley Society Member Resources). Based on the surveys, the most important factors behind learned society membership between 2017 and 2021 were access to societies' publications and networking with the international and local communities. The most common activities in which members participate are reading the societies' publications and event participation. Wiley's 2020 and 2021 surveys highlighted the growing importance of webinars and other online events in the societies' operations.

Based on Wiley's surveys, the most common reasons a respondent has not joined a learned society are that they have not been invited to do so or that membership fees are too high. Sometimes the respondents do not know of learned societies they could join. The most common reasons for giving up membership were loss of funding, change of workplace or place of residence, and retirement. Some ex-members no longer found membership of a learned society professionally beneficial.

Roscoe (2020) presents the findings of the 2019 survey in an article published in the *Learned Publishing* journal. A total of 3,112 persons from 20 different countries and 40 different fields of research responded to the 2019 survey, 61 per cent of whom were learned society members. More than 40 per cent of the respondents were members of at least three learned societies, and persons advanced in their career were typically members of more than one learned society. Of the society members who responded to the survey, 75 per cent were men, although the proportion women accounted for of younger respondents was over 40 per cent. Half of the members worked at universities or research institutions. About 11 per cent of the members worked at healthcare organisations. Nine per cent of the members were students and three per cent were pensioners. However, Roscoe's (2020) article does not precisely describe the way the material was collected or consider the representativity of the research data. It is thus unclear how well the background variables reflect the actual membership of the learned societies in reality. According to Roscoe, the communality and networks offered by the societies is particularly important for members who are at the beginning of their career journey, albeit these are important factors for all members. The majority of the members responding to the 2019 survey indeed would have liked more cooperation opportunities offered by the society as well as more consideration and visibility for authors' work.

Roscoe (2022) presents the findings of the 2021 survey in particular from the viewpoints of diversity, fairness and accessibility of the learned societies. Based on the survey, the members of the learned societies are more and more appreciative of the openness of science, and emphasise, for example, the significance of open publications and research materials for the societies' operations. According to Roscoe (2022), the majority (65%) of the members want the society to publish an open access journal, while only three per cent of the respondents stated that they would leave the society if

the journal were to move to open publication. In international publication operations, Article Processing Charges (APCs) are now a common way of enabling open access, but this operating model does not offer equal opportunities for publishing. Roscoe (2020, 2022) indeed suggests that the societies should consider, for example, a partial transformation of the travel grants reduced by remote conferences into grants for supporting the APCs of publications.

In Wiley's survey, members of learned societies regards the societies' activities for the promotion of equality and diversity in science as important. These should be considered in the planning of the societies' operations, such as in the recruitment of membership, authors and peer reviewers. The COVID-19 pandemic has had a significant impact on the working conditions of the members of learned societies, probably most strongly affecting the already most vulnerable members, such as persons belonging to risk groups. According to Wiley's survey, more than half of the respondents had been forced to skip conferences and other events during the pandemic. Almost half of the respondents experienced increased stress and anxiety and faced difficulties in reconciling work and family needs (Roscoe, 2022). Finnish learned societies have also been forced to cancel events and shift their operations online as a result of the pandemic. Publishing operations, on the other hand, have not been significantly impacted by the pandemic. (Late, Pölönen & Pylvänäinen, 2022).

# SCIENTIFIC JOURNALS AS A PART OF SOCIETIES' ACTIVITIES

**SCIENTIFIC PUBLICATION IS** one of the most traditional forms of operation of learned societies. In the 2018 survey, 85 per cent of responding societies had publication activities, and more than half of the societies published scientific journals. About 15 per cent of the societies published books and series of books. The societies publish in several languages, but the official languages of Finland are the most common languages of publication. (Korkeamäki et al., 2019)

A large proportion of the more than 300 scientific journals being published in Finland are published by Finnish learned societies (Late et al., 2020). Peer-reviewed publications published in Finnish journals, books and conferences make up about 11 per cent of the peer-reviewed publications of Finnish research organisations. The significance of Finnish and international publication forums shows great interdisciplinary variance. Finnish scientific journals are more significant publication channels in the fields of social sciences and humanities, with more than 20 per cent of the journal articles published in Finnish forums. In these fields, book publications are also common. Publishing activity in natural and medical sciences has, in turn, been concentrated in international journals, while conference publishing, alongside journals, is common in the technical field. (Pölönen, 2021)

Learned societies have a strong commitment to the culture of open scholarship (Late, Pölönen & Pylvänäinen, 2022), and Finnish scientific journals become more and more freely accessible online. In 2020, more than half of the Finnish journals and periodicals immediately published their content with open access, and about 40 per cent stated that they allow parallel recording into an open access repository. However, more than 70 per cent of the journals enabled open access to their publications in one way or another. Regardless of this, the proportion of journals meeting the open publishing standards of the Directory of Open Access Journals (DOAJ) and Plan S is still relatively small. (Linna et al., 2020) This is, however, typical of non-profit publication operations based on voluntary work (Bosman et al., 2021, Frantsvåg & Strømme 2019; Wise & Estelle 2020). Based on the data of the Publication Forum, only 24 per cent of the Finnish peer-reviewed publication channels could be found in the DOAJ database (Linna et al., 2020).

## PRACTICES OF READING SCIENTIFIC JOURNALS

Earlier studies have paid particular attention to researchers' practices in reading scientific journals (e.g. Late et al., 2019; Late, 2014; Tenopir et al., 2015; Tenopir et al., 2009), and these studies show that reading has for the most part shifted to electronic journals during the 2000s.

A survey examining the practices in terms of reading scientific journals in Finland showed that the researchers active in the country read on average 20 journal articles a month (Late et al., 2019). The amount of reading varied across disciplines in such a way

that researchers active in the fields of medical and natural sciences read more articles than those active in the fields of social sciences and humanities. Respondents with research-intensive tasks (e.g. those in the role of professor and doctorate students) also read more journal articles than those active in teaching and administration. Scientific journals were considered the most important channel of publication across all disciplines, although conferences played a more significant role in the field of technical sciences, and books and book articles did so in the field of humanities. The most important reasons for reading articles were research, writing and staying up to date. More than 90 per cent of the journal articles read were published in English.

More than half of the latest journal articles read had been read in an electronic format on a computer display. Only about three per cent of the articles had been read on a phone display or a tablet. Articles read on paper had mainly been printed for reading, and only five per cent had been read in a printed journal. (Late et al., 2019) Earlier studies (Revelle et al. 2012; Shrimplin et al. 2011) have identified different reader types of scientific literature; 1) book lovers, who prefer to read printed texts, 2) technophiles, who value new tools and do not shy away from reading on displays, 3) pragmatics, who prefer printed books in their spare time, but use displays for reading at work and 4) printers, who print out the texts to be read onto paper. Researchers active in the fields of humanities and social sciences tend to prefer printed books, while those active in the field of technical sciences prefer electronic books.

The study by Late et al. (2019) pointed out differences between the practices of reading Finnish and English language articles. Finnish language articles were more often read in a printed journal at home, while articles written in English were read on a computer display at work. Finnish language articles were also more often read for the purposes of staying up to date, teaching and pleasure in comparison to articles written in English. Reading English language articles was considered more important for work when compared to Finnish language ones.

A study conducted by Pölönen et al. (2021) on the users of the Journal.fi portal for Finnish scientific journals showed that, in addition to researchers (36%), students (40%) comprise a significant proportion of the users of Finnish scientific journals. The users also included citizens (8%), experts (7%) and teachers (5%), who usually do not have access to publications behind paywalls through consortium agreements. While researchers mainly used articles published in foreign languages, other user groups tended to use articles published in the domestic languages. Other studies have also proved the significance of students among the readership of scientific journals (e.g. Mohammadi et al., 2015).

For researchers, the main usability factors of scientific journals are their availability, accessibility, readability, findability and searchability (Talja et al. 2021; Tenopir et al., 2011). In relation to availability, open access is widely supported by the researchers (e.g. Talja et al., 2021, Nicholas et al., 2014). The researchers would also like to have new ways of sharing information and combining reading and writing more easily (Talja et al., 2021). When selecting articles, researchers pay attention to relevance and the reputation of writers and publication forums. Other factors identified include, among others, the quality and impact of the publications (Tenopir, et al., 2011). Studies (Nicholas et al., 2014, Watkinson et al., 2016) have shown that

researchers are often dissatisfied with the quality and number of publications (there are too many of them) as well as with slow editing. The importance of abstracts has increased even further, as researchers have to select what they want to read from a flood of information.

# RESEARCH DATA

**THE DATA FOR THE REPORT WAS COLLECTED** through a questionnaire named 'Who belongs to a learned society', which was sent to the members of learned societies and researchers working in Finland. The form was open between 1 February and 31 March 2022. The member societies of the Federation of Finnish Learned Societies were sent a request to convey the survey invitation to their members in their preferred manner, such as by email, through social media or by announcing it in the society's newsletter. In addition to the societies, the Finnish Union of University Professors and the Federation of Finnish Learned Societies announced the survey in their newsletters. Further, the questionnaire invitation was distributed on the federation's website and on its social media channels (Facebook, Twitter). #*minätutkin* ('I research') T-shirts of the federation and Tiedekirja bookstore gift vouchers were raffled among the respondents.

The questionnaire was implemented with the LimeSurvey software, and it was available in Finnish, Swedish and English. Open questions could be answered in the user's preferred language. The questionnaire (Annex 1) consisted of five sections, and the number of questions varied based on choices made by the respondent:

1. Background information (12 questions)
2. Membership of a Finnish learned society (10 questions)
3. Membership of an international learned society (4 questions)
4. Reading of scientific journals (6 questions)
5. Feedback and contact details

In total, the survey attracted 1,845 responses, of which 1,655 were approved for the final material. Any responses where the respondent had only answered the background information questions were excluded from the data. The respondent numbers, however, varied across the questions, as the respondent were allowed to skip questions at will.

In the report, the research data is analysed with conventional statistical methods, utilising the direct response distributions, cross tabulations, averages and correlations. Responses to open questions of the survey are analysed by classifying the responses into broader thematic groups, and quotes are picked up from the responses to the report, with the respondent's discipline presented alongside them. In discipline-specific analyses, the seven-tier discipline classification of the Finnish Ministry of Education and Culture is used, for which the field of education indicated by the respondents (question 8) has been reclassified to represent the natural sciences, technical sciences, medical and health sciences, agriculture and forestry, social sciences, humanities and other sciences.

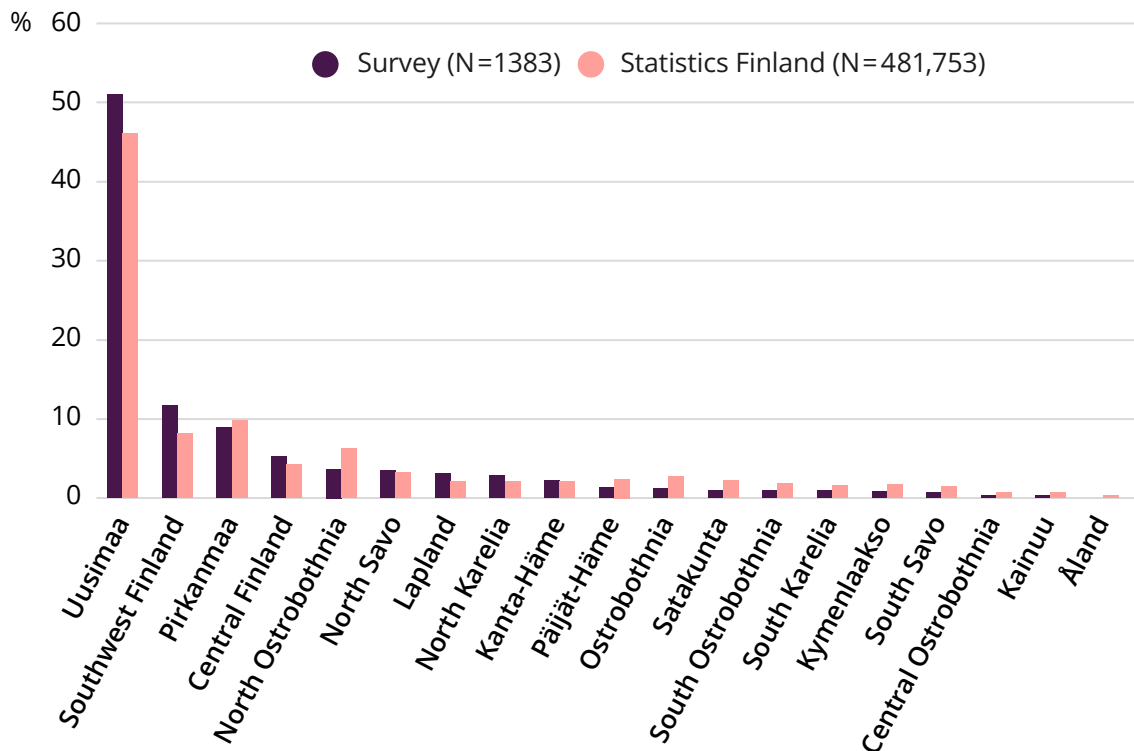


## PROFILE OF THE RESPONDENTS AND REPRESENTATIVITY OF THE MATERIAL

As the number of learned societies that distributed the survey invitation among their members and the number who received the survey invitation through other channels are unknown, it is difficult to estimate the response rate of the survey. The member societies of the Federation of Finnish Learned societies have almost 270,000 members in total, but as some members are probably members of more than one society, this number cannot be used for estimating the response percentage. Calculation of the response percentage is further complicated by the fact that the survey was not exclusively intended for researchers who are members of learned societies.

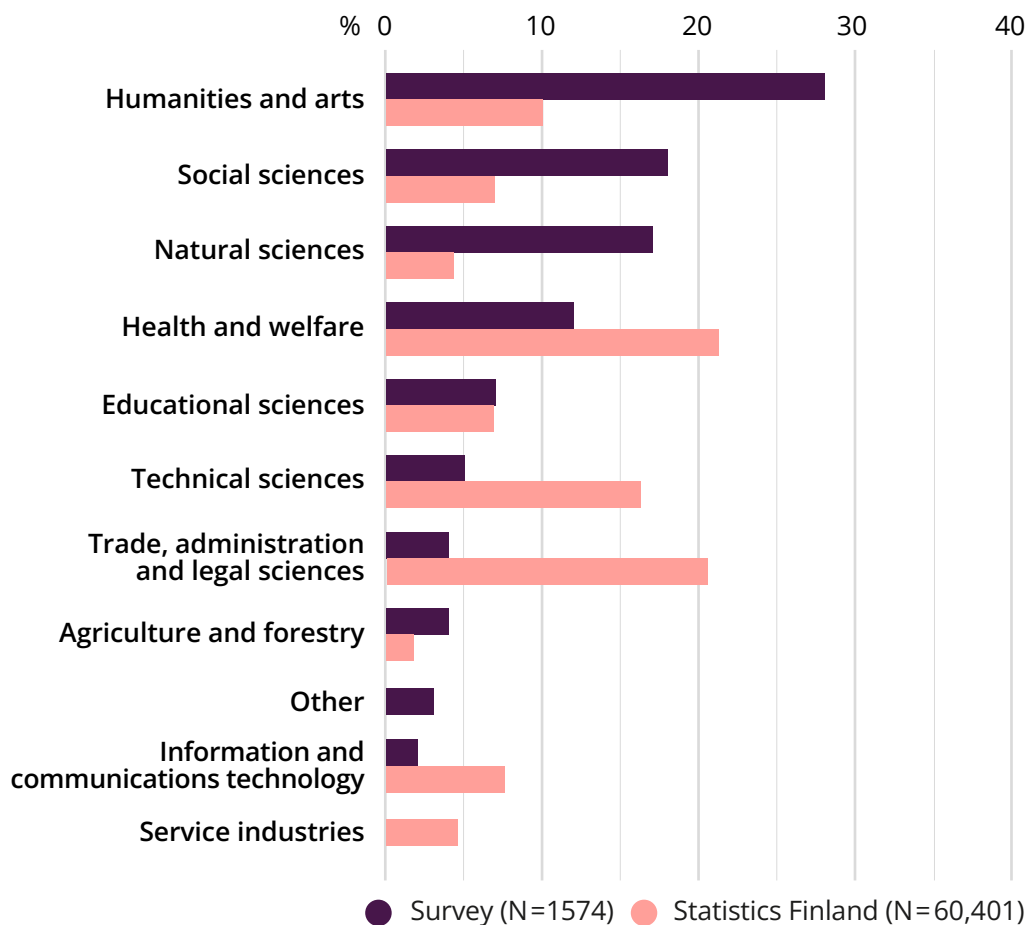
The educational background of the respondents is high, as 52 per cent have a doctoral degree, 37 per cent a master's degree and 8 per cent a bachelor's degree. Less than four per cent of the respondents have vocational or comprehensive education as their highest qualification.

The respondents came from all the regions of Finland, except for Åland (Figure 3). However, almost half of the respondents (49%) lived in Uusimaa. About ten per cent of the respondents lived either in Southwest Finland or Pirkanmaa. According to Statistics Finland, 46 per cent of those who have completed a higher university degree in Finland live in Uusimaa, 8 per cent in Southwest Finland and 10 per cent in Pirkanmaa, which explains part of the geographic distribution in the survey. When the distribution of highly educated respondents is compared by region, it can be noted, however, that Uusimaa and Southwest Finland are slightly overrepresented in the sample in comparison to the data of Statistics Finland about the place of residence of those with higher education. Smaller regions are slightly underrepresented in the sample.



**FIGURE 3.** Representativity of the survey data by place of residence of respondents who have attended higher education. Source: Statistics Finland.

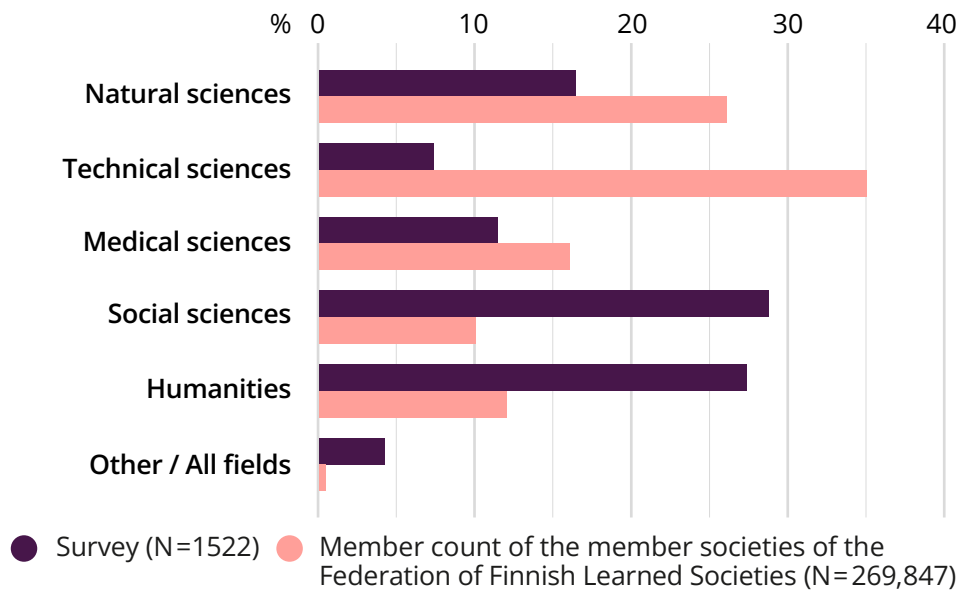
The respondents represent a wide variety of fields of education (Figure 4). The representativity of different fields of education can be examined by comparing the field of education indicated by the respondents with the data of Statistics Finland about the field of education of persons who completed a higher education degree in Finland in 2021 (Figure 4). The comparison shows that the respondents whose background is in the fields of the humanities and arts, social sciences and natural sciences are overrepresented, while respondents with a background in other educational fields are underrepresented. Nevertheless, it is possible that classifications by fields of education are not completely consistent.



**FIGURE 4.** Representativity of the survey material by fields of education of the respondents. Source: Statistics Finland.

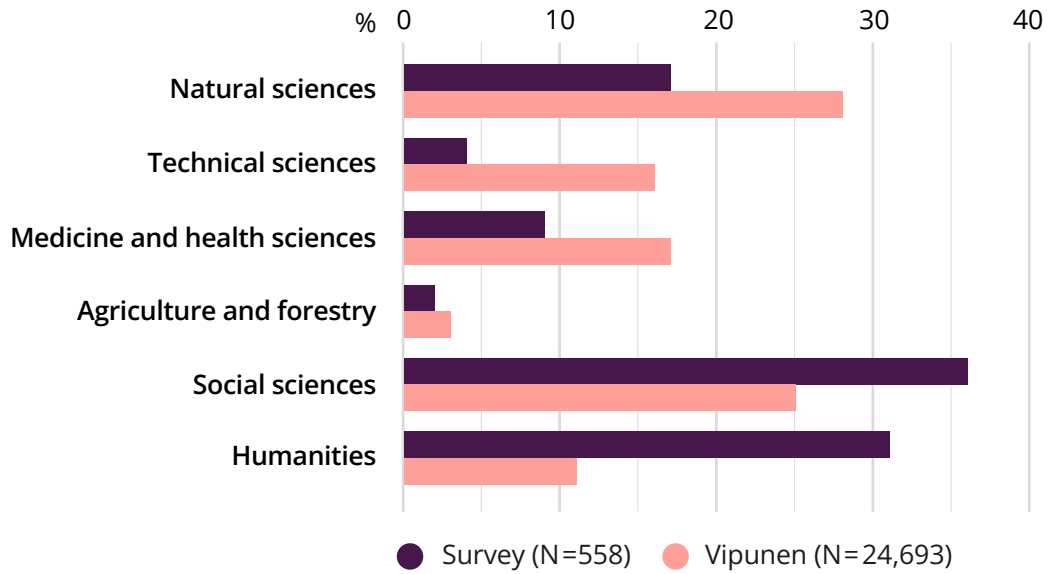
The discipline represented by the respondents who are members of Finnish learned societies can be compared with the discipline distribution among the members of the member societies of the Federation of Finnish learned societies (Figure 5). For this comparison, the fields of education indicated by the survey respondents were classified into six main disciplines. General education, services industries and defence were classified as 'other' education; this category is represented by those

learned societies that represent all disciplines. The comparison shows that the proportion of members active in the fields of natural sciences, medical sciences and technical sciences is considerably higher in the member societies in comparison to the proportion of respondents from these disciplines in the survey data. Persons from the fields of the humanities and social sciences are, in turn, overrepresented as survey respondents. This comparison is not completely reliable, either, as the respondent's field of education is not necessarily congruent with the discipline represented by the learned society.



**FIGURE 5.** Representativity of the survey data by discipline of the respondents in comparison to the discipline represented by the member societies of the Federation of Finnish Learned Societies. Source: The member database (2021) of the Federation of Finnish Learned Societies.

The representativity of university respondents can be examined by comparing the discipline indicated by the respondents with the data collected by the Finnish National Agency for Education on the disciplines of researchers working at universities (Figure 6). As in the earlier comparisons, the social sciences and humanities appear overrepresented in the sample.



**FIGURE 6.** *The disciplines of survey respondents working at universities in comparison to the disciplines of research personnel working at Finnish universities.*  
*Source: Vipunen – Education Statistics Finland.*

The comparisons between the disciplines clearly indicate that the humanities and social sciences are overrepresented in the survey, while respondents representing the natural sciences, medical and health sciences, technical sciences and agriculture and forestry are underrepresented. One explanation for the overrepresentation of the humanities and social sciences is that the societies active in these fields probably have more members with researcher backgrounds, while the big societies active in the fields of technical, natural and medical sciences might have more members representing other professions (e.g. natural science enthusiasts, medical doctors, engineers). As the survey invitation probably reached researchers more effectively, the representation of other professions remained smaller. Indeed, these shortcomings in the representativity of the sample should be considered when examining the findings.

# FINDINGS

## MEMBERS OF FINNISH AND INTERNATIONAL LEARNED SOCIETIES

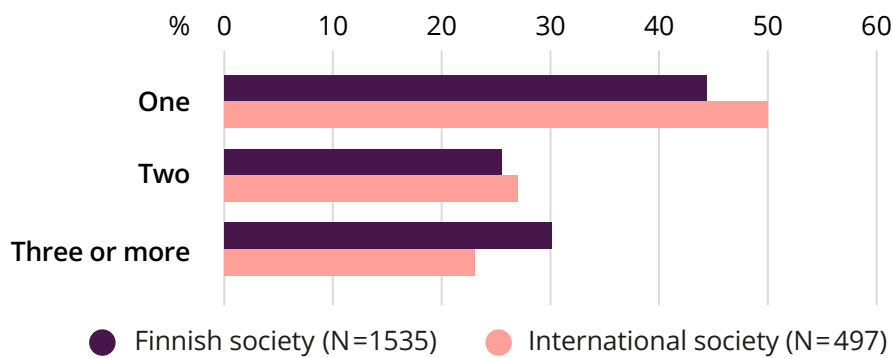
A total of 1,540 persons (93% of all respondents) who responded to the survey stated that they are currently members of a Finnish learned society. Respondents are most typically members of one (44%) or two (26%) societies (median 2, average 2.2, mode 1), but the number of societies varies between 1 and 20. About one third of the respondents are members of more than two Finnish societies (Figure 7).

The members of Finnish learned societies were asked to indicate the societies they were members of. A total of 356 different societies were identified in the open-ended responses, 217 (61%) of which were member societies of the Federation of Finnish Learned Societies. The most represented societies were the Ursa Astronomical Association (110 respondents), the Westermarck Society (94 respondents), the Finno-Ugrian Society (89 respondents), the Finnish Society of Military Sciences (87 respondents), the Society for the Study of Finnish (86 respondents), the Finnish Literature Society (72 respondents), the Finnish Historical Society (59 respondents), the Finnish Educational Research Association (59 respondents), the Finnish Society of Forest Science (58 respondents) and the Finnish Society of Sciences and Letters (54 respondents). Correspondingly, there were no respondents representing the members of 61 member societies of the Federation of Finnish Learned Societies. All federation member societies extracted from the responses to open questions have been listed in Annex 2, and the other societies in Annex 3.

As for societies that are not members of the Federation of Finnish Learned Societies, the Finnish Society of Clinical Pharmacy (29 responses) and the Finnish Inverse Problems Society (19 responses) sent the most responses. The respondents named a total of 139 societies that are not members of the Federation of Finnish Learned Societies. In the survey, learned societies were defined as follows: "Learned societies are organisations that promote science and research data, for example, through publishing journals and books and organising different research-related events." The respondents, however, were free to assess the scientific nature of the societies, which means that the named societies that are not members of the Federation of Finnish Learned Societies also included associations and unions (such as the Finnish Association of Mining and Metallurgical Engineers and the Finnish Union of University Professors), which would not necessarily qualify for membership of the Federation. Thus, it must be considered that membership of a learned society is defined more broadly in this survey than simply as belonging to a member society of the Federation of Finnish Learned Societies.

The survey was responded to by 518 (31% of the respondents) members of international learned societies. The respondents to the survey were, however, not prompted to name the international learned societies they were members of. Respondents are most typically members of one (51%) or two (27%) societies (median 1, average 1.9, mode 1), but the number of societies varies between 1 and 15. About one quarter of the respondents are members of more than two international societies (Figure 7).

About one third (36%) of the members of Finnish learned societies are also members of international learned societies, while 96% of the members of international learned societies are also members of Finnish societies.



**FIGURE 7.** *How many Finnish learned societies are you a member of?*

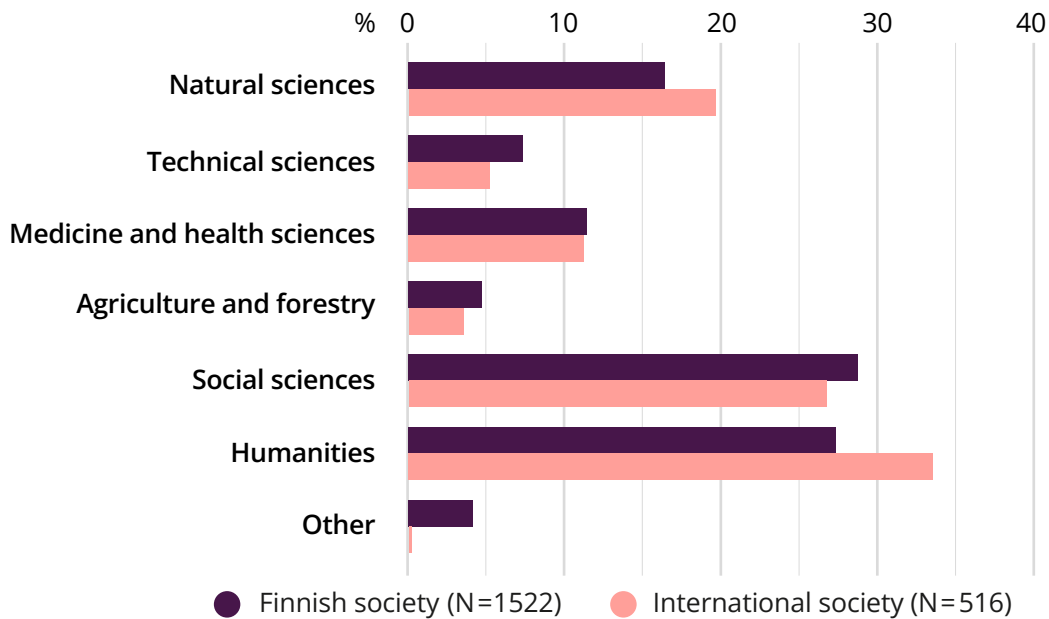
## Background information of the members of learned societies

### *Discipline of the members*

The members of Finnish and international learned societies represent a wide variety of disciplines. In the survey, the respondents were asked to select the discipline that best corresponds with the field of education of the member. The fields of education were grouped into six main disciplines (Figure 8). Defence, service industries and general education were classified as 'other'.

More than one fifth of the members of Finnish and international learned societies are active in the fields of the humanities or social sciences. Among the members of international societies, the proportion the humanities represent is bigger, about 34 per cent. Less than 20 per cent of the members are active in the fields of natural sciences. The proportion of persons active in the field of medical and health sciences was 11 per cent, while that of persons active in the fields of technical sciences and agriculture and forestry was about 5 per cent.

The average number of Finnish societies of which the respondents are members is greater in the fields of the humanities (average 2.6) and medical and health sciences (average 2.4 societies) than in other fields of education. The average number of international societies of which the respondents are members is greater in the fields of medical and health sciences (average 2.2) and natural sciences (average 2.0).



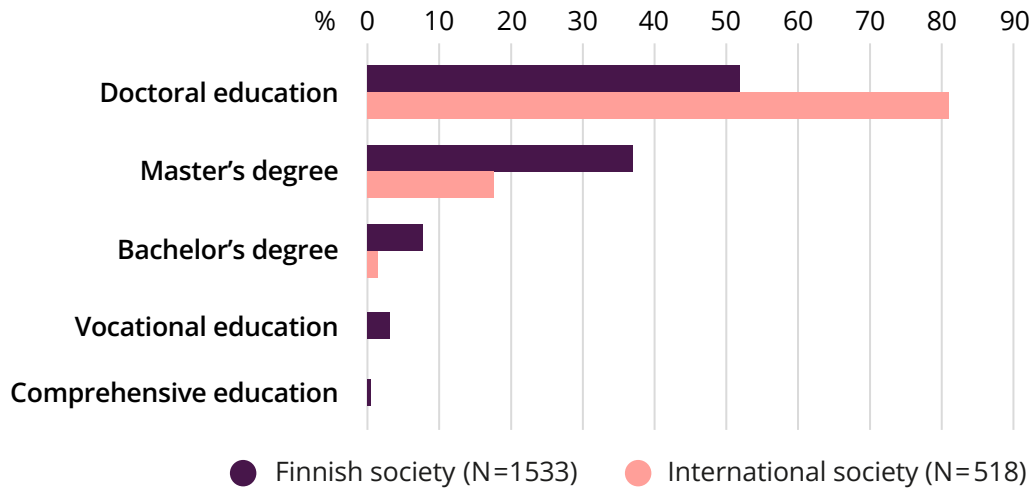
**FIGURE 8.** *Field of education of the members of Finnish and international learned societies.*

### **Educational background of the members**

The majority of the responding members of Finnish and international learned societies are highly educated (Figure 9). More than half of the members of Finnish learned societies have completed a doctorate and about one third of them have a master's degree. Correspondingly, 18 per cent of the members of international societies have a master's degree and more than 80 per cent have a doctoral degree. The membership of the Finnish learned societies in particular has a more varied educational background: almost ten per cent have a bachelor's degree, and a small minority have a background of comprehensive (0.5%) or vocational education (3%).

As for the educational background of the members, there are some differences between the disciplines. In comparison to other disciplines, the members of Finnish societies in the technical fields represent their professions on a broader scale, as most of the respondents had either a master's degree (49%) or a bachelor's degree (18%), and 23% had a doctoral degree. Of those classified as others, 19 per cent had a doctoral degree and 65 per cent had a master's degree. Similar differences, however, could not be observed between the members of international societies.

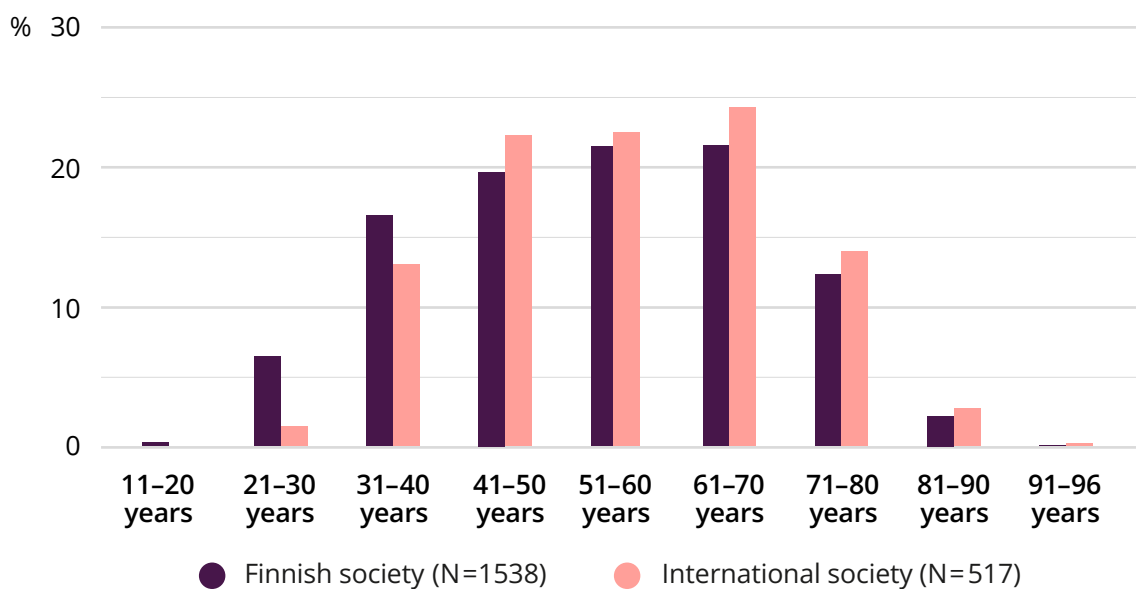
On average, those with a doctoral education have more memberships in Finnish (2.6 societies) and international (2 societies) than the respondents without a doctoral education.



**FIGURE 9.** Educational background of the members of Finnish and international learned societies.

**Age of the members**

The age distribution of the members of Finnish learned societies ranges between 11 and 96 years, the average being 54 years (median 55, mode 59). The average age of the members of international learned societies is somewhat higher, 56 years (median 58, mode 59), and the age of the members varies between 26 and 96 years (Figure 10). The age of the respondent displays a statistically significant correlation (Pearson .232, sig. .000) with the number of Finnish societies and international societies (Pearson .157, sig. .000), so older respondents are more likely to be members of multiple societies than younger respondents are.

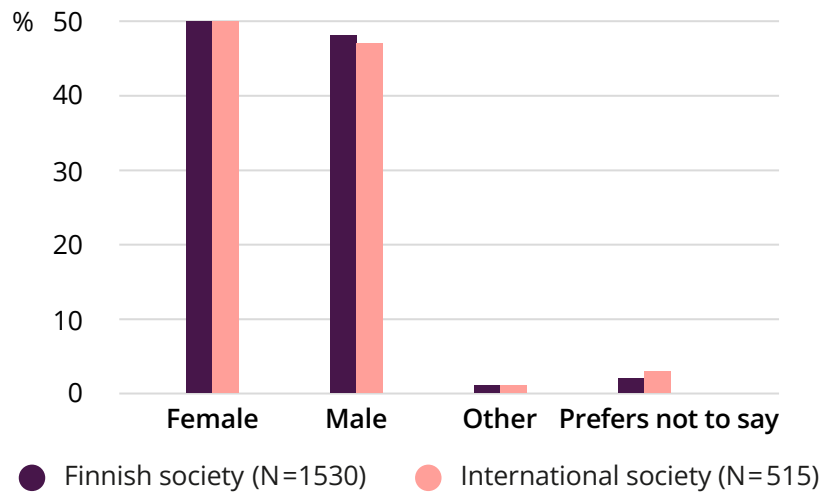


**FIGURE 10.** Age distribution of the members of Finnish and international learned societies.



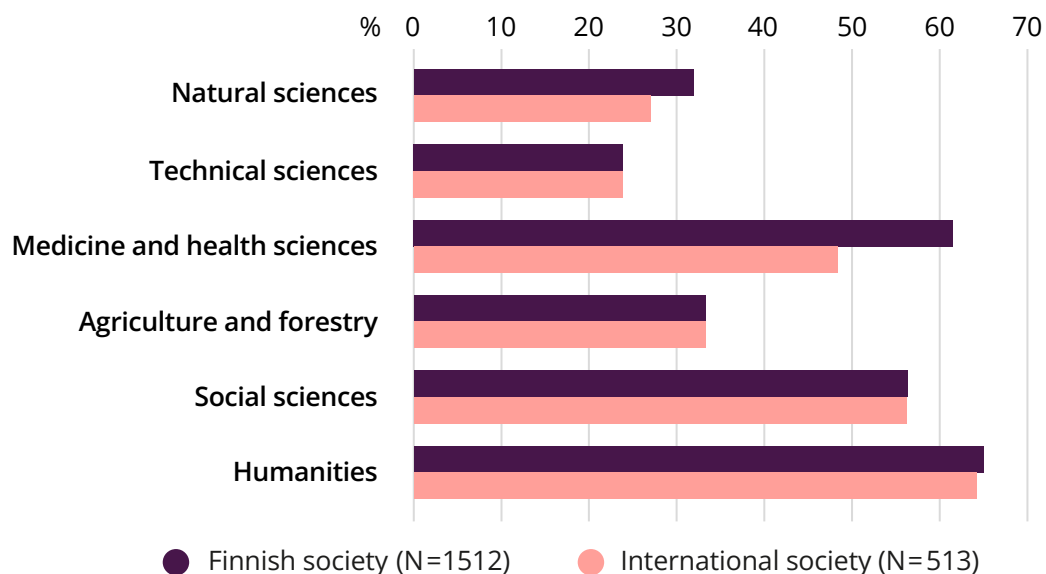
### Gender of the members

The gender distribution of the Finnish and international learned societies is equal (Figure 11), and the number of societies the respondent is a member of does not vary significantly between the genders. The average age (56 years) of male members, however, is higher than that of female members (50 years).



**FIGURE 11.** Gender distribution of the members of Finnish and international learned societies.

There are significant differences between disciplines in terms of the gender distribution of the members (Figure 12). In technical sciences, agriculture and forestry, and natural sciences, 70 per cent of the members of Finnish societies are men. In humanities (65%), medical and health sciences (61%) and social sciences (56%) the majority of the members were women. Similar differences can be found among the members of international societies, except that the proportion of female members in medical and health sciences is 50 per cent.



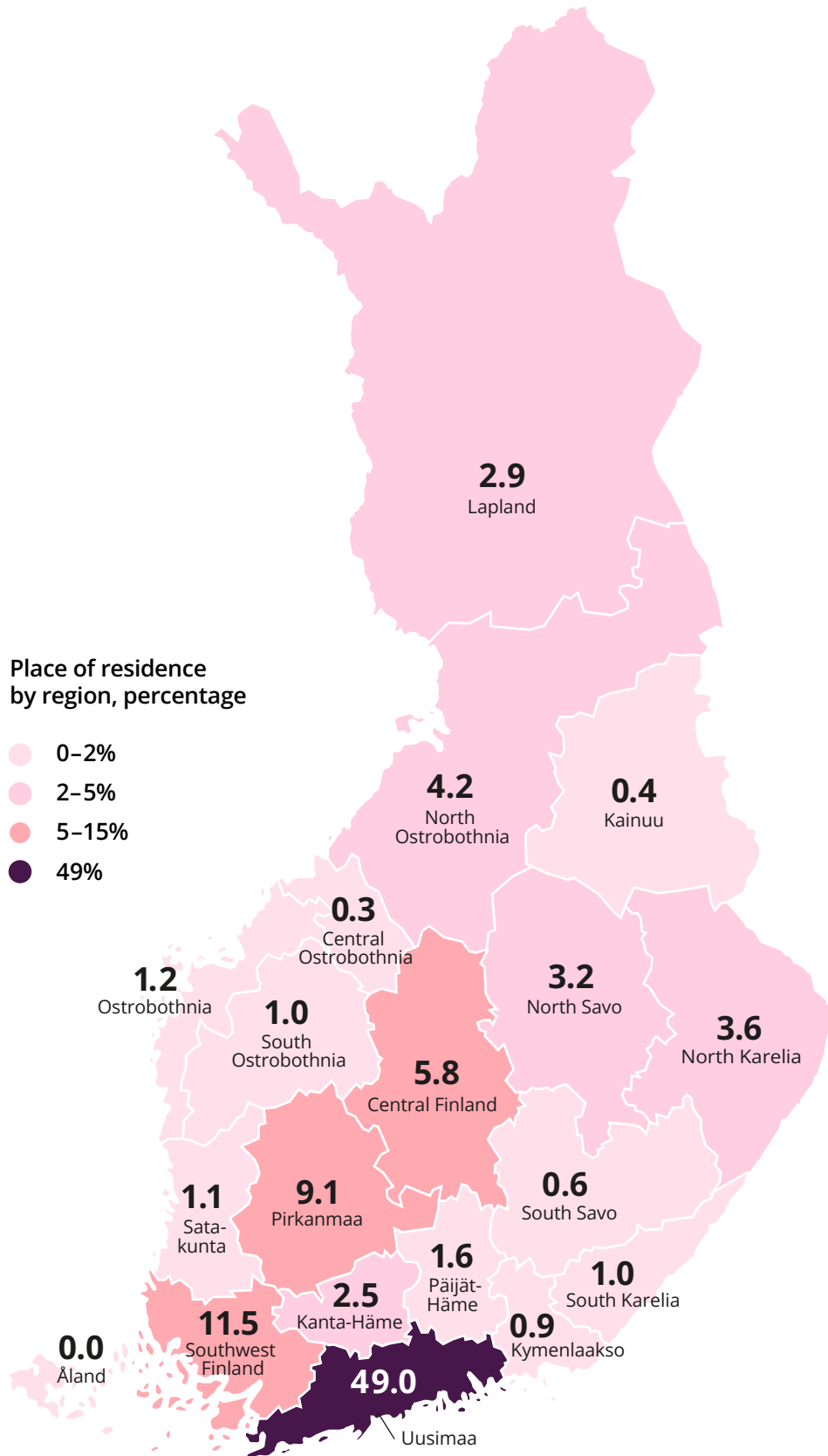
**FIGURE 12.** The proportion of female members in Finnish and international learned societies by discipline.

***Place of residence of the members***

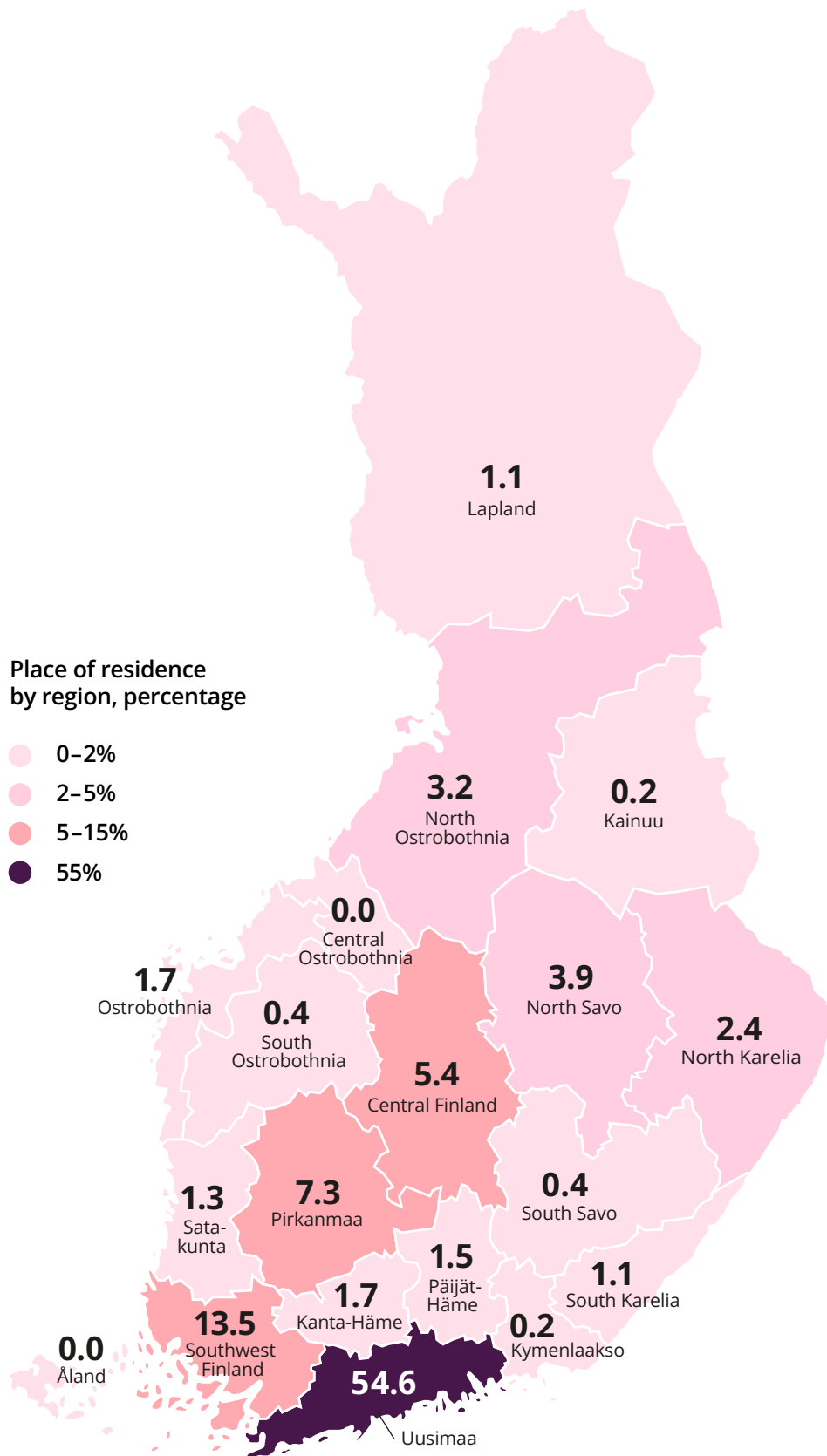
Almost 98 per cent of all members of Finnish societies and 96 per cent of the members of international societies who responded to the survey are Finnish citizens, and the majority of the members of Finnish (96%) and international (91%) society members live in Finland.

The survey was responded to by learned society members all around Finland (Figure 13, 14). Åland is an exception, as none of the respondents indicated it as their place of residence. The members of learned societies are concentrated in big university cities, particularly in the southern part of Finland. About half of the responding members of Finnish and international learned societies who live in Finland live in the Uusimaa region. About 10 per cent live in Southwest Finland and Pirkanmaa, and about 5 per cent live in Central Finland. The number of society members is significantly lower in other areas.

Almost all responding members of Finnish and international learned societies (99% and 98%) speak Finnish or Swedish fluently. The proportion of foreign persons in Finnish universities' person work years has been between 37 and 14 per cent depending on the career stage (Ministry of Education and Culture, 2022). We do not know the proportion those speaking fluent Finnish or Swedish accounts for of the foreign researchers living in Finland. However, it can be assumed that Finnish learned societies have not attracted members from among the foreign researchers working in Finland (foreign researchers can still, of course, participate in the societies' activities in other ways).



**FIGURE 13.** Place of residence of the members of Finnish learned societies in Finland.



**FIGURE 14.** Place of residence of the members of international learned societies in Finland.

### ***Work organisation of the members***

The most typical work organisations of learned society members are universities, with about one third of the members of Finnish learned societies and almost 60 per cent of the members of international learned societies working at them (Figure 15). About six per cent of the members work at research institutions.

About five per cent of the membership of Finnish societies work at a university of applied sciences or other educational institution. More than 10 per cent work at other state or municipal organisations. This group includes, for example, persons working at hospitals or other healthcare organisations. Of the members of Finnish learned societies, 11 per cent work in the private sector (including entrepreneurs), while 6 per cent of the respondents work at foundations or other non-profit organisations (including the learned societies). The proportion of students among the responding society members is four per cent and the proportion of unemployed persons is three per cent.

The membership of international societies is more concentrated in research organisations in comparison to the membership of Finnish societies. Less than five per cent of the members work at universities of applied sciences, other educational institutions, other state or municipal organisations, in the private sector or at foundations. Among the respondents of the survey, none were student members of international societies.

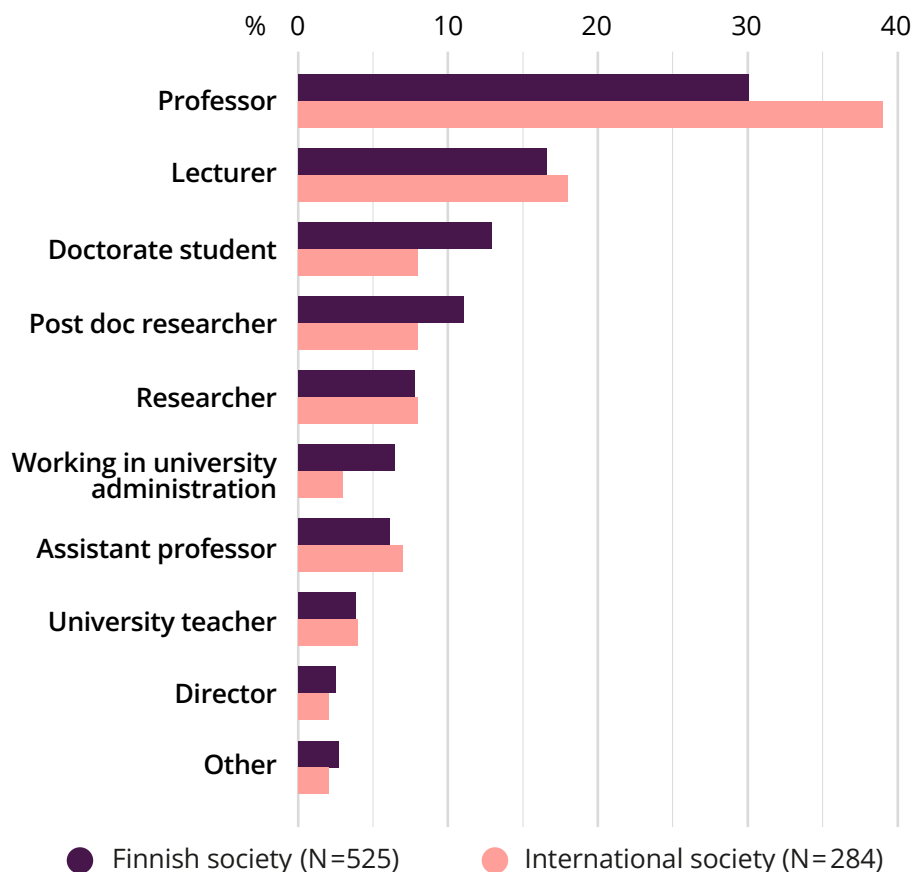
Pensioners account for a significant proportion of the membership of both Finnish and international societies – about 20 per cent of all respondents. This group also includes the emeriti members of research organisations.

Some discipline-specific differences can be found among the work organisations of learned society members. The work organisation of respondents active in the fields of the humanities and social sciences is more often a university (more than 40% of the respondents) than in other disciplines. In the case of respondents active in the fields of medical and health sciences, 28% work at universities, while a significant proportion of them (26%) work at hospitals or other healthcare organisations. Respondents active in the field of technical sciences work more often in the private sector (26% of the respondents) than persons of other disciplines, while a third of the respondents active in the fields of agriculture and forestry work at research institutions.



**FIGURE 15.** Main work organisation of the members of Finnish and international learned societies.

Respondents working at universities were asked what their main work task was (Figure 16). Most typically, the members of Finnish and international societies work as professors. The large number of professors can perhaps be explained with the fact that the Finnish Union of University Professors conveyed the survey invitation in its newsletter. The proportion accounted for by lecturers of societies' university members was more than 15 per cent. More than 10 per cent of the university members of Finnish learned societies are doctorate students or post doctoral researchers. For international societies, their proportion is about eight per cent, similarly to researchers. The vast majority (93%) of the student members of Finnish societies who responded to the survey work at universities.

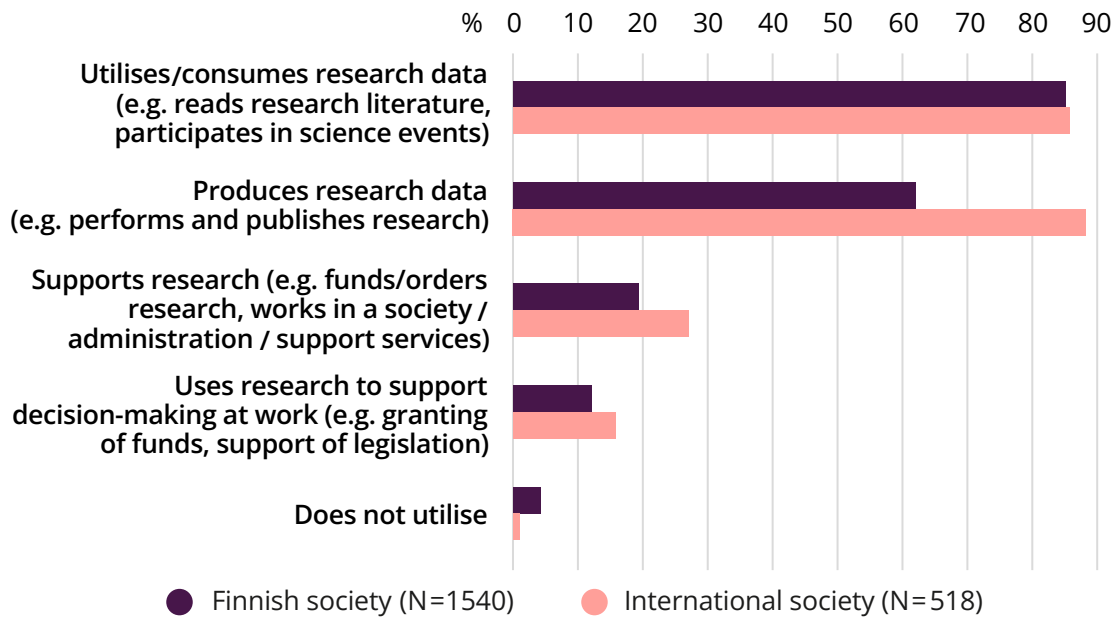


**FIGURE 16.** Job title of the members of Finnish and international learned societies who work at universities.

### ***Learned society members' relation to scientific knowledge***

The respondents were asked about their relation to scientific knowledge (Figure 17). The majority (more than 85%) of the members of Finnish and international learned societies stated that they benefit from or consume research data, for example, by reading research literature or participating in science events. More than 60 per cent of the members of Finnish learned societies and almost 90 per cent of the members of international learned societies also produced research data, for example, by conducting and publishing research. Fewer persons supported research or utilized research for decision-making. These tasks were a little more common in the case of the members of international societies. Only a small portion of the respondents stated that they do not consume, produce or support scientific research.

There are some discipline-specific differences as to the respondents' relation to scientific knowledge. Only 31 per cent of the members of Finnish societies who are active in the field of technical sciences stated that they produce research data, and the proportion of those who do not utilise, produce or support research at all was 15 per cent. Utilisation of research data as support for decision-making was especially popular in the fields of medical and health sciences and agriculture and forestry, with about one fifth of society members using data as support for decision-making. Similar differences, however, did not emerge between the members of international societies.



**FIGURE 17.** Relation to scientific knowledge among the members of Finnish and international learned societies.

## MEMBERSHIP OF FINNISH LEARNED SOCIETIES

### The motivation behind society membership

The members of Finnish learned societies were asked about the motivation behind their society membership (Figure 18). The respondents were allowed to select one or more options from a list presented in the survey. A look at the findings shows that the respondents' membership was motivated by several factors, with the majority (89%) of the respondents picking more than one motivating factor. More than half (59%) of the respondents selected four different motivating factors for membership.

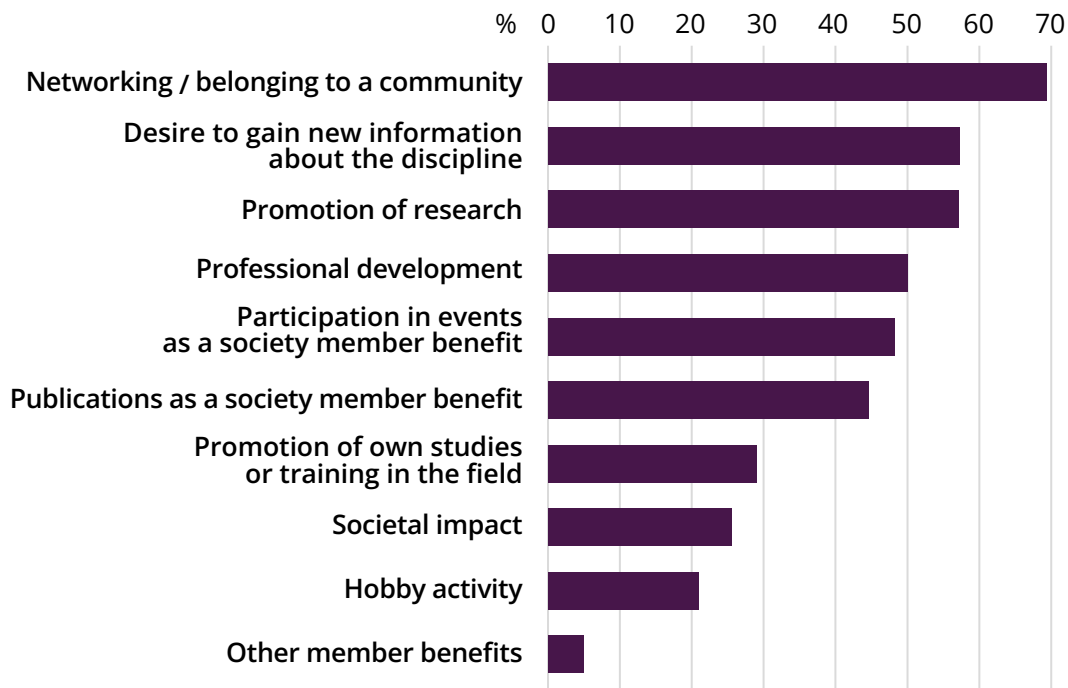
Almost 70 per cent of the respondents were motivated by networking / belonging to a community. Roscoe (2020) puts forward that networking is particularly essential for members who are at an early stage in their career. In this data, however, the significance of networking does not seem to be differentiated across age groups. More than half of the respondents were motivated by a desire to gain new information about the discipline and the promotion of research. Other frequently selected (more than 40% of the respondents) motivators were professional development, along with participation in events and publications as member benefits of the society. More than one fifth of the respondents were motivated by the promotion of studies or training in the field, societal impact and hobby activity. Only five per cent of the respondents stated that their membership was motivated by other member benefits. In the open-ended responses, membership as support for the society and a way of strengthening one's own identity were often cited as motivating factors.

*Responsibility for one's own discipline, protection and promotion of Finnish-language research.* (Humanities)

*Most important reason: loyalty towards colleagues.* (Medical and health sciences)



Some differences can be spotted between respondents from different disciplines as to their motivation for membership. Networking and belonging to a community were less often motivating factors for respondents active in the field of technical science, 40 per cent of whom selected this option. On the other hand, 40 per cent of respondents from the technical field did select hobby activity as a motivator for membership, which was less common in other fields. Societal impact as a motivator is more pronounced in the responses given by persons active in the fields of medical and health societies and the humanities and social sciences, when compared to respondents active in other fields.



**FIGURE 18.** *Motivating factors behind membership of Finnish learned societies. N=1540.*

## PARTICIPATION IN THE ACTIVITIES OF THE SOCIETIES

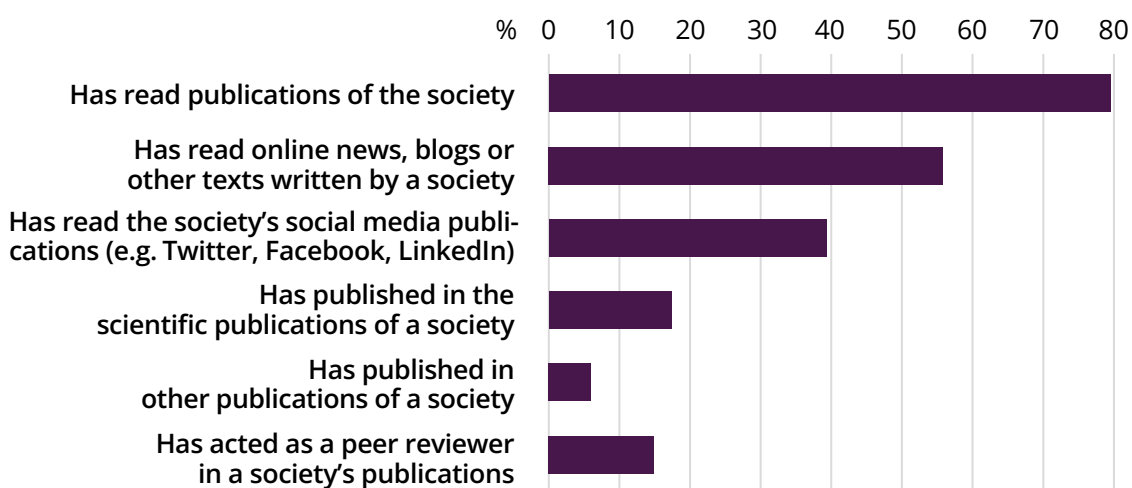
The members of Finnish learned societies were asked about the society activities in which they had participated during the last year. It is known based on the member society survey 2021 of the Federation of Finnish Learned Societies (Late, Pölönen & Pylvänäinen, 2022) that the key forms of operation of the learned societies are scientific publishing and the organizing events: more than 80 per cent of the societies organise events, and more than 70 per cent publish scientific journals or books. The less common and less vital tasks include the rewarding of researchers, the provision of training or the funding of research activity. Only a small proportion of the societies perform research or provide researchers with material or facilities. Looking after professional interests is rare, too.

### Publishing activity

The societies are active in publication-related work (Figure 19). Almost 80 per cent of the respondents had read publications of the society during the last year. Reading of

publications, however, varies between disciplines. A smaller portion of respondents active in the field of natural sciences (56%) had read publications of the society. More than half of the members read online news, blogs or other texts of the society. About 40 per cent had read social media publications of the society.

About 17 per cent of the respondents had published in the society's scientific publication, and 6 per cent had published in other publications of the society. Activity varies across the disciplines in this case, too. While one quarter of the respondents active in the field of humanities have published in the scientific publication of the society, only five per cent had done so in the fields of natural sciences, and seven per cent in the field of technical sciences. Almost 15 per cent of the respondents had done peer-reviewing for the society's publications. Peer-reviewing was most common in the field of humanities, where one fifth of the respondents had acted as a peer-reviewer, while the corresponding proportion was only five per cent in the fields of natural and technical sciences.

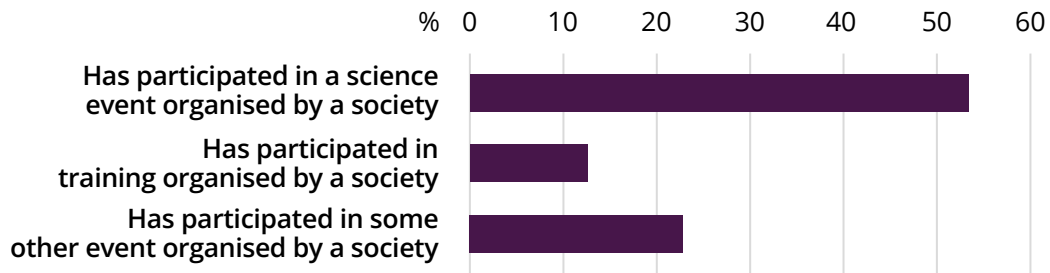


**FIGURE 19.** Participation of the members of Finnish learned societies in the societies' publishing activity during the last year. *N*=1540.

## Events

Participation in the societies' events had been active, too (Figure 20). More than half of the respondents had participated in a scientific event organised by a learned society during the last year, and more than 20 per cent had participated in some other event. About 13 per cent had participated in training provided by a learned society. Participation in training was most active in the fields of medical and health sciences, where about one third of the respondents had participated in training organised by a learned society. Participation in training was least common among respondents who were active in the fields of social sciences (9%) and humanities (7%). The effects of the COVID-19 pandemic on the activity of the members could be observed in the open-ended responses, particularly in relation to participation in events. Due to this, the findings do not necessarily shed light on the regular activities of the societies.

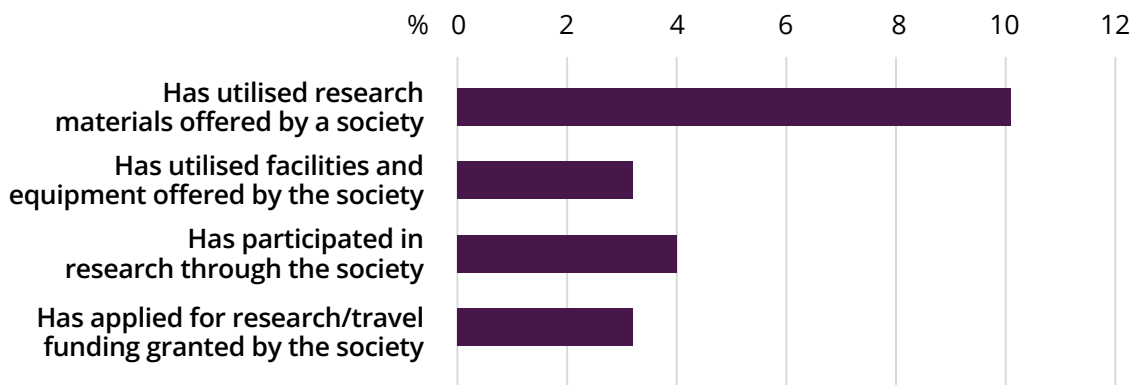
*COVID! Participation has been impossible for a long time. (Humanities)*



**FIGURE 20.** Participation of the members of Finnish learned societies in the societies' event activity during the last year. *N=1540.*

### Services supporting research

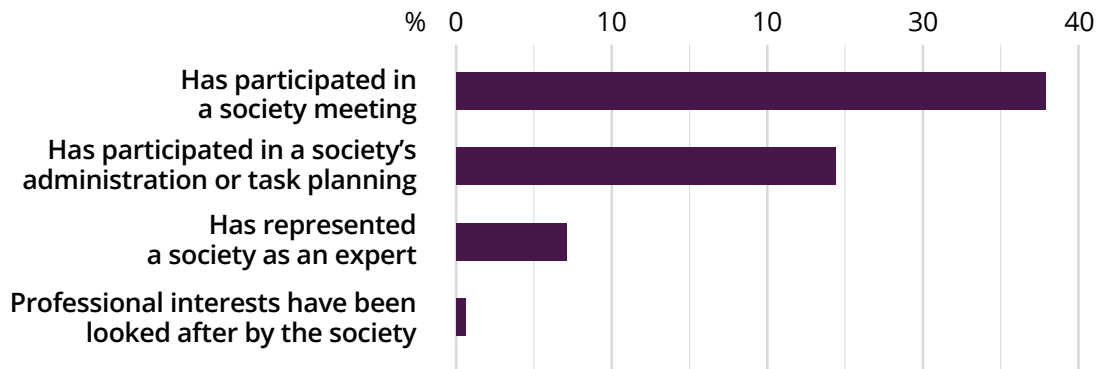
Utilisation of societies' activities in relation to the implementation of research was far less common (Figure 21). About 10 per cent of the respondents had utilised research data provided by a learned society during the last year, and about 3 per cent has utilised facilities and equipment provided by a learned society. Utilisation of research data was most typical in the field of humanities, where about 15 per cent had utilised materials provided by the societies. Four per cent of the respondents had participated in research through a society. Three per cent of the respondents had applied for research or travel grants from a society.



**FIGURE 21.** Participation of the members of Finnish learned societies in the societies' research activity during the last year. *N=1540.*

### Administration and representation of societies

Respondents participated actively in the organisation of societies' activities (Figure 22). Almost 40 per cent of the respondents had participated in a society meeting during the last year. Almost one quarter had participated in a society's administration or task planning. This also included participating in the editorial work of societies' publications. Seven per cent had represented a society as an expert. Societies had looked after the professional interests of only a few respondents.



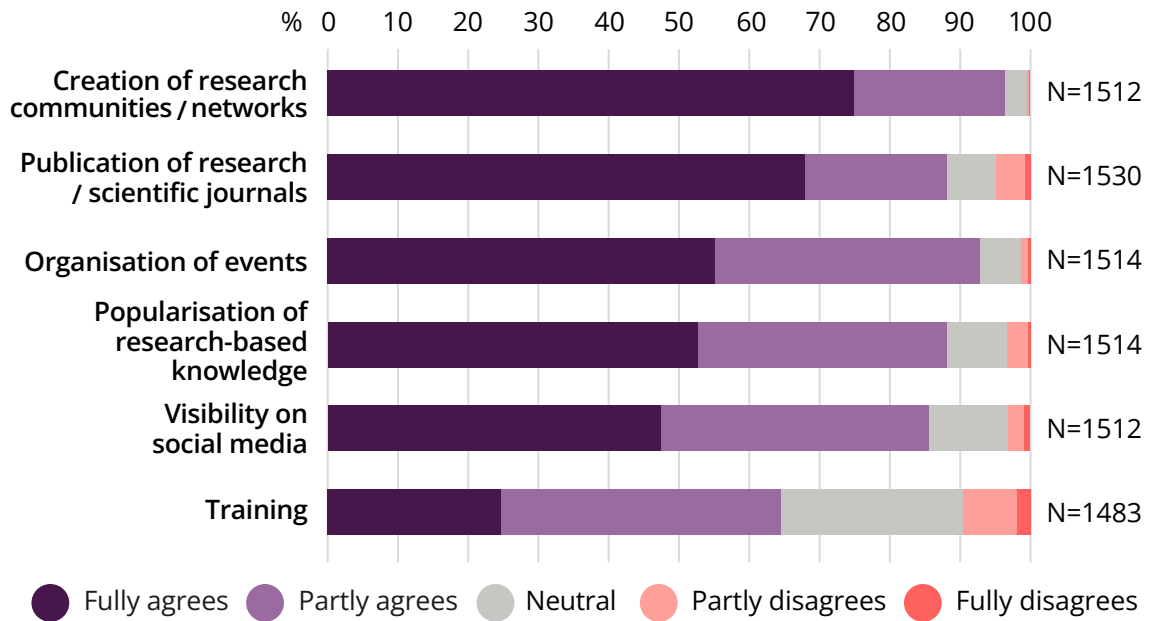
**FIGURE 22.** Participation of the members of Finnish learned societies in the organisation of societies' activities during the last year. N=1540.

## IMPORTANCE OF THE OPERATIONS OF FINNISH LEARNED SOCIETIES

A set of statements about the operations of Finnish learned societies were given in the survey, with the respondents asked to assess the importance of the activities in the society's operations. Generally, the respondents agreed with most statements, at least to some extent. Figure 23 shows statements about the societies' communality, publications and events. The creation of a community spirit was regarded as the most important function of the societies. Almost 80 per cent of the respondents agreed completely with the statement that the creation of research communities and networks by Finnish learned societies is important.

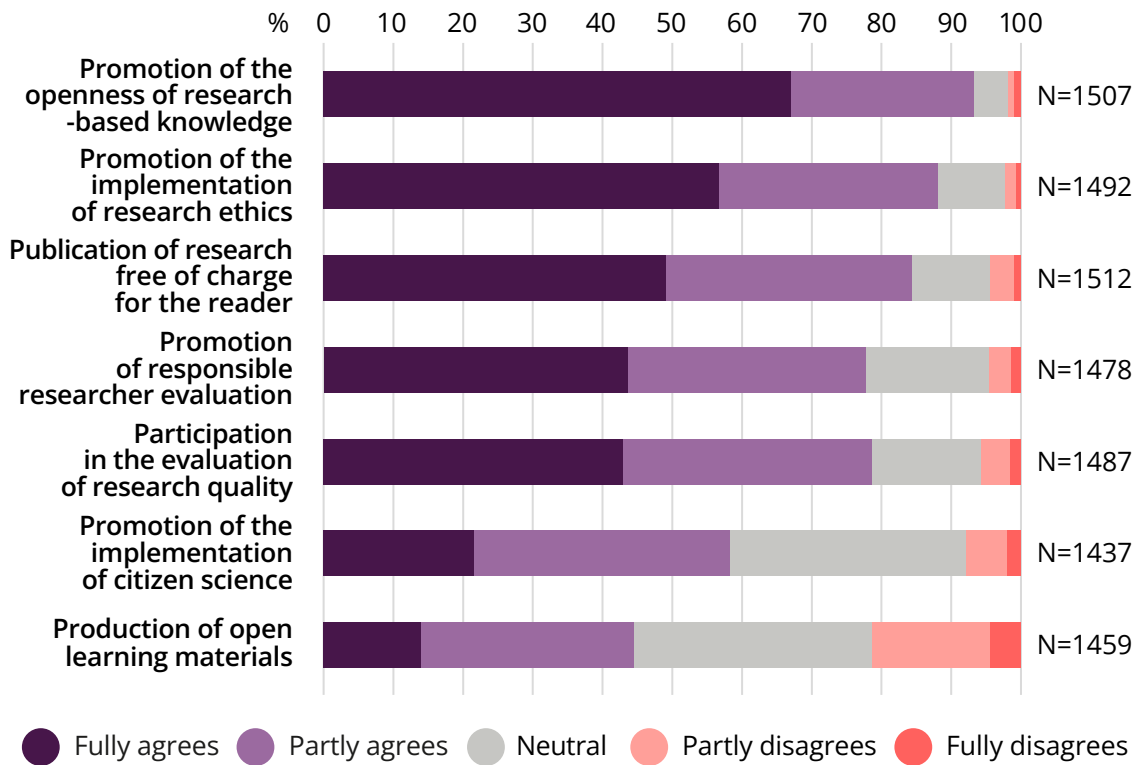
Tasks related to publications were mostly seen as important, too. Almost 70 per cent agreed completely with the statement that the publication of research and scientific journals by the societies is important. Regarding publications, differences can be seen between the respondents from different disciplines. In particular, the respondents who were active in the fields of the humanities and social sciences considered the societies' publication operations important, while only 37% of respondents active in the field of natural sciences agreed fully with this statement.

About half of the respondents agreed fully with the statement that the popularisation of research-based knowledge by the societies, visibility in social media and event organisation are important. The organisation of training was not considered an equally important part of the societies' work. About one quarter agreed fully with the statement that the organisation of training is an important part of the societies' operations. The organisation of training was considered important particularly among those active in the fields medical and health sciences, where almost 60 per cent agreed fully with the statement.



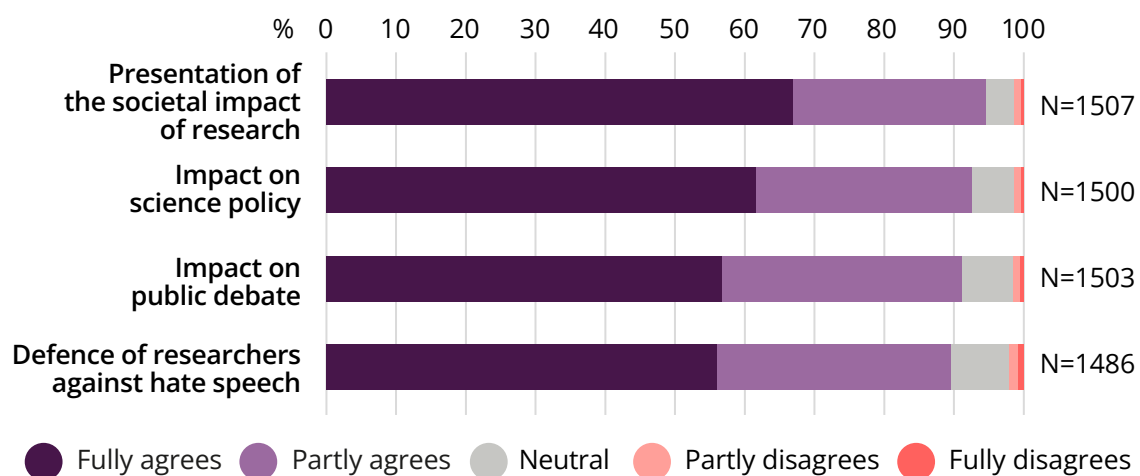
**FIGURE 23.** Assessments by members of Finnish learned societies about the importance of tasks related to communality and publication and event activity in societies' operations.

Figure 24 shows the responses to statements related to the promotion of responsible and open science. Almost 70 per cent of the respondents agreed fully with the statement that the promotion of the openness of research-based knowledge is important, and about half agreed fully with the statement about the publication of research free of charge to the readers – more than 80 per cent agreed at least partly with this. The majority of the respondents also agreed fully or partly with the statement that the promotion of research integrity and responsible researcher evaluation are important parts of the operations of learned societies. About 40 per cent agreed fully and almost 80 per cent agreed partly with the statement that the societies' participation in the evaluation of the scientific quality of research is important. Participation in the evaluation of the quality of research was considered important particularly among persons active in the fields of medical and health sciences and humanities, where more than half of the respondents agreed fully with this statement. The promotion of citizen science (22% agreed fully) and the importance of open learning materials (14% agreed fully) received far less support.



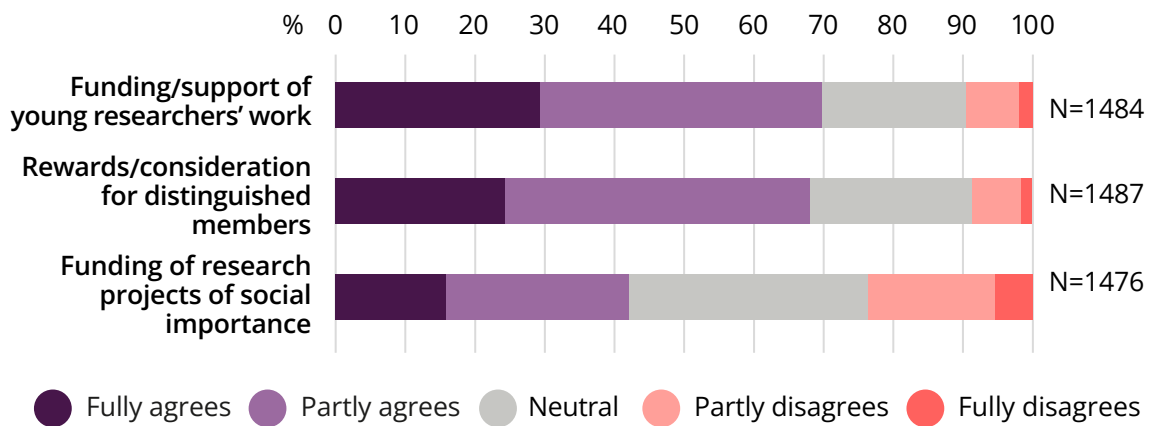
**FIGURE 24.** Assessments by members of Finnish learned societies about the importance of tasks related to open science in societies' operations.

Figure 25 shows the responses to statements related to science policy, research impact and supporting researchers. More than half of the respondents agreed fully and about 90 per cent agreed at least partly with the statements about the societies' impact on science policy, the presentation of the societal impact of research, participation in public debate and the defence of researchers against hate speech. Differences between the disciplines were not observed in these matters.



**FIGURE 25.** Assessments by members of Finnish learned societies about the importance of tasks related to science policy and research evaluation in societies' operations.

Figure 26 shows the responses to the statements about research funding and the rewarding of researchers. Research funding was not considered an equally important part of the societies' operations. About 30 per cent agreed fully with the statement that the societies funding or supporting young researchers' work is important. About half of the respondents active in the fields of medical and health sciences agreed fully with the importance of funding young researchers' work. Only 16 per cent agreed fully with the importance of funding research projects of social importance through the societies. One quarter of the respondents agreed fully with the statement that rewarding or honouring distinguished members of the societies is important.



**FIGURE 26.** Assessments by members of Finnish learned societies about the importance of tasks related to research funding and rewarding of researchers in societies' operations.

### REASONS FOR NON-MEMBERSHIP OF LEARNED SOCIETIES

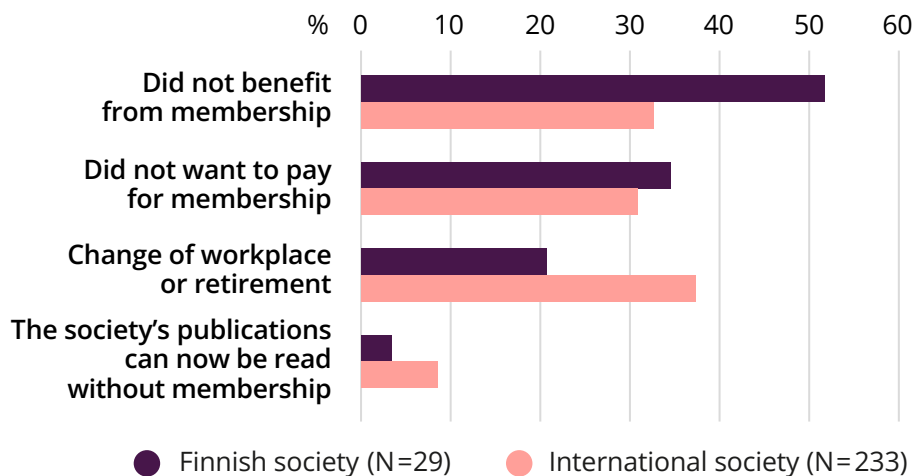
The survey was responded to by 74 persons who were not members of Finnish learned societies and 909 persons who were not members of international societies (Figure 27). The majority (78%) of the respondents who were not members of Finnish societies did not belong to any international society, either. Regarding Finnish societies, almost 40 per cent of the non-members had previously been members, and 60 per cent had never belonged to a learned society. Correspondingly, about one quarter of the non-members of international societies had belonged to a society earlier, while the majority (74%) had never belonged to an international society.



**FIGURE 27.** Survey respondents who are not members of Finnish or international learned societies.

For both Finnish and international societies, the most typical reason for giving up membership was that the person felt that they were not benefiting from membership any longer (Figure 28). This was more pronounced in the case of the Finnish societies. More than one third had given up membership because they did not want to pay for it any more. About one fifth of the ex-members of Finnish and international societies had given up membership due to a change of workplace or retirement. The fact that the publications of societies can now be read without membership was a less common reason. This, however, was slightly more typical of international societies. In addition to these reasons, lack of time and the termination of the society's operations were cited in the open-ended responses.

*The tasks required too much time, I was a board member.* (Natural sciences)



**FIGURE 28.** Reasons for giving up membership of Finnish and international societies.

Regarding Finnish societies, the most typical reason (58% of the respondents) for never being a member of a learned society was that the person had not been invited to a society (Figure 29). About one third of the non-members of the international societies provided this reason. Another typical reason for non-membership was lack of knowledge of Finnish societies and especially international societies. More than one third of the non-members of international societies and 16 per cent of the non-members of Finnish societies did not find membership beneficial. More than 10 per cent of the non-members of both Finnish and international societies did not want to pay for membership.

Regarding international societies, a common reason cited in the open-ended responses (38 responses) was also that joining an international learned society had simply never occurred to the respondent. Other reasons emerging in the open-ended responses were the sufficiency of Finnish society activities and the connection to international societies through other channels (e.g. through membership of a Finnish learned society).



*There are other international cooperation organisations in our field, so membership of a Finnish society or working for an employer who has membership allows us to keep track and participate. (Humanities)*

*Through my memberships, I've mainly wanted to promote the publishing activities of Finnish societies in the domestic languages. (Social sciences)*



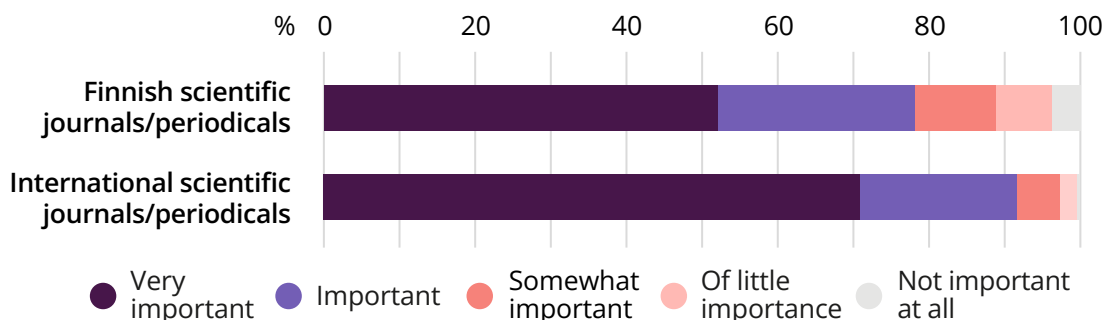
**FIGURE 29.** *Reasons the respondents have never been members of Finnish or international societies.*

## READING PRACTICES OF FINNISH AND INTERNATIONAL SCIENTIFIC JOURNALS

### The significance of journals as publication channels

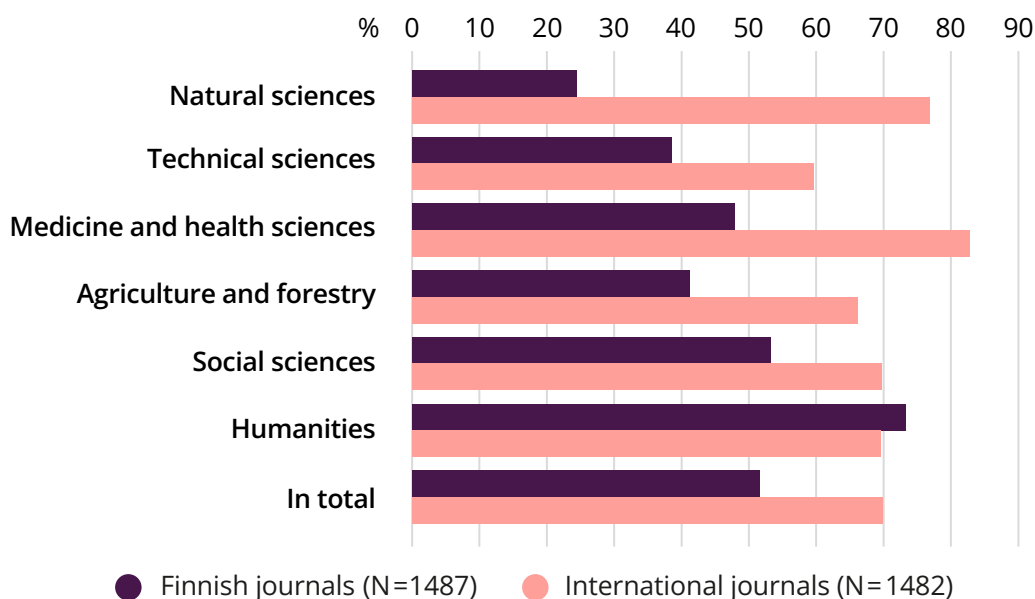
In the survey, the respondents were asked to assess the significance of Finnish and international peer-reviewed journals as publication channels in the respondents' disciplines (Figure 30). Almost 70 per cent of the respondents were of the opinion that international scientific journals are very important publication channels, and about 20 per cent said that they are important. Regarding Finnish journals, about half of the respondents were of the opinion that the journals are very important, and one quarter said that they are important.

Respondents who were members of Finnish and international learned societies considered international journals more significant than the respondents who were not members of the societies. The members of Finnish societies also put more emphasis on the significance of Finnish journals as publication channels than non-members did.



**FIGURE 30.** An assessment of the significance of Finnish and international peer-reviewed scientific journals/periodicals as publication channels.

The significance of international journals is almost equally high across all disciplines, but the significance of Finnish journals is particularly pronounced in the humanities (Figure 31). Of the respondents active in the fields of the humanities, 73 per cent, and 53 per cent of those active in the fields of the social sciences regarded Finnish journals as very important. Correspondingly, only 25 per cent of respondents active in the fields of the natural sciences considered Finnish journals very important.



**FIGURE 31.** The discipline-specific proportions of respondents who considered Finnish and international scientific journals and periodicals to be very important publication channels in their own field.

### Reading frequency of journals

The respondents were asked to assess how often they read Finnish and international scientific journals (Figure 31). The survey did not specify reading in any more detail. Thus, what the respondents consider reading (e.g. reading of an entire article, skimming, browsing) may vary. The majority of the respondents read peer-reviewed journals at least once a month. Almost one fifth read international journals daily,

while the proportion of those reading Finnish journals daily is five per cent. Less than five per cent of the respondents did not read Finnish or international journals at all.

If the frequency of reading is broken down discipline-specifically, it can be noted that the reading frequency of international journals is higher than that of Finnish journals across all disciplines. However, the comparison shows that, in comparison to other disciplines, Finnish journals are more frequently read in the fields of medical and health sciences, the humanities and social sciences. About 50 per cent of those active in the fields of medical and health sciences and 40 per cent of those active in the fields of the humanities and social sciences read Finnish journals at least once a week.

Respondents working at universities and research institutions read international journals significantly more often than respondents working at other organisations. Almost 80 per cent of the respondents working at research organisations read international journals at least once a week. The reading frequency of Finnish journals was not affected by the work organisation.



**FIGURE 32.** *The reading frequency of articles in Finnish and international scientific journals/periodicals.*

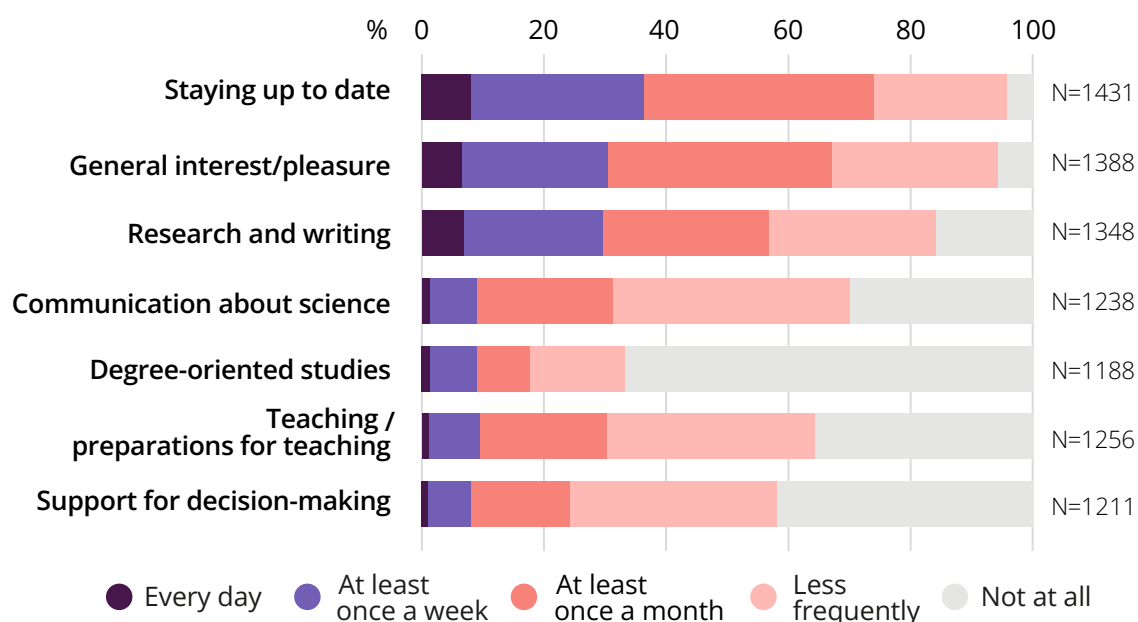
### The purpose of reading

Finnish scientific journals are mostly read for keeping up to date, out of general interest, for pleasure and for research and writing (Figure 32). About 30 per cent of the respondents read journals at least once a week for these purposes. Finnish journals are less frequently read for communication about science, studying purposes, preparation of teaching and as support for decision-making. Reading for studying purposes appears infrequent in this data due to the low number of student respondents. Almost 70 per cent of the respondents did not read for studying purposes at all.

There are some discipline-specific differences in the purpose of reading. For example, more than 40 per cent of respondents active in the fields of technical sciences

and about 30 per cent of respondents active in the fields of natural sciences did not read Finnish journals for the purposes of research and writing at all, while more than 40 per cent of respondents active in the fields of the humanities and social sciences read journals for this purpose at least once a week. In medical and health sciences, the humanities and social sciences, Finnish journals are more frequently used for studying purposes than in other disciplines.

The reading of Finnish journals also varies according to the background organisation of the respondents. Respondents working at research organisations read Finnish journals for the purposes of research and writing (40% at least once a week) and teaching (16% at least once a week) more frequently than others. Reading as support for decision-making and for communication about science is more pronounced among those working at foundations/non-profit organisations and state, municipal and international organisations. About 15 per cent of these respondents read Finnish journals at least once a week for these purposes.

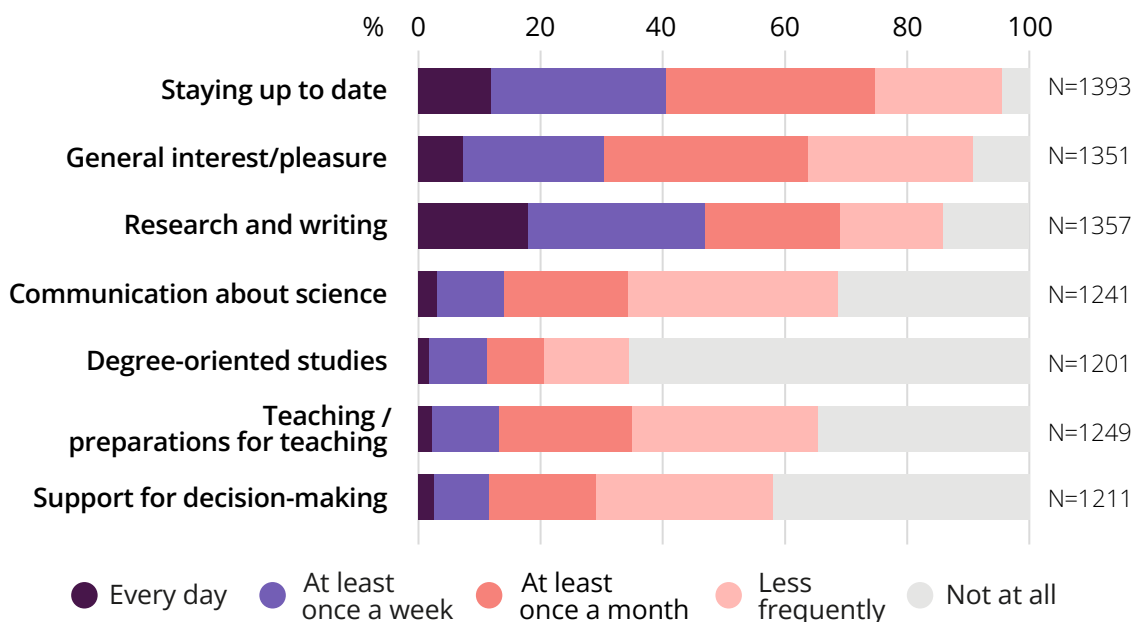


**FIGURE 33.** *The purpose of reading Finnish scientific journals/periodicals.*

The most common reasons for reading international journals were research, writing and keeping up to date (Figure 33). Almost half of the respondents stated that they read international journals for these purposes daily or at least once a week. General interest and pleasure were also more common as reasons for reading international journals, as 30 per cent of the respondents read journals for this purpose at least once a week. The other reasons for reading international journals appear less frequently.

The purpose of reading international journals also varies across disciplines to an extent. As with Finnish journals, respondents active in technical fields read international journals for the purposes of reading and writing less frequently (about 40% not at all). Respondents active in the fields of medical and health sciences read international journals more often as support for decision-making than those active in other fields.

The purpose of reading also varies according to the respondent's work organisation. Respondents working at research organisations read international journals for the purposes of research and writing (73% at least once a week), keeping up to date (52% at least once a week) and teaching (24% at least once a week) more frequently than others.

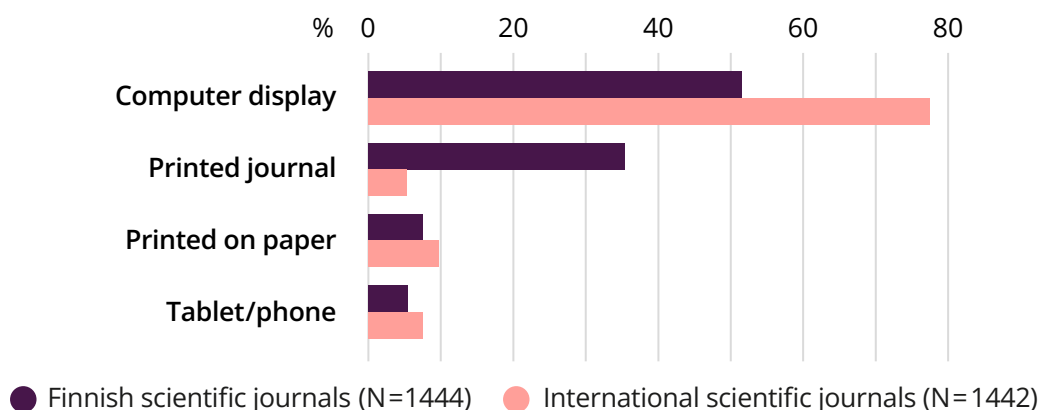


**FIGURE 34.** *The purpose of reading international journals/periodicals.*

### The format in which journals are read

Most of the respondents stated that they read Finnish and international journals on the display of a computer (Figure 34). Reading on a computer display is particularly pronounced in the case of international journals, where almost 80 per cent of the respondents mostly read the journals on a display. Printed journals, in turn, are more pronounced as a way of reading Finnish journals. More than one third stated that they read Finnish journals in printed form, while the corresponding proportion for international journals was only five per cent. About 10 per cent stated that they print out the articles for reading. Reading on a tablet or phone was still uncommon, with only less than 10 per cent reading Finnish and international journals with these methods.

Finnish journals are most frequently read in printed form in the fields of medical and health sciences and technical sciences, where more than 40 per cent mostly read the journals in printed form. Only 10 per cent of respondents active in the fields of agriculture and forestry read Finnish journals in printed form, and the most common way of reading in these fields is on a display (77%).



**FIGURE 35.** *The format of reading Finnish and international scientific journals/periodicals.*

### What the readers expect from scientific journals

In the last open-ended question of the survey, the respondents were asked to indicate their future expectations regarding the features of Finnish and international scientific journals. A total of 603 respondents answered the question, with some expressing more than one expectation. The responses were reviewed manually and classified into nine main categories, which are presented in Table 3. One response can be included in one or more categories depending on its content.

**TABLE 3.** *Classification of open-ended responses and the frequency of the categories as answers to the question “What features/changes would you like to see in Finnish and international scientific journals/periodicals?”*

	N	%
Open science	261	32
Content of articles	145	18
Availability/findability of publications	89	11
Format of publications	80	10
Content of publications	76	9
Funding of publications	74	9
Publishing process	44	5
Other	20	2
None	22	3
In total	810	100

Almost one third of the open-ended responses are related to open science. The majority (98%) of these are in favour of open access to publications, with some responses also promoting the openness of research data. Clear open science policies are expected from scientific journals.

*The findings of publicly funded research should be available to everyone free of charge.* (Social sciences)

*Scientific journals should be completely open to everyone. The costs should be covered by other means than through article fees.* (Technical sciences)

*Openness of articles (CC or similar licensing), demand for the openness of data, materials and code, promotion of clear and transparent writing.* (Agriculture and forestry)

Of the responses, 18 per cent contained comments on the content of the articles. The comments concerned the quality and comprehensibility of the articles. Societal impact and timeliness are also demanded from the articles. Other topics emerging in the comments are demands for multi-disciplinary and easy-to-read content.

*All I want is the highest possible quality in research articles in the publications, so that the information contained in them could be utilised in the best possible way.* (Medicine and health sciences)

*The articles in the journals could also be directed at readers with ordinary levels of education and published in Finnish. The articles are directed at far too limited a readership. There are no Finnish language publications that spread scientific knowledge.* (Technical sciences)

More than 10 per cent of the comments are about access to publications and their ease of use and visibility. The readers want to find the publications with ease and also gain knowledge from comprehensible and easy-to-read content. More support for reading on mobile devices is also expected.

*Openness/reading for free, accessibility not only through computers but mobile devices as well, easy sharing on social media (Twitter, LinkedIn).* (Agriculture and forestry)

*Easy access. Information about different publications from different disciplines. Where can I find a summary of the publications of different disciplines that interest me?* (Medicine and health sciences)

*Easier access. Many publications seem to be downright secret – they are not present online etc. Instead, one comes across them in discussions with colleagues.* (Humanities)

*Mobile findability. The articles are sometimes hard to read on the phone as the text must be magnified to make it readable.* (Technical sciences)

About 10 per cent of the comments concern the format of the publications. The comments demand digital publications (49%) on the one hand and the preservation

of printed publications on the other (44%). Other comments concern supporting reading on mobile devices and opportunities for listening to publications. The digitalisation of old materials is also considered important, as their availability in printed form has diminished.

*I wish that more of the older issues were digitalised. In my own discipline, I must sometimes refer to articles written as early as in the 19<sup>th</sup> century, and far from everything can be found in antiquarian bookshops etc.* (Humanities)

*A big issue is the relation between digital and printed publication, i.e. whether anything will be published on paper in the future. Reading long texts on a display is tiring and cumbersome.* (Social sciences)

Comments concerning the publications' contents (9%) are mostly about the demand for multilingual publications and about publishing in the domestic languages (44% of the responses). Publications should also be diverse and contain different types of articles. Other wishes included theme issues, preprints, enhanced visual appearance and increased interactivity of the publications.

*All I want is that Finnish journals remain in existence. It is very important to have up-to-date information about research in Finnish, too. I have often received positive feedback about this myself.* (Social sciences)

*Finnish journals should maintain and develop the Finnish terminology of the discipline.* (Humanities)

Funding of the publications was touched upon in many comments (9%). At a more general level, the comments concern the unpaid nature of the publications or a demand for lower prices, which is essentially related to open publications. Several responses call for restricting the importance of commercial publishers in scientific publishing and national financial support for Finnish publications. Author fees are also cited in many responses, and the common opinion is that they are undesirable in Finnish journals. On the other hand, a few responses call for financial compensation of editors, authors and peer reviewers.

*I want the commercial publication giants to tumble and scientific publishing to be organised cost-effectively.* (Natural sciences)

*I think there should be a system in Finland that would guarantee the continuity of Finnish scientific journals and periodicals. They are borne of interest in science, and they do not yield profit. Shrinking subscriber fees/society membership fees greatly affect the survival conditions of the journals.* (Humanities)

Comments concerning the publication process (5%) are mainly about speeding up the publication process and improving quality. There are also several comments stating



that the peer review process must be improved and developed. Open peer reviewing emerged as an option for the future.

*The review practice in my discipline is slow and cumbersome. Publication times range from half a year to three years. It is also very hard to find good reviewers. This is what I see as an editor.* (Natural sciences)

*Peer reviewing should be more transparent and it should provide some kind of benefit.* (Natural sciences)

*Openness, reliable and smooth peer reviewing, a smooth delivery process and interaction between those involved in the publication.* (Social sciences)

Other comments are related to factors such as the assessment of publications. Respondents criticise the greater appreciation of international journals, while the significance of publication in Finnish is on the decline. On the other hand, the significance of international publishing is also a topic of comments. Continuity, activity, cooperation and equality are characteristics expected of scientific journals. New kinds of publication platforms are also asked for in some of the comments.

*Especially when it comes to international publications, I think that their clear monopoly restricts access to scientific knowledge and publication opportunities. It is very important to strive for new publication environments among international universities.* (Social sciences)

Some respondents, however, said that they are completely satisfied with the current situation and do not want changes to scientific journals.

*I am mostly satisfied. The quality level of Finnish publications in particular is astonishingly high. Among international publications, the selection is so wide that one can switch to another publication if needed.* (Medicine and health sciences)

# CONCLUSIONS

## WHO ARE THE MEMBERS OF FINNISH AND INTERNATIONAL LEARNED SOCIETIES?

The survey targeted at the membership of learned societies shows that learned societies comprise researchers, experts, professionals and enthusiasts from different organisations and sectors. The findings confirm that the Federation of Finnish Learned Societies represents a wide spectrum of the Finnish scientific community through its member societies. The members of the learned societies represent the Finnish scientific and research community on a broad scale in terms of age, field of education, work organisation and place of residence. The typical learned society member is a highly educated person who works at a research organisation, is over 50 years old and utilises or produces research data. The findings are consistent with those of the international survey commissioned by Wiley (2022).

A significant proportion of the membership lives in Finland in Uusimaa or other university city regions and speaks Finnish or Swedish fluently. About one third of the members of Finnish learned societies are also members of international learned societies. Although professors, lecturers and researchers constitute the core of the membership, the survey shows that particularly Finnish learned societies form communities whose members are active not only in institutions of higher education and research institutes, but also in the public and private sectors and in foundations.

A significant proportion of the membership of both Finnish and international societies is made up of pensioners. The number of student members appears to be low in this material. In comparison to the surveys conducted by Wiley, the proportion of pensioners was considerably higher (20%, Wiley 3%), while the proportion of students was lower (4%, Wiley 9%). The actual representativity of these respondent groups is difficult to assess in the case of both surveys. However, based on earlier surveys, the societies are particularly interested in getting more young researchers involved (Korkeamäki et al., 2019). In addition to university students, students from universities of applied sciences could be recruited to learned societies, as the survey indicates that the numbers of these student members are low. The large number of pensioners among the respondents shows that learned societies offer a scientific community for many retired researchers. The societies could utilise the competence of their experience members, for example, in mentoring young researchers.

Based on the survey, the gender distribution of Finnish learned societies is equal, which corresponds with the gender distribution of the Finnish scientific community. In Wiley's international membership survey, the proportion men accounted for of the membership was 70 per cent (Roscoe, 2022). The difference could be traced back to the less equal gender distribution of the global scientific community, or the fact that Wiley's survey focused on predominantly male disciplines, such as the natural sciences. The gender distribution of the membership varies by discipline in Finland, too. Persons working in the fields of the humanities and social sciences, where the proportion of women is larger, are overrepresented among the respondents of this

survey. The findings, however, reflect the general gender distribution of different disciplines (e.g. Tanhua & Paavola, 2022).

Typically, members of learned societies are members of more than one learned society. The number, however, varies by the respondent's discipline, age and educational background. Respondents active in the fields of the humanities and social sciences and medical and health sciences were more likely to be members of more than one Finnish learned society, while respondents active in the fields of medical and health sciences and natural sciences were more likely to belong to international learned societies. Respondents with a doctoral education and older respondents were also more typically members of more than one society. In addition to age, the number of learned societies a person is a member of has been found to vary by gender, with men more likely to be members of more than one learned society than women (Roscoe, 2022). However, such a difference in the membership of learned societies did not emerge in this survey.

## **WHAT MOTIVATES THE MEMBERS TO BE INVOLVED IN FINNISH LEARNED SOCIETIES?**

The most common motivating factors behind being a member of a Finnish learned society are networking and belonging to a community, the desire to gain new knowledge about the discipline and the promotion of research. About half of the respondents were motivated by event participation and publications as member benefits. One of the worries of Finnish learned societies is that the migration to open scholarly publishing will drive members away, as journals become available for reading without paying a membership fee (Korkeamäki et al., 2019). The membership survey shows that members are rarely motivated by only one factor: almost 90 per cent of the respondents selected more than one motive, with about 60 per cent selecting four different motivating factors for their membership. Roscoe (2020) put forward that networking is particularly essential for members who are in the early phases of their career. However, this material did not reveal age-specific differences in the significance of networking. There were some differences, however, between respondents from different disciplines: respondents from the technical fields were less frequently motivated by networking opportunities, while hobby activity was a more common motivator in these fields. In comparison to respondents active in other fields, societal impact as a motivator was more pronounced in the responses given by persons active in the fields of medical and health societies and the humanities and social sciences.

## **WHAT ACTIVITIES OF THE FINNISH LEARNED SOCIETIES DO THE MEMBERS PARTICIPATE IN?**

The survey shows that the services offered by the Finnish learned societies are important for their members. More than 80 per cent of the members of the Finnish learned societies have read publications by learned societies during the past year. Publications also emerge as the most popular activity of learned societies in the Wiley (2022) survey. Participation in events had also been active, although the coronavirus

pandemic had had an effect on the organisation of events and participation in them. In the 2021 membership survey of the Federation of Finnish Learned Societies, almost 80 per cent of the learned societies stated that the society had to cancel planned events as a result of the pandemic (Late, Pölönen & Pylvänäinen, 2022). Due to this, the findings do not necessarily shed light on the regular activities of the societies, where the organisation of different scientific and public events is an even more common form of activity than publications (Korkeamäki et al., 2019). The 2020 and 2021 Wiley surveys showed that the importance of webinars and other online events has increased during recent years. Finnish societies have also moved their operations to virtual environments in the last few years (Late, Pölönen & Pylvänäinen, 2022).

Learned society activities related to research implementation, such as participation in research, applying for research and travel funding and the utilisation of research materials, facilities and equipment has been far less common (less than 10% of the respondents). The number of learned societies offering such opportunities is also lower (Korkeamäki et al., 2019). The members were actively involved in the organisation of the operations of learned societies, for example by participating in meetings. Support for the societies' activities was also cited as a motivating factor behind membership in the open-ended responses. It is indeed likely that the survey drew responses from active society members.

## **WHAT TASKS OF THE FINNISH SOCIETIES DO THE MEMBERS CONSIDER IMPORTANT?**

A key finding of the survey is that, in addition to traditional forms of operation, such as networking, publications and events, the membership considers the promotion of responsible science to be an important task of learned societies. The creation of community spirit and networks was seen as the most important tasks of learned societies: more than 95 per cent of the respondents agreed with this statement completely or partly.

The importance of publication operations was particularly pronounced in the responses provided by persons active in the fields of the humanities and social sciences. In fields where publishing is concentrated in international channels, Finnish scientific publication activities are less important (e.g. Puuska & Miettinen, 2008). The respondents considered the role of learned societies important as promoters of the openness of research-based knowledge, and the majority (almost 85%) supported publishing research free of charge for the readers. Publication activities are indeed one of the learned societies' key forms of operation, and a significant proportion of learned societies' publications already complies with the principles of open science. The societies have been important enablers and promoters of open, non-profit and scientific publication activities without author fees (so called Diamond OA) in Finland. The Journal.fi platform maintained by the Federation of Finnish Learned Societies also plays an important role here. On the other hand, it must be remembered that openness should adhere to international standards: according to a comprehensive study conducted in 2020 (Linna et al., 2021), only 13% of Finnish open journals complied with the open publishing requirements set out in the research funders' Plan S policy.

Popularisation of research, visibility on social media and event organisation were also considered to be important forms of operation for the learned societies by the majority of the respondents. Promotion of general scientific understanding is a key task for the learned societies, and visibility on social media and event organisation are a significant part of the learned societies' operations (Korkeamäki et al., 2019; Late, Pölönen & Pylvänäinen, 2022). The role of learned societies as providers of training was not seen as equally important, but it was more pronounced in the fields of medical and health sciences.

Regarding responsible science, the promotion of research integrity was seen as an important task for the learned societies, although its significance in the operations of the societies has been low so far (Late, Pölönen & Pylväinen, 2022). Societies' tasks related to science policy, research impact and evaluation and the defence of researchers were also seen as important. The societies participate in the evaluation of research particularly through publication activities, by utilising peer reviewing. Many societies also propose experts to different working groups and panels for evaluating and developing science. (Late, Pölönen & Pylvänäinen, 2022) Tasks related to research funding and researchers' remuneration were considered less important. Many learned societies have activities related to researchers' remuneration, but research funding is less common (Late, Pölönen & Pylvänäinen, 2022).

Based on earlier survey findings, the majority of the responding societies were interested in developing their activities in one or more areas of responsible research (Late, Pölönen & Pylvänäinen, 2022). The learned societies were most interested in developing the identification and proposal of experts to working groups, committees or for performing evaluation tasks (65%) and the promotion of open science and organisation of events (more than 50% of the societies). Many learned societies were also interested in developing activities related to the evaluation of research quality (more than 40% of the societies) and the evaluation of societal impact, science education and research integrity (about 30% of the societies). An important finding of the membership survey is that learned society members clearly see the wide-ranging promotion of responsible science as an important area in the operations of learned societies.

## **WHY ARE RESPONDENTS NOT MEMBERS OF SOCIETIES OR WHY HAVE THEY LEFT A SOCIETY?**

Membership of a learned society is mainly given up in connection with changing life or work situations. The most common reason for not being a member of a learned society was that the respondent had not been invited to join a society or the respondent's unawareness of learned societies to join. Among the less common reasons were limited benefit from the membership and unwillingness to pay for it. For both Finnish and international societies, the most typical reason for giving up membership was that the person felt that they were not benefiting from membership any longer. This was particularly pronounced in the case of the Finnish societies, with more than half of the ex-members citing this reason. More than one third said that they did not want to pay for membership. About one fifth of the ex-members of Finnish and international societies had given up membership due to a change of workplace or retirement. The earlier Wiley (2022) reports have produced similar findings.

In the last few years, there has been debate in learned societies about the impact of the migration to open scholarly publishing on the member counts. The fact that the publications of societies can already be read without membership was an uncommon reason for giving up membership, particularly in the case of Finnish societies. According to the Wiley survey (Roscoe, 2022), the majority (65%) of the members want the society to publish an open access journal, while only three per cent of the respondents stated that they would leave the society if the journal were to move to open publication. Earlier research has also proven researchers' support and desire for open scientific journals (e.g. Talja et al., 2021, Nicholas et al., 2014). Of this survey's respondents, 93% also agreed completely or partly with the statement that societies should promote the openness of research-based knowledge, and 84% were of the opinion that societies should publish research free of charge for the readers.

## **WHAT IS THE SIGNIFICANCE OF FINNISH AND INTERNATIONAL SCIENTIFIC JOURNALS AS PUBLICATION CHANNELS?**

International and Finnish scientific journals are important publication channels for the members of learned societies. Almost 70 per cent of the respondents were of the opinion that international scientific journals are very important publication channels in their discipline, and about 50 per cent said the same about Finnish scientific journals. While international journals were considered significant publication channels across all disciplines, the significance of Finnish journals was considered greater in the fields of the humanities and social sciences in comparison to other disciplines. The findings confirm differences highlighted by earlier research in the publishing cultures of disciplines and the discipline-specific significance of international and Finnish publication channels (e.g. Puuska & Miettinen, 2008). For example, according to Pölönen (2021), only about 3 per cent of all natural science journal and conference articles were published in the domestic languages, while the same proportion exceeded 24 per cent in the humanities. In the humanities, publishing in multiple languages is the international practice. In a comparative study of seven European countries, Kulczycki et al. (2020) showed that, in 2013–2015, more than half of 25,000 researchers in the fields of the humanities and social sciences published peer-reviewed journal articles in more than one language (the proportion was highest in Slovenia, 69%, and the lowest in Flanders, 38%, while in Finland it was 45%). In addition to this, a significant proportion of the journals published by Finnish learned societies operate in the fields of the humanities and social sciences (Late et al., 2020, Pölönen, 2022). Earlier research also shows that, in addition to journals, conferences play an important role as publication channels in technical sciences, and books and book articles do the same in the humanities and social sciences (e.g. Piro, Aksnes, & Rørstad, 2013; Puuska & Miettinen, 2008; Puuska & Pölönen, 2021).

## **HOW OFTEN AND FOR WHAT PURPOSES ARE FINNISH AND INTERNATIONAL SCIENTIFIC JOURNALS READ?**

The majority of the respondents read peer-reviewed journals at least once a month, but international journals were read more frequently than Finnish ones. Scientific

journals were read especially for keeping up to date, out of general interest, for entertainment and for research and writing. There were no significant differences between Finnish and international journals regarding the purpose of reading, albeit international journals are read somewhat more frequently for the purposes of research and writing. Although earlier research has proven students to be a significant reader group both in the case of Finnish (Pölönen et al., 2020) and international journals (Mohammadi et al., 2015), studying did not emerge as a significant factor behind reading in this survey. The reason for this was probably the small number of students among the respondents.

Reading of peer-reviewed journals varies across the respondents' disciplines and work organisations. In the fields of medical and health sciences, humanities and social sciences, reading of Finnish journals was more frequent than in other fields. Similar quantitative differences between disciplines have also been observed in earlier research on reading scientific articles (Late et al., 2019). Persons working in research organisations tend to read international journals in particular more frequently for research, writing and teaching in comparison to respondents from other disciplines. The findings are in line with earlier research (e.g. Late et al., 2019). The differences between research organisations in the purpose of reading are explained by the persons' work tasks. For example, persons with research-intensive tasks have been shown to read more scientific articles in comparison to those working in teaching and administration (Late et al., 2019). Moreover, persons working in research organisations often have better access to paid scientific journals through consortium agreements that enable reading.

The Journal.fi user survey implemented by the Federation of Finnish Learned Societies (Pölönen et al., 2020) in early 2020 with the participation of 48 journals and a total of 668 users showed that students (40%) and researchers (36%) constituted the largest user groups of Finnish open scientific journals. However, the proportion accounted for by citizens, experts, teachers and other users was 24%. Most notably, research published in the domestic languages serves learning and science communication with user groups that extend beyond the research community. In the Journal.fi survey, only researchers studied more articles published in languages other than the domestic ones. However, one quarter of the users of articles published in the domestic languages also were researchers.

## **IN WHAT FORMAT FINNISH AND INTERNATIONAL SCIENTIFIC JOURNALS ARE READ?**

Scientific journals are most typically read on a computer display. Reading on a computer display seems to have become more common, as about half of the articles last read by the respondents of the survey of Late et al. (2019) were read on a computer display. This proportion has now increased to almost 80 per cent for international journals and more than 50 per cent for Finnish journals. Printing of articles for reading, in turn, seems to have become far less common (e.g. Late et al., 2019, Tenopir et al., 2019). The underlying reasons could be the reduction of use of paper for ecological reasons and – given the increasing amount of remote work – reduced availability of printers in home offices. However, the printed format is still widely used

for reading Finnish scientific journals. The study by Late et al. (2019) showed that Finnish language articles are more frequently read in printed journals in comparison to international journals. This might be influenced by the fact that scientific journals published in the domestic languages serve a wider audience than just researchers, including those who still appreciate printed journals. One of the key findings of the survey is indeed that although the scientific community is widely shifting towards a digital and open operating environment, there is also a persisting demand for printed journals, especially in the case of Finnish publications. How users read printed journals is obviously influenced by whether the journal is available in printed form. In 2018, about 65 per cent of the learned societies published journals in both printed and digital form, and 28 per cent published only digital journals (Korkeamäki et al., 2019). Reading on a phone or tablet is still fairly uncommon, but has increased during the last six years in the light of earlier research findings (Late et al., 2019).



# SUMMARY

**THERE ARE HUNDREDS OF** active learned societies in Finland, and their total number of members is over 250,000. This report is an attempt to increase the information available on the membership of learned societies and what the members appreciate in societies' activities. The report is the first of its kind in Finland. The material for the report was collected in spring 2022 in the form of an electronic questionnaire, and it consists of 1,655 responses. The findings show that the membership of the learned societies represents the Finnish science and research community across a broad spectrum. Membership of a learned society is primarily motivated by communality, gaining of new knowledge and the promotion of science. The membership considers the key tasks of learned societies to be the creation of networks, publication and event activities, and the promotion of the openness of research-based knowledge and responsible science. It follows from the findings that learned societies should communicate actively about their operations, as the most common reason for not being a member of a learned society was that the respondent had not been invited to join a society or the respondent's unawareness of learned societies. Membership of a learned society is typically given up in connection with changing life or work situations. The transition to giving free access to the society's journal was an uncommon reason for giving up membership. The findings also show that international and Finnish scientific journals are important publication channels for the members of learned societies, but their roles vary across disciplines and they are read in different ways. Scientific journals are typically read in digital form, but Finnish journals in particular are still being read in printed form, too.

## ACKNOWLEDGEMENTS

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# REFERENCES

- Bosman, J., Frantsvåg, J. E., Kramer, B., Langlais, P.-C., & Proudman, V. (2021). OA Diamond Journals Study. Part 1: Findings. Zenodo. <https://doi.org/10.5281/zenodo.4558704>
- Delicado, A., Rego, R., Conceição, C. P., Pereira, I., & Junqueira, L. (2014). What roles for scientific associations in contemporary science? *Minerva*, 52(4), 439–465. <https://doi.org/10.1007/s11024-014-9260-3>
- Frantsvåg, J. E., & Strømme, T. E. (2019). Few open access journals are compliant with Plan S. *Publications*, 7(2), 26. <https://doi.org/10.3390/publications7020026>
- Hewitt, M., Dingwall, R., & Turkmendag, I. (2017). More than research intermediaries: a descriptive study of the impact and value of learned societies in the UK social sciences. *Science and Public Policy*, 44(6), 775–788. <https://doi.org/10.1093/scipol/scx013>
- Korkeamäki, L., Late, E., Pölönen, J., Rynnänen-Karjalainen, L. & Syrjämäki, S. (2019). Tieteelliset seurat Suomessa 2018. (Learned societies in Finland 2018.) Tieteellisten seurain valtuuskunnan verkkojulkaisuja 7. (Online publications of the Federation of Finnish learned Societies 7.) Federation of Finnish Learned Societies, Helsinki, 2019. <https://doi.org/10.23847/isbn.9789525995183>
- Kulczycki, E., Guns, R., Pölönen, J., Engels, T., Rozkosz, E. & Zuccala, A., Bruun, K., Eskola, O., Starčić, A. I., Petr, M. & Sivertsen, G. (2020). Multilingual Publishing in the Social Sciences and Humanities: A Seven-Country European Study. *Journal of the Association for Information Science and Technology*, 71(11), 1371–1385. <https://doi.org/10.1002/asi.24336>
- Mohammadi, E., Thelwall, M., Haustein, S., & Larivière, V. (2015). Who reads research articles? An altmetrics analysis of Mendeley user categories. *Journal of the Association for Information Science and Technology*, 66(9), 1832–1846. <https://doi.org/10.1002/asi.23286>
- Late, E., Pölönen, J., Pylvänäinen, E. (2022). Learned Societies and Responsible Research. A Report on the findings of a Federation of Finnish Learned Societies' Survey amongst Member Societies. Tieteellisten seurain valtuuskunnan verkkojulkaisuja 10. (Online publications of the Federation of Finnish Learned Societies 10.) <https://doi.org/10.23847/tsv.214>
- Late, E. & Pölönen, J. (2021). The number of Learned Societies in Europe. Zenodo. <https://doi.org/10.5281/zenodo.5513561>
- Late, E., Korkeamäki, L., Pölönen, J., & Syrjämäki, S. (2020). The role of learned societies in national scholarly publishing. *Learned Publishing*, 33(1), 5–13. <https://doi.org/10.1002/leap.1270>
- Late, E., Tenopir, C., Talja, S., & Christian, L. (2019). Reading practices in scholarly work: from articles and books to blogs. *Journal of Documentation*, 75(3), 478–499. <https://doi.org/10.1108/JD-11-2018-0178>

- Late, E. (2014). Cultural and contextual shaping of scholarly communication. Publishing and reading practices in Finnish state research institutes. Tampere University Press. <https://urn.fi/URN:ISBN:978-951-44-9625-7>
- Linna, A.-K., Holopainen, M., Ikonen, A., & Ylönen, I. (2020). Kotimaiset tieteelliset julkaisusarjat ja avoimuus. (Finnish scientific publication series and openness.) *Informaatiotutkimus*, 39(4), 4–32. <https://doi.org/10.23978/inf.98656>
- Ministry of Education and Culture (2022). The full-time equivalents (FTEs) of foreign teaching and research staff at higher education institutions. Annual data collection of the Ministry of Education and Culture. Available at: [https://research.fi/en/science-innovation-policy/science-research-figures/s2\\_6](https://research.fi/en/science-innovation-policy/science-research-figures/s2_6) (Accessed 11.8.2022)
- Mohammadi, E., Thelwall, M., Haustein, S., & Larivière, V. (2015). Who reads research articles? An Altmetrics analysis of Mendeley user categories. *Journal of the Association for Information Science and Technology*, 66, 1832–1846. <https://doi.org/10.1002/asi.23286>
- Nicholas, D., A. Watkinson, R. Volentine, S. Allard, K. Levine, C. Tenopir, & E. Herman. (2014). Trust and Authority in Scholarly Communications in the Light of the Digital Transition: Setting the Scene for a Major Study. *Learned Publishing*, 27(2), 121–34. <https://doi-org.libproxy.tuni.fi/10.1087/20140206>
- Piro, F., Aksnes, D. & Rørstad, K. (2013). A macro analysis of productivity differences across fields: Challenges in the measurement of scientific publishing. *Journal of the American Society for Information Science and Technology*, 64(2), 307–320. <https://doi.org/10.1002/asi.22746>
- Puuska, H-M. & Miettinen, M. (2008). Julkaisukäytännöt eri tieteenaloilla. (Publication practices in different disciplines.) Opetusministeriön julkaisuja 2008:33. (Publications of the Ministry of Education 2008:33.) <http://urn.fi/URN:ISBN:978-952-485-566-2>
- Puuska, H.-M. & Pölönen, J (2021). Tieteellisen julkaisemisen monimuotoisuus ja tutkimuksen vastuullinen arviointi. (Diversity of scientific publication and responsible evaluation of research.) *Tiedepolitiikka*, 46(3). <https://journal.fi/tiedepolitiikka/article/view/107765>
- Pölönen, J., Syrjämäki, S., Nygård, A. J., & Hammarfelt, B. (2021). Who are the users of national open access journals? The case of the Finnish Journal.fi platform. *Learned Publishing*, 34(4), 585–592. <https://doi.org/10.1002/leap.1405>
- Pölönen, J. (2021). Kansalliset julkaisukanavat mahdollistavat tiedejulkaisemisen kotimaisilla kielillä. (National publication channels facilitating science publishing in domestic languages.) *Tietolinja*, 2021 (2). <https://urn.fi/URN:NBN:fi-fe2021121661234>
- Revelle, A., K. Messner, A. Shrimplin & S. Hurst. (2012). Book Lovers, Technophiles, Pragmatists, and Printers: The Social and Demographic Structure of User Attitudes Toward E-Books. *College & Research Libraries* 73(5), 420–9. <https://doi.org/10.5860/crl-288>

- Roscoe, J. (2020). Building new societies: Insights and predictions from the 5<sup>th</sup> Wiley Society Member Survey. *Learned Publishing*, 33(1), 29–36. <https://doi.org/10.1002/leap.1277>
- Roscoe, J. (2022). The need for accelerated change in diversity, equity and inclusion in publishing and learned societies. *Learned Publishing*. <https://doi.org/10.1002/leap.1457>
- Shrimplin, A. K., A. Reville, S. Hurst & K. Messner. (2011). Contradictions and Consensus – Clusters of Opinions on E-Books. *College & Research Libraries* 72(2), 181–90. <https://doi.org/10.5860/crl-108rl>
- Tanhua, I., Paavola, J-M. (2022). Sukupuolten tasa-arvo ja etninen tasa-arvo korkeakoulujen opetus- ja tutkimushenkilöstön keskuudessa – Kirjallisuuskatsaus. (Gender equality and ethnic equality among the teaching and research personnel of higher education institutions – A literature review.) KOTAMO-hankkeen julkaisu. (A publication of the KOTAMO project.) Available at: <https://okm.fi/documents/1410845/113231925/Kirjallisuuskatsaus-Tasa-arvo-Korkeakouluissa-2022.pdf/>
- Talja, Tenopir, C., & Late, E. (2022). Desired Affordances of Scholarly E-Articles: Views from Scholars Based on Open-Ended Answers. *Libri*, 72(1), 67–81. <https://doi.org/10.1515/libri-2021-0012>
- Tenopir, Late, E., Talja, S., & Christian, L. (2019). Changes in Scholarly Reading in Finland Over a Decade: Influences of E-Journals and Social Media. *Libri*, 69(3), 169–187. <https://doi.org/10.1515/libri-2018-0120>
- Tenopir, C., S. Allard, B. J. Bates, K. J. Levine, D. W. King, B. Birch, R. Mays, and C. Caldwell. 2011. Perceived Value of Scholarly Articles. *Learned Publishing*, 24(2), 123–32. <https://doi-org.libproxy.tuni.fi/10.1087/20110207>
- Tenopir, C., King, D. W., Christian, L., & Volentine, R. (2015). Scholarly article seeking, reading, and use: a continuing evolution from print to electronic in the sciences and social sciences. *Learned Publishing*, 28(2), 93–105. <https://doi.org/10.1087/20150203>
- Tenopir, C., King, D. W., Spencer, J. & Wu, L. (2009). Variations in article seeking and reading patterns of academics: what makes a difference? *Library & Information Science Research*, 31(3), 139–148. <https://doi.org/10.1016/j.lisr.2009.02.002>
- Tieteellisten seurain valtuuskunnan jäsenesuratietokanta. (Member society database of the Federation of Finnish Learned Societies.) Available at: <https://www.tsv.fi/fi/toiminta/jasenseurat/jasenseurahaku>
- Vehkalahti, K. (2014). Tieteelliset seurat 200 vuoden aikajanalla (Learned societies on a 200-year timeline). *Tieteessä tapahtuu*, 6, 36–38.
- Watkinson, A., D. Nicholas, T. Clare, E. Herman, H. R. Jamali, R. Volentine, S. Allard, K. Levine, and C. Tenopir. 2016. Changes in the Digital Scholarly Environment and Issues of Trust: An Exploratory, Qualitative Analysis. *Information Processing & Management*, 52(3), 446–58. <https://doi-org.libproxy.tuni.fi/10.1087/20120407>

Wiley (2022). Wiley Society Member Resources. Available at:  
<https://secure.wiley.com/society-member-resources>

Wise, A., & Estelle, L. (2020). How society publishers can accelerate their transition to open access and align with Plan S. *Learned Publishing*, 33(1), 14–27.  
<https://doi.org/10.1002/leap.1272>

# ANNEX 1: THE QUESTIONNAIRE

## WHO ARE THE MEMBERS OF LEARNED SOCIETIES? SURVEY FOR SCHOLARS AND SOCIETY MEMBERS

### Welcome to take part on this survey!

In Finland, there are more than 300 learned societies with approximately 260,000 members. The question is who are the members and why they want to hold their membership? With this study, we aim to find an answer to this question. The survey is conducted by the [Federation of Finnish learned Societies](#) which is a co-operative body for learned societies in Finland. Learned societies can use the results from this survey to develop their activities and the Federation can develop its services for the societies.

The questionnaire is open to all members of learned societies and those working as researchers in Finland. The questionnaire is available in Finnish and English and it is possible to leave comments on open questions with any language. The questionnaire is available in Swedish [here](#). By taking part on this survey, you will give us valuable information about the membership of your society. Every answer is important. Participants have a chance to win #*minätutkin* t-shirts and books from Tiedekirja.

It takes about 15 minutes to fill the survey. The survey is open until 30<sup>th</sup> of March 2022.

The survey data will be analysed and published in a way that one respondent cannot be identified. Results will be published in a research report that will be published in a publication series of the Federation of Finnish Learned Societies. In addition, other publications may be written. Anonymized data will be archived to the Finnish social science data archive for further research use.

Please ask more information about the study from researcher Elina Late (Elina.Late@tsv.fi).

### Background questions

1. What is your age in full years?

2. Your gender is:

*Please choose one of the following:*

- Male
- Female
- Other
- Don't like to say

3. Do you have the Finnish citizenship?

*Please choose one of the following:*

- Yes I am
- No I have not

**4. Do you live in Finland for the moment?**

*Please choose only one of the following:*

- Yes I do
- No I don't

**5. In which region in Finland are you located?**

*Only answer this question if the following conditions are met:*

*Answer was 'Yes I do' at question 4.*

*Please choose only one of the following:*

- Uusimaa
- Southwest Finland
- Satakunta
- Kanta-Häme
- Pirkanmaa
- Päijät-Häme
- Kymenlaakso
- South Karelia
- South Savo
- North Savo
- North Karelia
- Central Finland
- South Ostrobothnia
- Ostrobothnia
- Central Ostrobothnia
- North Ostrobothnia
- Kainuu
- Lapland
- Åland

**6. Are you fluent in Finnish or Swedish?**

*Please choose only one of the following:*

- Yes I am
- No I am not

**7. What is your highest degree earned?**

*Please choose one of the following:*

- Comprehensive school
- Vocational education
- Bachelor's degree or equivalent
- Master's degree or equivalent
- Doctoral education
- Other

**8. Which field of education describes your expertise the best?**

*Please choose one of the following:*

- Generic programmes and qualifications
- Education
- Arts and humanities
- Social sciences, journalism and information
- Business, administration and law

- Natural sciences, mathematics and statistics
- Information and Communication Technologies (ICT)
- Engineering, manufacturing and construction
- Agriculture, forestry, fisheries and veterinary
- Health and welfare
- Services
- Other

**9. Please select your work status/primary place of work?**

*Please choose one of the following:*

- University
- University of applied sciences
- Other education institution
- Research institution
- Learned society
- Hospital/health care
- In publishing
- Non-profit organization
- Other government organization
- Other municipality organization
- Other private sector
- I work with a grant
- I am an entrepreneur
- I am a student
- I am retired
- I am an emerita/emeritus of university
- I am not employed
- Other

**10. Which of the following options describes your current position the best?**

*Only answer this question if the following conditions are met:*

*Answer was 'University' at question 9. Please choose one of the following:*

- Student
- Doctoral student
- Researcher
- Post doctoral researcher
- University teacher
- University lecturer
- Associate professor
- Professor
- Director
- I work at the university administration
- Other

**11. Where do you study?**

*Only answer this question if the following conditions are met:*

*Answer was 'I am a student' at question 9.*

*Please choose one of the following:*

- University
- University of applied sciences
- High school
- Vocational school
- Comprehensive school
- Other education institution



**12. Are you a regular producer, consumer or supporter of scientific research?**

*Please choose all that apply:*

- I consume research (e.g., read scholarly publications, participate on scholarly events)
- I produce research (i.e., conduct research, publish results, etc.)
- I support research (i.e., fund research, have researchers working for me, work at a society/administration/research services etc.)
- I utilize research to make decisions (i.e., to allocate funds, set protocols, etc.)
- I do not consume, produce or support scientific research
- Other:

**Membership of Finnish learned society****13. Are you currently a member of Finnish learned society?**

*Please choose one of the following:*

- Yes
- No, but I have been a member in the past
- No, nor I have ever been
- Not sure

**14. How many different Finnish learned societies are you currently a member of?**

*Only answer this question if the following conditions are met:*

*Answer was 'Yes' at question 13.*

**15. Of which Finnish learned societies do you hold a membership?**

*Only answer this question if the following conditions are met:*

*Answer was 'Yes' at question 13.*

**16. What motivates you for holding a membership for Finnish learned society?**

*Only answer this question if the following conditions are met: Answer was 'Yes' at question 13. Please choose all that apply:*

- Advancing research
- Advancing studies or education in the field
- Professional development
- Networking/being a part of community
- Hobbies
- Desire to learn new about the field
- Societal influencing
- Subscription for society publication(s)
- Opportunity to participate on society events
- Other membership benefits
- Other:

**17. Please select all activities supported by your Finnish societies or associations in which you have participated in the last 12 months.**

*Only answer this question if the following conditions are met: Answer was 'Yes' at question 13. Please choose all that apply:*

- Attended on a scholarly event organized by the society
- Attended an educational event organized by the society

- Attended other event organized by the society
- Read society's publications (e.g. journal)
- Read society's webpages, blogs etc.
- Read society's public social media network(s) (e.g., Twitter, Facebook, LinkedIn)
- Published in society's scholarly publication(s)
- Published in society's other publication(s)
- Served a referee for the society's publication(s)
- Applied research or traveling grants from the society
- Utilized research data offered by the society
- Utilized premises or equipment offered by the society (e.g. working spaces, library etc.)
- Participated on research coordinated by the society
- Participated on a meeting of the society
- Participated on society's administration/planning
- Represented society as a expert
- Got professional advocacy from the learned society
- Other:

**18. Why did you let your membership lapse?**

*Only answer this question if the following conditions are met: Answer was 'No, but I have been a member in the past' at question 13. Please choose all that apply:*

- I did not benefit for the membership
- Society's publications are openly available (reading does not require membership)
- I did not want to pay for the membership
- I changed jobs or retired
- Other:

**19. Indicate which, if any, of the following are reasons why you are not a member of a Finnish society.**

*Only answer this question if the following conditions are met: Answer was 'No, nor I have ever been' at question 13. Please choose all that apply:*

- I don't think there is any value in joining
- I don't know any societies in my field
- I've never been invited to join
- I don't want to pay for a membership
- Other:

**20. Please rate your level of agreement with each of the following statements.**

**Please choose the appropriate response for each item:**

*Please choose the appropriate response for each item: Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree, I don't know*

**It is important for Finnish society...**

- To publish research/scholarly journals
- To make publications openly available (free of charge)
- Popularize research
- Fund societally important research projects
- Fund/support the work of young researchers
- Create research communities/networks
- Maintain presence in social media
- Provide education

- Create open materials for education
- Arrange events
- Foster citizen science
- Foster responsible research assessment

**21. Rate your level of agreement with each of the following statements:**

**Finnish learned societies should...**

*Please choose the appropriate response for each item: Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree, I don't know*

- Recognize and award members for good work
- Support researchers facing hate speech
- Influence on science policy
- Speak about societal influence of science
- Participate on research evaluation
- Foster research ethics
- Influence on societal discussion

**22. What other important tasks do you see for Finnish societies now and in the future?**

**Membership of international societies**

**23. Are you currently a member of an international learned society?**

*Please choose only one of the following:*

- Yes I am
- No, but I have been a member in the past
- No, nor I have ever been
- Not sure

**24. How many different international learned societies are you currently a member of?**

*Only answer this question if the following conditions are met: Answer was 'Yes I am' at question 23.*

**25. Why did you let your membership lapse?**

*Only answer this question if the following conditions are met: Answer was 'No, but I have been a member in the past' at question 23. Please choose all that apply:*

- I did not benefit for the membership
- Society's publications are openly available (reading does not require membership)
- I did not want to pay for the membership
- I changed jobs or retired
- Other:

**26. Please indicate which, if any, of the following are reasons why you are not a member of international learned society in your field.**

*Only answer this question if the following conditions are met: Answer was 'No, nor I have ever been' at question 23. Please choose all that apply:*

- I don't think there is any value in joining
- I don't know any societies in my field
- I've never been invited to join

- The cost is too high
- Other:

### Reading of scholarly journals

**27. To what extent are national and international peer reviewed journals valued in your field as publishing forums?**

*Please choose the appropriate response for each item: Very important, important, somewhat important, slightly important, not at all important, I don't know*

- National peer reviewed journals
- International peer reviewed journals

**28. How often do you read articles from national and international peer reviewed journals?**

*Please choose the appropriate response for each item: Daily, At least once a week, At least once a month, Less frequently, Not at all, I don't know*

- Articles from national peer reviewed journals
- Articles from international peer reviewed journals

**29. In which format/device do you most often read articles from national and international peer reviewed journals?**

*Please choose the appropriate response for each item:*

- Print journal
- Printed on paper
- Computer screen
- Tablet computer
- Mobile phone
- Other, please specify?
- I don't know

**30. For what purpose do you read articles from national peer reviewed journals?**

*Please choose the appropriate response for each item: Daily, At least once a week, At least once a month, Less frequently, Not at all, I don't know*

- Research and writing
- Studying
- Teaching/preparing teaching
- For making decisions
- Journalism/science journalism
- Current awareness/keeping up
- Common interest/pleasure
- For other purpose

**31. For what purpose do you read articles from international peer reviewed journals?**

*Please choose the appropriate response for each item: Daily, At least once a week, At least once a month, Less frequently, Not at all, I don't know*

- Research and writing
- Studying
- Teaching/preparing teaching

- For making decisions
- Journalism/science journalism
- Current awareness/keeping up
- Common interest/pleasure
- For other purpose

**32.** What features/changes do you wish for national and international scholarly journals in the future?

**Feedback and contact information**

**33.** Here you can tell more or give feedback for the survey

**34.** If you want to take part in the draw of #minätutkin t-shirts and books from Tiedekirja please leave your email address we can use for contacting the winners.

***Thank you for your contribution!***

# ANNEX 2: A LIST OF THOSE MEMBER SOCIETIES OF THE FEDERATION FOR FINNISH LEARNED SOCIETIES THAT THE SURVEY RESPONDENTS WERE MEMBERS OF

Name of the society	Number of responses
Aikuiskasvatuksen Tutkimusseura	17
Akustinen seura	1
Alkoholi-, huume- ja rahapelitutkimuksen seura	3
Alue- ja ympäristötutkimuksen seura	16
Ammatillisen koulutuksen tutkimusseura OTTU	3
Arkistoyhdistys – Arkivföreningen	3
Bibliothecarii Medicinae Fenniae	4
BirdLife Suomi	17
Dendrologian Seura – Dendrologiska Sällskapet	14
Diakonian tutkimuksen seura	2
Edistyksellinen tiedeliitto	7
Ekonomiska Samfundet i Finland	1
Elintarviketieteiden seura	1
Etnisten suhteiden ja kansainvälisen muuttoliikkeen tutkimuksen seura ETMU	8
Eurooppalaisen filosofian seura	5
Finnish Bone Society	1
Finska Vetenskaps-Societeten – Suomen Tiedeseura	54
Focus Localis	7
Föreningen för nordisk filologi	4
Geofysiikan Seura	22
Glossa – Keskiajan tutkimuksen seura	6
Hallinnon Tutkimuksen Seura	14
Historiallinen Yhdistys	1
Historian Ystävien Liitto	11
Historiska föreningen	29
Hoitotieteiden tutkimusseura, HTTS	23

Name of the society	Number of responses
Hoitotyön tutkimussäätiö	1
Hymnologian ja liturgiikan seura	6
Infektioautien tutkimusyhdistys – Föreningen för infektionssjukdomsforskning	32
Informaatiotutkimuksen yhdistys, ITY	21
Kalevalaseura-säätiö	14
Kansainvälisten suhteiden seura KATSE	6
Karjalan teologinen seura	24
Karl Marx -seura	5
Kasvinsuojeluseura	1
Kasvun ja vanhenemisen tutkijat	14
Kehitystutkimuksen seura	1
Kemiallisteknillinen Yhdistys – Kemisktekniska Föreningen	1
Kirjallisuudentutkijain Seura	19
Klassillis-filologinen yhdistys – Klassisk-filologiska föreningen	1
Korkeakoulututkimuksen seura	11
Kotikielen Seura	86
Kulttuurintutkimuksen seura	20
Kulttuuripolitiikan tutkimuksen seura	4
Kulutustutkimuksen seura	5
Lapin tutkimusseura	19
Lapsuudentutkimuksen seura	3
Liikennesuunnittelun Seura	4
Liikuntatieteellinen Seura	17
Lääketieteellinen Radioisotooppiyhdistys – Finlands Medicinska Radioisotopförening	7
Lääketieteellisen fysiikan ja tekniikan yhdistys, LFTY	3
Maaseudun uusi aika	5
Matematiikan ja luonnontieteiden opetuksen tutkimusseura	2
Media- ja viestintätieteellinen seura, Mevi	26
Metsähistorian Seura	4
Mikael Agricola -seura	5
Nordenskiöld-samfundet i Finland	6
Nuorisotutkimusseura	6
Oikeus- ja yhteiskuntatieteellinen yhdistys	5
Oulun Historiaseura	3
Pohjois-Karjalan historiallinen yhdistys	6

<b>Name of the society</b>	<b>Number of responses</b>
Pohjoismaiden Maataloustutkijain Yhdistys, Suomen osasto	2
Pohjois-Suomen Historiallinen Yhdistys	2
Pohjois-Suomen Maantieteellinen Seura	3
Poliittisen talouden tutkimuksen seura	3
Porthan-Seura	7
Prologos	3
Puheen ja kielen tutkimuksen yhdistys	3
Rajapinta	13
Rakennustaiteen seura – Samfundet för byggnadskonst	2
Rakenteiden Mekaniikan Seura	6
Sidekudostutkijat	1
Skepsis	7
Societas biochemica, biophysica et microbiologica Fenniae	11
Societas Gerontologica Fennica	2
Societas pro Fauna et Flora Fennica	5
Sosiaali- ja terveydenhuollon tietojenkäsittely-yhdistys	4
Sosiaalilääketieteen yhdistys	27
Sosiaalityön tutkimuksen seura	11
Sukupuolentutkimuksen seura – Sällskapet för genusforskning (SUNS)	37
Suomalainen Lakimiesyhdistys	4
Suomalainen Lääkäriseura Duodecim	39
Suomalainen Teologinen Kirjallisuusseura	6
Suomalainen Tiedeakatemia	34
Suomalaisen Kirjallisuuden Seura	72
Suomalaisen Kuolemantutkimuksen Seura	7
Suomalaisten Kemistien Seura	25
Suomalais-Ugrilainen Seura	89
Suomen 1700-luvun tutkimuksen seura	8
Suomen ainedidaktinen tutkimusseura	6
Suomen Aivotutkimusseura	15
Suomen Antropologinen Seura	20
Suomen Arkeologinen Seura	7
Suomen Arkkitehtiliitto – Finlands Arkitektförbund (SAFA)	1
Suomen Arviointiyhdistys	1



Name of the society	Number of responses
Suomen Ateenan-instituutin säätiö – Stiftelsen för Finlands Atheninstitut	1
Suomen Atomiteknillinen Seura – Atomtekniska Sällskapet i Finland	3
Suomen Biologian Seura Vanamo	22
Suomen Biostatistiikan Seura	39
Suomen Egyptologinen Seura – Egyptologiska Sällskapet i Finland	5
Suomen Eksegeettinen Seura	4
Suomen Elokuvatutkimuksen Seura	7
Suomen epidemiologian seura	2
Suomen Estetiikan Seura	1
Suomen Etnomusikologinen Seura	16
Suomen Farmakologiyhdistys (SFY)	22
Suomen filosofian ja fenomenologisen tutkimuksen seura SFFS – Societas philosophica et phaenomenologica Finlandiae	4
Suomen Filosofinen Yhdistys – Filosofiska Föreningen i Finland	11
Suomen Fyysikkoseura – Finlands Fysikerförening	24
Suomen Geologinen Seura – Geologiska Sällskapet i Finland	17
Suomen Hammaslääkäriseura Apollonia	6
Suomen Heraldinen Seura – Heraldiska Sällskapet i Finland	4
Suomen Historiallinen Seura – Finska Historiska Samfundet	59
Suomen Hyönteistieteellinen Seura	4
Suomen Itämainen Seura – Finska Orientsällskapet	4
Suomen Kalliomekaniikkatoimikunta	5
Suomen Kansantietouden Tutkijain Seura	10
Suomen kansatieteilijöiden yhdistys Ethnos	9
Suomen Kardiologinen Seura – Kardiologiska Föreningen i Finland	4
Suomen Kartografinen Seura	1
Suomen kasvatuksen ja koulutuksen historian seura	2
Suomen kasvatustieteellinen seura	59
Suomen Kaupunkitutkimuksen Seura	1
Suomen keskiajan arkeologian seura – Sällskapet för medeltidsarkeologi i Finland	6
Suomen kielitieteellinen yhdistys	25
Suomen kirkkohistoriallinen seura – Finska kyrkohistoriska samfundet	14
Suomen Kliinisen Kemian Yhdistys	3
Suomen kognitiivisen kielentutkimuksen yhdistys FiCLA	5

Name of the society	Number of responses
Suomen Kriminalistiyhdistys – Kriminalistföreningen i Finland	1
Suomen lastenpsykiatyyhdistys	1
Suomen lihavuustutkijat ry	2
Suomen luonnonsuojeluliitto	4
Suomen Lähi-idän instituutin säätiö	1
Suomen Lääkintäoikeuden ja -etiikan Seura	1
Suomen Maantieteellinen Seura – Geografiska Sällskapet i Finland	15
Suomen Maaperätieteiden Seura	18
Suomen Maataloustieteellinen Seura	7
Suomen matemaattinen yhdistys	8
Suomen Matkailututkimuksen Seura	16
Suomen meriarkeologinen seura	2
Suomen merihistoriallinen yhdistys – Sjöhistoriska föreningen i Finland	6
Suomen Metsätieteellinen Seura	58
Suomen Mineraloginen Seura	4
Suomen muinaismuistoyhdistys	11
Suomen musiikkiteollinen seura – Musikvetenskapliga sällskapet i Finland	8
Suomen Nuorisopsykiatrinen yhdistys	1
Suomen Oppihistoriallinen Seura – Finlands Lärdomshistoriska Samfund	6
Suomen Patologiyhdistys	1
Suomen patristinen seura	2
Suomen Pelitutkimuksen Seura	2
Suomen Perhostutkijain Seura	6
Suomen Psykologinen Seura	6
Suomen Queer-tutkimuksen Seura	8
Suomen rauhantutkimusyhdistys	14
Suomen Ravitsemustieteen Yhdistys – Föreningen för Näringslära i Finland	7
Suomen sammalseura	1
Suomen science fiction- ja fantasiatutkimuksen seura	2
Suomen Semiotiikan Seura – Semiotiska Sällskapet i Finland	10
Suomen Sieniseura	30
Suomen Slavistiipiiri – Finlands Slavistkrets	7
Suomen sosiaalipedagoginen seura	7

Name of the society	Number of responses
Suomen Sotahistoriallinen Seura – Krigshistoriska Samfundet i Finland	14
Suomen Sotahistorian Komissio – Militärhistoriska Kommissionen i Finland	2
Suomen Sotatieteellinen Seura	87
Suomen soveltavan kielitieteen yhdistys AFinLA	29
Suomen Sukututkimusseura	26
Suomen taidekasvatuksen tutkimusseura	3
Suomen taloushistoriallinen yhdistys – Ekonomisk-historiska föreningen i Finland ry	2
Suomen Tekoälyseura (STeS)	1
Suomen Telelääketieteen ja e-Health seura (STeHS)	5
Suomen tiedetoimittajain liitto – Finlands vetenskapsredaktörers förbund	9
Suomen tieteellinen kirjastoseura	30
Suomen tieteen- ja teknologiantutkimuksen seura	19
Suomen Tilastoseura	17
Suomen Toksikologiyhdistys (STY)	11
Suomen Tribologiyhdistys	5
Suomen Tähtitieteilijäseura	2
Suomen Unitutkimusseura	2
Suomen urheiluhistoriallinen seura	2
Suomen Uskontotieteellinen Seura	11
Suomen Vammaistutkimuksen Seura	4
Suomen Verenpaine yhdistys	1
Suomen Vesiyhdistys	4
Suomen Väestötieteen Yhdistys	8
Suomen Yhdysvaltain tutkimuksen seura	3
Suoseura	13
Svenska litteratursällskapet i Finland	24
Svenska skolhistoriska föreningen i Finland	1
Säätiö Institutum Romanum Finlandiae – Stiftelsen Institutum Romanum Finlandiae	1
Taidehistorian seura – Föreningen för konsthistoria	34
Taloustieteellinen yhdistys	9
Tampereen Historiallinen Seura	1
Teatterintutkimuksen seura – TeaTS	2
Tekniikan akateemiset TEK	4

Name of the society	Number of responses
Tekniikan Historian Seura THS	4
Teknillisten Tieteiden Akatemia – Akademin för Tekniska Vetenskaper	8
Tekniska Föreningen i Finland	4
Teologinen Julkaisuseura	9
The Westermarck Society	94
Tietojenkäsittelytieteen Seura	5
Tulevaisuuden tutkimuksen seura	12
Turun eläin- ja kasvitieteellinen yhdistys	3
Turun Historiallinen Yhdistys	5
Turun korkeakoulujen yhteiskunnallis-taloudellinen tutkimusyhdistys	1
Työelämän tutkimusyhdistys	6
Työoikeudellinen yhdistys	4
Työväen historian ja perinteen tutkimuksen seura	7
Tähtitieteellinen yhdistys Ursa	110
Uusfilologinen yhdistys – Nyfilologiska föreningen	5
Valtiotieteellinen yhdistys – Statsvetenskapliga föreningen	23
Venäjän ja Itä-Euroopan tutkimuksen seura – Sällskapet för Rysslands- och Östeuropaforskning	10
Viipurin Suomalainen Kirjallisuusseura	2
Visaseura	1
Yhdyskuntasuunnittelun seura	4
Yhteiskunnallisen ja kulttuurisen eläintutkimuksen seura	7
Yhteiskuntatieteellinen ympäristötutkimuksen seura	14
Ympäristötieteellinen Seura	2

# ANNEX 3: A LIST OF LEARNED SOCIETIES THAT ARE NOT MEMBERS OF THE FEDERATION FOR FINNISH LEARNED SOCIETIES THAT SURVEY RESPONDENTS ARE MEMBERS OF

Name of the society	Number of responses
Armas Launis -seura	1
Birch and Star	1
Designmuseon ja Arkkitehtuurimuseon Ystävät DAMY	1
Eero Järnefeltin seura	1
Finnish Inverse Problems Society	19
Finnish Society for the Study of English, FINSSE	4
Folklore Fellows	1
Habitus	1
Helsingin psykoterapiayhdistys	1
Helsingin tutkijanaiset	1
Helsingin yliopiston dosenttiyhdistys	1
Helsinki seura	1
International Geographical Union, Suomen kansalliskomitea	1
Kansainvälisen politiikan yhdistys	1
Kenraali Hannes Ignatiuksen Kadettisäätiö	1
Kliinisen Farmasian Seura	29
Kliiniset Mikrobiologit	2
Korva-, nenä- ja kurkkutaudit – pään ja kaulan kirurgia	1
Kriittisen eläintutkimuksen verkosto	2
Kulttuurihistorian seura	2
Käytäntölähtöisen tutkimuksen yhdistys, PraBa	1
Liikenneoikeusyhdistys	2
Lounais-Suomen Syöpäyhdistys	1
Lähihistorian tutkimuksen seura	1
Lähikuva-yhdistys	1

Name of the society	Number of responses
Lääketieteellinen ultraääniseura	1
M. A. Castrénin seura	5
Maanpuolustuksen tieteellinen neuvottelukunta – MATINE	1
Maaperän tutkimus- ja kunnostusyhdistys, MUTKU	2
Marxilaisen Yhteiskuntatieteen Seura	2
Mikrobiologikilta	3
Muistitietotutkijoiden verkosto, FOHN	1
Museopedagoginen yhdistys Pedaali	1
Nordic Educational Research Association	1
Nordic Society Oikos	3
Nordiska Administrativa Förbundet, Suomen osasto	2
Nykysuomen seura	1
Ohjausalan tutkimuksen verkosto, FERA	1
Oikeuspoliittinen yhdistys, Demla	2
One Health Finland	1
Organisaatiodynamiikka FINOD	1
Oulun Sieniseura	1
Paasikivi seura	1
Perheiden ja läheissuhteiden tutkimusseura	3
Photonics Finland	2
Porin Karhunvartijat	1
Professoriliitto	6
Psykedeelitutkimusyhdistys	3
Päijät-Hämeen tutkimusseura	2
Ravitsemusterapeuttien Yhdistys	1
Redescriptions	1
Sairaalfyysikot	2
Sámegiela ja -kultuvrra dutkansearvi	1
Satakunnan historiallinen seura	1
Satakunnan Puutarhaseura	1
Sateenkaarihistorian ystävät	1
Savuton Suomi 2030 -verkosto	1
Seti Instituutti	1
Sotilasperinteen Seura	1
Statistikot Suomen lääketeollisuudessa	2

Name of the society	Number of responses
Suomalainen Yliopistoseura	1
Suomalais-ranskalainen teknillistieteellinen seura	1
Suomen Akustisen Ekologian Seura	1
Suomen Allergologi- ja immunologyhdistys	2
Suomen Arkeoastronominen seura	1
Suomen arvostelijain liitto	1
Suomen Ateroskleroosiyhdistys, SATY	4
Suomen avantgarden ja modernismin seura	2
Suomen Avaruustutkimusseura	1
Suomen Diabetestutkijat ja Diabetologit	1
Suomen Eläinlääkärien Kehitysyhteistyöjärjestö, SEK	1
Suomen Eläinlääkäripraktikot	1
Suomen energiaekonomistit	1
Suomen Fysiatriryhdistys	1
Suomen Gastroenterologiayhdistys	1
Suomen Gynekologiayhdistys	1
Suomen historiallisen leksikografian seura	1
Suomen Ihotautilääkäriyhdistys	1
Suomen Immunologiayhdistys	3
Suomen infektioidentorjuntayhdistys	2
Suomen Infektiolääkärit	1
Suomen Katalyysiseura	1
Suomen Kehitysbiologian seura	1
Suomen keuhkolääkäriyhdistys, SKLY	1
Suomen kirjastoseura	1
Suomen Kliinisen Fysiologian yhdistys	2
Suomen Kolposkopiayhdistys	1
Suomen Kriminologinen Yhdistys	6
Suomen kääntäjien ja tulkkien liiton Opettajien ja tutkijoiden jaosto	1
Suomen Lainopillinen Yhdistys	1
Suomen lepakkotieteellinen yhdistys	2
Suomen limnologinen yhdistys	1
Suomen Lääketieteellisen Genetiikan Yhdistys	1
Suomen Lääketieteellisen Mykologian Seura	3
Suomen Lääkintäupseeriliitto	1

Name of the society	Number of responses
Suomen Menopausstitutkimusseura	1
Suomen miestutkimuksen seura	3
Suomen nisäkästieteellinen seura	3
Suomen nurmiyhdistys	1
Suomen paleontologinen seura BKK	1
Suomen Perinatologinen Seura	1
Suomen Potilasturvallisuusyhdistys	1
Suomen Radiologiyhdistys	1
Suomen Reumatologinen Yhdistys	1
Suomen Rinologiyhdistys – Consociatio Rhinologica Fennica	1
Suomen Rorschah-yhdistys	1
Suomen Seksologinen Seura	1
Suomen Sisätautilääkärien Yhdistys	1
Suomen Solubiologit	1
Suomen Sosiaali oikeudellinen seura	2
Suomen sotataloudellinen seura	1
Suomen Sotilaspsykologinen Seura	1
Suomen sotilassosiologinen seura	5
Suomen Sukuhistoriallinen Yhdistys, SSHY	3
Suomen Tieteidenvälinen Seura	1
Suomen Ympäristökasvatuksen Seura	1
Suomi-Venäjä-seura	1
Suoviljelysyhdistys	2
Systeemityöyhdistys, SYTYKE	1
Tampereen hyönteistutkijain seura	1
Tampereen kasvitieteellinen yhdistys	1
Tieteentekijöiden liitto	3
Tohtoriupseerit	1
Tohtoriverkosto	2
Topelius-seura	1
Turun Mikrobiologien Tiedeseura	3
Turun Suomalainen Yliopistoseura	1
Turun Syöpätutkijat	1
Turun Turvallisuustieteellinen Yhdistys	1
Turun Yliopistojen Dosenttiyhdistys	2



Name of the society	Number of responses
Tutkijoiden ja kansanedustajien seura, Tutkas	4
Tutkimusyhdistys Suoni	1
Uskonnon, katsomuksen ja kasvatuksen tutkimusseura, UKKT	1
Uuno Klami -seura	1
Valtio-opillinen yhdistys	1
Viestinnän tutkijayhdistys, VAKKI	3
Viite - tieteen ja teknologian vihreät	1
Vuorimiesyhdistys	7
Ympäristöjohtamisen yhdistys	7



**Federation of Finnish  
Learned Societies**