

Research Article

Open Access

Gunnar Sivertsen*

Understanding and Evaluating Research and Scholarly Publishing in the Social Sciences and Humanities (SSH)

<https://doi.org/10.2478/dim-2019-0008>
received April 15, 2019; accepted May 10, 2019.

Abstract: Internationalization is important for research quality and for specialization on new themes in the social sciences and humanities (SSH). Interaction with society, however, is just as important in these areas of research for realizing the ultimate aims of knowledge creation. This article demonstrates how the heterogeneous publishing patterns of the SSH may reflect and fulfill both purposes. The limited coverage of the SSH in Scopus and Web of Science is discussed along with ideas about how to achieve a more complete representation of all the languages and publication types that are actually used in the SSH. A dynamic and empirical concept of balanced multilingualism is introduced to support combined strategies for internationalization and societal interaction. The argument is that all the communication purposes in all different areas of research, and all the languages and publication types needed to fulfill these purposes, should be considered in a holistic manner without exclusions or priorities whenever research in the SSH is evaluated.

Keywords: Norwegian Model, social sciences, humanities, SSH, research evaluation, scholarly publishing, multilingualism, publication type, publication pattern

1 Introduction

This article is an extended version of my invited Luojia Lecture for Wuhan University on 30th October 2018 with the same title as above. I use this opportunity to go deeper into some of the topics of the lecture by combining the perspectives and updating the results of four recent studies.

*Corresponding author: Gunnar Sivertsen, Nordic Institute for Studies in Innovation, Research and Education, Toyen, Oslo, Norway, E-mail: gunnar.sivertsen@nifu.no

One of them (Sivertsen, 2016a) presents the patterns of internationalization and discusses the criteria for research assessment in the social sciences and humanities (SSH). The second study (Sivertsen, 2018a) focuses on the use of language for internal and external communication in research, while the third (Aksnes & Sivertsen, 2019) demonstrates to what extent the scholarly literature of the SSH is covered by Scopus and Web of Science (WoS). All the three studies are based on bibliographic data that allow for a complete representation of scholarly publishing in the SSH. The fourth study (Sivertsen, 2018b) explains how this bibliographic database was established and organized. In this article, I present the essence of all the four studies and combine them in a more general discussion of scholarly publishing in the SSH, how it is represented in bibliographic data sources, and how it may be evaluated. All data have been updated for this article.

Wuhan University hosted the 16th International Conference on Scientometrics & Informetrics (ISSI) in October 2017. For the first time in history, ISSI then had a special session on research evaluation in the SSH. This event can be taken as a sign of increasing worldwide interest in the topic and an increasing recognition that these areas of research deserve special attention when it comes to criteria and data sources for research evaluation.

I have experienced increased interest in the evaluation of the SSH in China since then, not only by the invitation to hold the Luojia Lecture in Wuhan but also at meetings and conferences organized by, e.g., The Chinese Academy of Social Sciences Evaluation Studies (CASSES) and the Beijing and Chengdu branches of the National Science Library of the Chinese Academy of Sciences. The School of Information Management at Wuhan University has recently initiated a PhD project supervised by professor Lin Zhang with the aim of studying the publication patterns and internationalization of the social sciences in China.

In Europe, I have experienced the same increasing interest as co-initiator and member of the European Network for Research Evaluation in the SSH (ENRESSH).

This network is funded by the European Commission as a COST action (European Cooperation in Science and Technology) and has 127 participants from 37 countries. The aims of the network are to promote a better understanding of how the SSH generate knowledge and contribute to society and to develop appropriate research evaluation methods for these areas of research. Since the start of the network three years ago, international collaborations within the network have already resulted in several published studies, some of which I refer to here.

2 Achieving Complete Representation of Scholarly Publishing in the SSH

Several countries in Europe, particularly among the smaller countries, have established national or institutional databases with a more comprehensive representation of scholarly publishing in the SSH than is found in the most used international data sources such as Scopus and WoS. One way to achieve a more comprehensive representation of the SSH is the so-called “Norwegian Model” (Sivertsen, 2018b). This is a model for using bibliometric indicators in performance-based funding of research institutions that I developed for the Norwegian government in 2004. It has so far also been adopted at the national level by Flanders in Belgium (Engels & Guns, 2018), Denmark (Aagaard, 2018), Finland (Pölonen, 2018), and Poland (Kulczycki & Korytkowski, 2018), as well as at the local level by several Swedish universities (Hammarfelt, 2018) and by University College Dublin in Ireland (Cleere & Ma, 2018). I explain the model in detail here, not only because it serves as an example of an extensive data source but also because I use data provided by the Norwegian model in some of the empirical results presented in this article.

The Norwegian Model has three components:

- A. A complete representation in a national database of structured, verifiable, and validated bibliographical records of the peer-reviewed scholarly literature in all areas of research;
- B. A publication indicator with a system of weights which makes field-specific publishing traditions comparable across fields in the measurement of “publication points” at the level of institutions;
- C. A performance-based funding model that reallocates a small proportion of the annual direct institutional funding according to the institutions’ shares in the total of publication points.

I first very shortly explain component C. Then I describe how components A and B are constructed for the purposes of the Norwegian model in Norway. In section 3, I return to component A for explaining the data source used for the results presented in this article.

Component C represents performance-based funding of research organizations (Hicks, 2012; Jonkers & Zacharewicz, 2015; Debackere et al., 2017; Sivertsen, 2017). Performance-based funding can be applied by using either evaluation, indicators, and/or performance contracts to allocate a share of the direct funding to research organizations according to how they recently performed at the organizational level. Such funding arrangements may have several purposes. They may provide transparency and legitimacy of the funding criteria. The purpose may also be to steer institutions to improve their performance. Performance-based funding may also create information for strategic development at the national and institutional level.

All of these purposes are relevant in Norway, where component B is only one of several indicators used in the funding formula. The publication indicator reallocates less than 2 percent of the total funding of the higher education institutions, but it still receives much attention, also at the level of individual researchers. The experience is that even with only marginal influence on the total funding, component C will support the need for completeness and validation of the bibliographic data in component A.

The publication indicator is not meant to cover the researchers’ publishing activities in general. It is meant to represent and stimulate original research activity of good quality as expressed in publications in all areas of research, not only the SSH. Accordingly, the indicator only covers original research publications. The data in component A are thereby delimited by a definition, according to which a scholarly or scientific publication must:

- A. present new insight
- B. in a scholarly format that allows the research findings to be verified and/or used in new research activity
- C. in a publication channel (journal, series, book publisher) which represents authors from several institutions and organizes independent peer review of manuscripts before publication.

Although the first two requirements of the definition demand originality and scholarly format in the publication itself, the third requirement is supported by a dynamic register of approved scholarly publication channels at <http://dbh.nsd.uib.no/kanaler/>. Suggestions for additions can be made at any time through the same web page. Publications in local channels (serving only one

institution’s authors) are not included in the definition, partly because independent peer review cannot be expected in local channels, and partly because the indicator connected to institutional funding of research is not meant to subsidize in-house publishing. Publication channels with questionable procedures for peer review have not included the register of approved publication channels.

In addition to the definition, there is a need for a comprehensive data source with bibliographic data that can be connected to persons and their institutional affiliations. These data need to be well structured (thereby comparable and measurable), verifiable (in external data sources, e.g., in the library information sources), and validated (intersubjective agreement on what is included according to the definition). These needs are now possible to serve due to the development during the past two decades of Current Research Information Systems (CRIS). They can be designed to produce quality-assured metadata at the level of institutions or countries. CRIS systems at the institutional level have become widespread recently, in both locally and commercially developed solutions (Sivertsen, 2019).

Norway is one of the few countries which has a fully integrated noncommercial CRIS system at the national level. CRISTIN (The Current Research Information System in Norway; cristin.no) is a shared system for all research organizations in the public sector: universities, university colleges, university hospitals, and independent research institutes. The Norwegian model, which is now used for institutional funding in all sectors, was a driver in the development of a shared system. One reason is that many publications are affiliated with more than one institution and need to be treated as such in the validation process and in the indicator. Another reason is that transparency across institutions stimulates data quality. Every institution can see and check all other institutions’ data. The publication database in the CRIS system is also online and open to society at large.

The costs of running Cristin would not be legitimate without multiple use of the same data. References to publications are registered only once, after which they can be used in CV’s, applications to research councils, evaluations, annual reports, internal administration, bibliographies for Open Archives, links to full text, etc. Cristin has more data about persons, projects, and publications than is needed for the Norwegian Model. The data for component A are in a separate database called the Norwegian Science Index (NSI). Component B is based on NSI data.

Table 1
Publication Points in Norway

	In channels at (the normal) level 1	In channels at (the high) level 2
Articles in journals and series (ISSN)	1	3
Articles in books (ISBN)	0.7	1
Books (ISBN titles)	5	8

Component B of the Norwegian Model is the publication indicator. In the measurement for the funding formula by the end of each year, the publications are weighted as they are counted. The intention is to balance between field-specific publishing patterns, thereby making the publication output comparable across research areas and institutions that may have different research profiles. In one dimension, three main publication types are given different weights: articles in journals and series (ISSN), articles in books (ISBN), and books (ISBN). In another dimension, publication channels are divided into two levels to stimulate publishing in the most prestigious and demanding publication channels within each field of research. The highest level is named “Level 2”. It includes only the leading and most selective international journals, series, and book publishers. There is also a quantitative restriction, since the publication channels selected for Level 2 can, only in total, represent up to 20% of the world’s publications in each field. The weighting of publications by type and channel is summarized in Table 1.

Publication points are measured at the level of institutions, not at the level of individual researchers. The points for publications with multiple authors representing several institutions are fractionalized among the participating institutions according to their number of participating authors. Since 2015, the fractional counting method has been modified by using the square root of fractions (Sivertsen, 2016b). This counting method has recently been developed further into a new general bibliometric counting method for contributions to scientific publications called modified fractional counting (MFC) (Sivertsen et al., 2019). Compared to traditional fractional counting, MFC eliminates the extreme differences in contributions over time that otherwise occur between scientists who mainly publish alone or in small groups and those who publish with large groups of coauthors. As an extra benefit, we find that scientists in different fields of research turn out to have comparable average contributions to scientific articles.

Table 2
Peer-reviewed Scientific and Scholarly Publications in the Norwegian Science Index (NSI) 2011–2017 by Publication Type and Area of Research

	Natural Sciences and Engineering	Health Sciences	Social Sciences	Humanities
Articles in journals and series (ISSN)	52,031	40,587	19,414	9,334
Articles in books (ISBN)	6,987	2,136	11,369	7,323
Books (ISBN titles)	122	107	826	802
Sum	59,140	42,830	31,609	17,549

The list of journals, series, and book publishers on “Level 2” is revised annually in collaboration with national councils in each discipline or field of research. These councils propose changes to an interdisciplinary National Publishing Board, which governs the process on behalf of all institutions and has the final decision. Bibliometric statistics (world production versus national production in channels on both levels and citation statistics for publication channels) are used as an aid in this process, but not as criteria by themselves.

From the start, the register of journals, series, and book publishers has needed quality assurance on level 1 as well. Journals with only local authorship or questionable peer review and publishing procedures have not been included. With the increase in “predatory journals” where one can publish rapidly against payment, the list also serves the purpose of good-quality open access publishing.

3 Data Used for Analysis in This Article

We now turn to how we use data from the Norwegian Science Index (NSI, component A as explained above) for the analyses presented in this article. This data source has a total of 151,038 publications from 2011 to 2017. Table 2 summarizes the number of publications per area of research and publication type.

In most results presented in this article, we include only the publications from the social sciences (31,609 publications) and humanities (17,549 publications), a total of 49,068 publications. Of these, 58.6 percent are articles in journals or series, 38.1 percent are articles in books, and 3.3 percent are books. All of the analyses are done with whole counts, and all publications are weighted the same = 1 (the weighting for publication points in Table 1 is not applied).

4 The Representation of the SSH in Scopus and Web of Science

Of all 151,038 publications in NSI 2011–2017 that are represented in Table 2, WoS covered 62.9 percent while Scopus covered 76.5 percent. The journal name, ISSN-number, and e-ISSN numbers were used to match with NSI data.

The coverage varies by area of research, as shown in *Figure 1*. The results are largely the same as in our previous study (Aksnes & Sivertsen, 2019), but here, we have used data from a longer period of time and applied a more recent version of the Scopus Journal List (2017). The SSH have a more limited coverage in both databases. Before we return to a discussion of this observation, we present eight examples based on a similar analysis at the subfield level within the SSH in *Figure 2*. We observe that, just as between the four major areas of research, there are also disciplinary differences in the coverage of subfields within an area of research.

We note that although Scopus covers the scientific and scholarly literature of the SSH more extensively than WoS, the pattern of deficiencies is the same. Previous studies such as Archambault et al. (2009) have shown that there is an extremely strong correlation in the number of articles per country in Scopus and WoS, with Scopus providing the largest numbers. This reflects that the two products have similar profile and biases. Although the providers of Scopus (Elsevier) and WoS (Clarivate Analytics) claim to be increasingly covering the world’s scientific and scholarly literature comprehensively, both products are selective in practice as well as in principle. To have success on the market, these products depend not only on the coverage but also on the quality and relevance of their contents, as well as on their production costs. The provider of WoS, Clarivate Analytics, explicitly inherits a tradition in which Eugene Garfield (1979) demonstrated that information retrieval theory (Bradford’s law of scattering) and citation analysis support the idea of

Table 3
Publication Types as Percentage Shares within Areas of Research (Based on Table 2)

	Natural Sciences and Engineering	Health Sciences	Social Sciences	Humanities
Articles in journals and series (ISSN)	88.0%	94.8%	61.4%	53.5%
Articles in books (ISBN)	11.8%	5.0%	36.0%	41.9%
Books (ISBN titles)	0.2%	0.2%	2.6%	4.6%
Sum	100%	100%	100%	100%

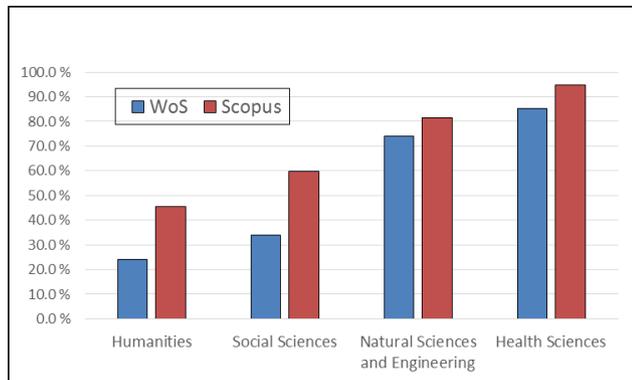


Figure 1. Percentage shares of publications in NSI (totals in Table 2) that were covered by Web of Science (WoS) and Scopus, 2011–2017

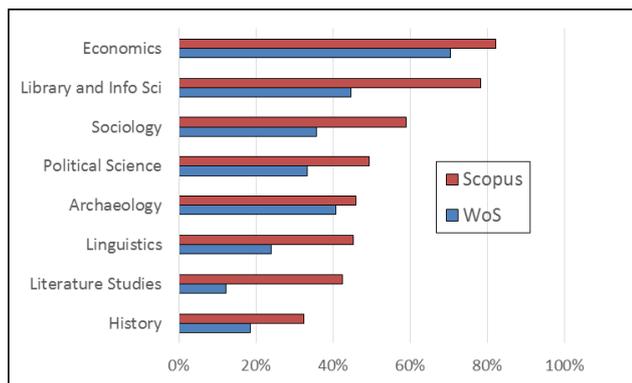


Figure 2. Same data and analysis as in Figure 1 with eight subfields in the SSH as examples

indexing mainly the “core journals”. Scopus is based on the same principle. The general picture is that although Scopus has a broader coverage, the two data sources follow the same pattern in the representation of major areas of research and their subdisciplines. We can see from our data that the deficiencies in the SSH are mainly due to incomplete coverage of the international journals, limited or no coverage of national disciplinary journals and very limited coverage of peer-reviewed scholarly books. However, these types of scholarly publications are

particularly prevalent in the SSH – for good reasons, as we argue now.

5 Publication Types and Language Use in the SSH

In Table 3, we have recalculated the numbers in Table 2 as percentages within each area of research. We observe that publications in books are much more prevalent in the SSH than in the health sciences and the natural sciences and engineering, where journal publishing is dominating. This is one of the reasons for the limited coverage of the SSH in WoS and Scopus.

Another reason for the limited coverage of the SSH is related to the use of languages in scientific and scholarly publications. This is seen in Figure 3 as stable differences between the areas of research in the percentages of the publications that are in international languages. Publications in the natural sciences and engineering and in the health sciences are almost always in international languages (and very seldom in other international languages than English). Publications in the SSH also appear in the national language (here: Norwegian). Particularly in the humanities, the international language may also be in other languages than English, e.g., German or French.

Publishing in books and journals, and publishing in a national versus an international language, is often discussed as conflicting alternatives. However, our data indicate that the most active researchers in the SSH combine the alternatives in practice. Of all 3,182 researchers with at least seven publications during the seven years that we cover in our data, 72 percent published in both the national language and international language and 88 percent published in both books and journals. The continued use of national languages in the SSH is not only present in Norway but also in seven other European countries (Kulczycki et al., 2018). Neither are book

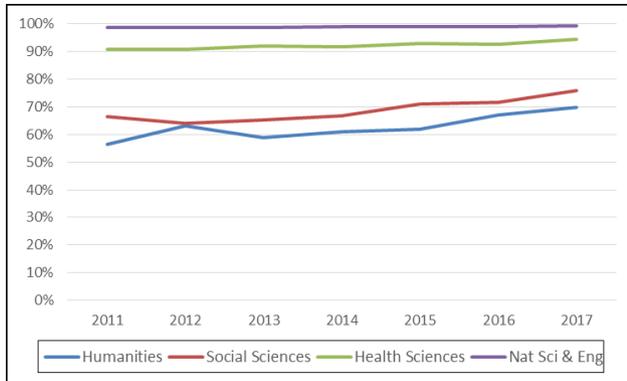


Figure 3. Percentage publications in international languages in major areas of research, 2011–2017

publications disappearing from scholarly communication in the SSH (Engels et al., 2018). We now discuss some possible reasons for practicing book publishing and national language publishing in the SSH.

The stability of the heterogeneous publication patterns within the SSH indicates that the choice of language and publication type is not just a question of new trends versus old traditions. Publication patterns are more deeply rooted in scholarly norms, methods, and practices. The monograph, the edited book, and the journal article represent different methodologies and organizations of research that may all need to be used at different times. The choice of language depends on the international scholarly relevance of the research versus the societal relevance for the culture and society being studied. One and the same research project may well contribute with different parts to both dimensions. The SSH would probably lose their *raison d'être* and support from society by disconnecting from the surrounding culture and society to mainly communicate in international journals that are only read by peers abroad. Nevertheless, publishing in those specialized journals on the international level is necessary to be confronted with and inspired by the scholarly standards, critical discussions, and new developments among other experts in the field. Hence, there are several reasons for why we observe in our data that individual researchers in the SSH in practice *do both*: They publish in both books and journals and in more than one language.

In another publication (Sivertsen, 2018a), I have proposed the concept of *balanced multilingualism* as a basis for governing the tensions between strategies for internationalization and excellence in research on the one hand and strategies for societal relevance and participation on the other. Balanced multilingualism can be a dynamic and empirically based concept with

which it will be possible to promote both types of strategies at the same time without just defending status quo or only focusing on one of the strategies. The idea has now resulted in the so-called Helsinki Initiative on Multilingualism in Scholarly Communication.¹ Policy makers, administrators, universities, research institutions, research funders, libraries, and researchers are invited to sign the initiative and to support multilingualism in scholarly communication. The latest version of the call of the Helsinki Initiative is given below.

Helsinki Initiative on Multilingualism in Scholarly Communication

Research is international. That's the way we like it! Multilingualism keeps locally relevant research alive. Protect it! Disseminating research results in your own language creates impact. Endorse it! It is vital to interact with society and share knowledge beyond academia. Promote it! Infrastructure of scholarly communication in national languages is fragile. Don't lose it!

The signatories of the Helsinki Initiative on Multilingualism in Scholarly Communication support the following recommendations to be adopted by policy-makers, leaders, universities, research institutions, research funders, libraries, and researchers:

A. Support dissemination of research results for the full benefit of the society.

Make sure researchers are merited for disseminating research results beyond academia and for interacting with heritage, culture, and society.

Make sure equal access to researched knowledge is provided in a variety of languages.

B. Protect national infrastructures for publishing locally relevant research.

Make sure not-for-profit journals and book publishers have both sufficient resources and the support needed to maintain high standards of quality control and research integrity.

Make sure national journals and book publishers are safeguarded in their transition to open access.

C. Promote language diversity in research assessment, evaluation, and funding systems.

Make sure that in the process of expert-based evaluation, high quality research is valued regardless of the publishing language or publication channel.

¹ <https://www.helsinki-initiative.org/>

Make sure that when metrics-based systems are utilized, journal and book publications in all languages are adequately taken into account.

Helsinki Initiative on Multilingualism in Scholarly Communication has been prepared by the Federation of Finnish Learned Societies (TSV), the Committee for Public Information (TJNK), the Finnish Association for Scholarly Publishing, Universities Norway (UHR) and the COST Action “European Network for Research Evaluation in the Social Sciences and the Humanities” (ENRESSH).

“In all languages” campaign is a wake-up call for policy-makers, leaders, universities, research institutions, research funders, libraries, and researchers to promote multilingualism in scholarly communication. Participate by posting in Twitter or Facebook a statement or video of your or your colleagues’ support for multilingualism in scholarly communication, of course #InAllLanguages.

6 Interaction with Society in the SSH

All areas of research interact with society in specific ways. Medical research interacts with health care, engineering with, e.g., transportation, and biology with, e.g., agriculture. The SSH are also always at work in society, but they do so within specific societal and cultural contexts. They study these contexts and inform and educate them in return. This does not imply that SSH research can be considered “local”. Some of the disciplines of the SSH have been international in language use and communication for more than 2,000 years. But they have always been so within the societal and cultural contexts that they belong to and reflect on.

The SSH will sometimes contribute significantly in sectors of society where other areas of research contribute more often, such as in health care, technological innovation, job creation, and industry. However, the daily and widespread *normal* societal interaction (Sivertsen & Meijer, 2018) of the SSH can be expected and must be respected in more *typical* cultural and societal sectors and domains, such as democratic development, policy design, public administration, international affairs, integration and understanding of different languages and cultures, education at all levels, cultural life, media and information, and in investigating and informing about history, the “memory of society”. In these sectors and domains, one will find that societal impact usually

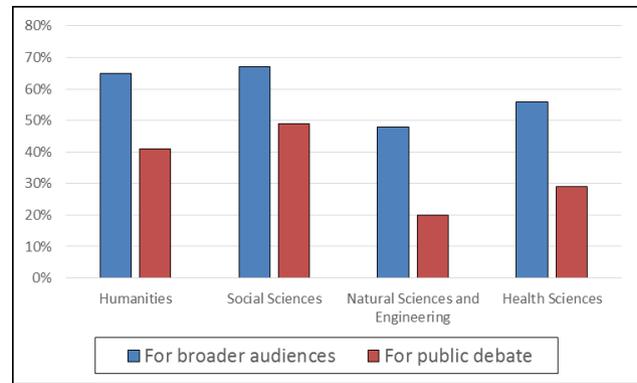


Figure 4. Percentages of Norway’s university professors who in a survey claimed to have published at least once for a broader audience or for public debate during 2010–2012.

is in place as organized interaction and responsibilities between the SSH and other institutions of civilization with related purposes, such as school system, social welfare institutions, cultural institutions, media, and institutions and organizations providing the basis for evidence-based policies.

Specific for the interaction with society of the SSH is that communication can often take place *directly in the language of the people*. This is one explanation for the more frequent use of the national language in scientific and scholarly publications from the SSH. A survey of all academic staff of Norwegian universities (Kyvik & Sivertsen, 2013) showed that popularizing in publications for a wider audience is more frequent in the SSH than in the other areas of research. They are also more active in participating in societal debates with their own publications in newspapers, etc. These differences are shown in Figure 4.

7 Examples of Studies of SSH Research Based on More Comprehensive Data

The Norwegian model and the Cistin system presented in Section 2 above are examples of a trend toward the establishment of noncommercial national information systems in some countries. This trend has supported an increase in output-based studies of research in the SSH. This field of research is quite new and began to flourish in terms of international comparisons (e.g. Engels et al., 2018; Kulczycki et al., 2018, Kulczycki et al., 2019) after the establishment of the COST network ENRESSH mentioned in the introduction. The increased activity is now the

basis for a new series of biannual conferences focusing on Research Evaluation in the SSH (RESSH, established in Rennes 2015, continued in Antwerp 2017 and in Valencia in 2019).

The ECOOM group at the University of Antwerp and the Scholarly Communication Research Group at the Adam Mickiewicz University in Poznań are particularly active. The first group developed and is running the Flemish Bibliographic Database for the SSH (VABB-SHW) for a similar purpose as the Norwegian CRISTIN system. They have used the data for studying several aspects of the publishing patterns of the SSH that have rarely been studied before. The second more recently established group focuses especially on the SSH with an interest in what shapes publishing practices and how research evaluation systems transform the scholarly communication. Here are some examples of studies, not only from the two groups just mentioned:

The ECOOM group studied general changes in the publication patterns over a decade (2000–2009), finding growth in the output, particularly a steady increase in the number and the proportion of publications in English, however, with no overall shift away from book publishing (Engels et al., 2012). They found almost identical evolutions in the use of English as a publication language by comparing data from CRIS in Flanders and Norway; however, WoS coverage was stable for Norway but had been increasing rapidly for Flanders, probably because of differences in the parameters used for performance-based funding of universities (Ossenblok et al., 2012). Internationalization was also found in book publishing. Although peer-reviewed books were increasingly published abroad and in English, non-peer-reviewed book literature remained firmly domestic and published in the Dutch language (Verleysen et al., 2014). Although the humanities are more continentally oriented in their book publishing, the social sciences are firmly Anglo-Saxon oriented (Verleysen & Engels, 2014). A study of coauthorship patterns in the SSH indicated that collaborative publishing in the SSH is increasing with a sharp decline in single-author publishing (Ossenblok et al., 2014). A study of 753 peer-reviewed edited books and the 12,913 chapters published therein revealed that not only coauthorships but also coediting and publishing different chapters in the same books are indicators of scholarly collaboration in the SSH (Ossenblok & Engels, 2015). The editors of scholarly books are mostly established researchers, produce more book chapters and monographs than do other researchers, and are more productive (Ossenblok et al., 2015). In an analysis

of five cohorts, Guns, Eykens and Engels (2019) showed a continuing trend across all cohorts and in both the SSH towards peer review and use of English. Although there is no trend away from book publications, journal articles are increasingly published in WoS-indexed journals.

On the basis of CRIS data, other researchers have provided deeper insight into the publishing patterns of particular fields of research, such as political science (Chi, 2015) and law (van Leeuwen et al., 2016). There are also studies based on CRIS data that study policy-related questions across all fields of research, not only the SSH. With data from the CRIS of the University of Helsinki, Puuska (2009) examined the effects of a scholar's position and gender on publishing productivity in several types of scientific publications: monographs, articles in journals, articles in edited books, and articles in conference proceedings. Aksnes et al. (2013) studied the mobility of researchers on the basis of CRIS data from the four main Norwegian universities.

Other studies have contributed to a critical examination of how CRIS data are used for statistics, evaluation, and funding in research management, most often with suggestions for further development of data and indicators (Sivertsen & van Leeuwen, 2014; Diaz-Faes et al., 2016; Kulczycki, 2017; Savic et al., 2017; Giménez-Toledo et al., 2016; Giménez-Toledo et al., 2017; Giménez-Toledo et al., 2019), sometimes only describing potential negative effects of such use (Hammarfelt & De Rijcke, 2014).

8 Discussion: How to Evaluate Research and Scholarly Publishing in the SSH

The presence of publications in Scopus or WoS has increasingly become a criterion in evaluations of research in the SSH (SSH). Some countries have even installed protocols for research evaluation or performance-based funding models where publications that are indexed by the commercial databases are treated separately in indicators of “internationalization” and “research quality”. In other countries, there is a general belief that research quality can be promoted in the SSH by expecting more publications in the limited number of international journals that have been selected for indexing. Consequently, for several years already, Elsevier and Clarivate Analytics have experienced a pressure from researchers in the SSH to have more journals indexed.

Both providers have responded by increasing the coverage of journals and book series, and, recently, even of books in the SSH. However, the coverage of the scholarly publication output in the SSH is still limited, as has been demonstrated in this article. The shortage is mainly due to the more heterogeneous scholarly publication patterns in the SSH where publishing in international journals is supplemented by book publishing and the use of journals in the native languages (Hicks, 2004; Archambault et al., 2006; Engels et al., 2012; Sivertsen, 2014).

Just as with the abuse of Journal Impact Factors in research assessment of individual performance in the natural sciences and engineering and in the health sciences (Zhang et al., 2017), the “coverage criterion” in the SSH represents an artifact which is external to and beyond the control of the scholarly norms and standards that it is sought to represent. It creates unnecessary tensions between fields in the SSH with different degrees of coverage in the databases. It also creates debates about what will happen to the use of books and native languages in the SSH. In these debates, the general development toward publishing in journals covered by Scopus or WoS is often perceived as “inevitable” and driven by new evaluation regimes, not by internal scholarly standards. In this article, I have proposed an understanding of the processes of internationalization in the SSH which is independent of the “coverage criterion” and instead related to concepts of field-specific research excellence and societal relevance in the SSH.

In a historical perspective, it is easy to demonstrate that the SSH are not originally “national” in their publishing practices. They started by being international within an academic elite. In Europe, Latin was the first of several international languages that have been used during several centuries. The “nationalization” of the SSH is closely connected to the democratization of education and cultural and social life in the 20th century. Today, the quality and relevance of research in the SSH are checked not only by peers but also directly by society.

Internationalization is important for research quality and for specialization on new themes. Interaction with society is just as important for realizing the ultimate aims of knowledge creation. Taking both purposes into consideration at the same time, there is no reason to apply a general hierarchy of languages or publication types in the assessment of research in the SSH. All the communication purposes in all different areas of research, and all the languages and publication types needed to fulfill these purposes, should be considered in a holistic manner without exclusions or priorities whenever research in the SSH is evaluated.

References

- Aagaard, K. (2018). Performance-based research funding in Denmark: The adoption and translation of the Norwegian model. *Journal of Data and Information Science*, 3(4), 20–30.
- Aagaard, K., Bloch, C., & Schneider, J. W. (2015). Impacts of performance-based research funding systems: The case of the Norwegian Publication Indicator. *Research Evaluation*, 24(2), 106–117.
- Aksnes, D. W., Rorstad, K., Piro, F. N., & Sivertsen, G. (2013). Are mobile researchers more productive and cited than non-mobile researchers? A large-scale study of Norwegian scientists. *Research Evaluation*, 22(4), 215–223.
- Aksnes, D. W., & Sivertsen, G. (2019). A criteria-based assessment of the coverage of Scopus and Web of Science. *Journal of Data and Information Science*, 4(1), 1–21.
- Archambault, E., Vignola-Gagne, E., Cote, G., Lariviere, V., & Gingras, Y. (2006). Benchmarking scientific output in the social sciences and humanities: The limits of existing databases. *Scientometrics*, 68(3), 329–342.
- Archambault, E., Campbell, D., Gingras, Y., & Lariviere, V. (2009). Comparing bibliometric statistics obtained from the Web of Science and Scopus. *Journal of the American Society for Information Science and Technology*, 60(7), 1320–1326.
- Chi, P. (2015). Changing publication and citation patterns in political science in Germany. *Scientometrics*, 105(3), 1833–1848.
- Cleere, L., & Ma, L. (2018). A local Adaptation in an output-based research support scheme (OBRSS) at University College Dublin. *Journal of Data and Information Science*, 3(4), 74–84.
- Debackere, K., Arnold, E., Sivertsen, G., Spaapen, J., & Sturn, D. (2017). *Performance-based Research Funding Systems*. Brussels: European Union, Directorate-General for Research and Innovation.
- Díaz-Faes, A. A., Bordons, M., & van Leeuwen, T. N. (2016). Integrating metrics to measure research performance in social sciences and humanities: The case of the Spanish CSIC. *Research Evaluation*, 25(4), 451–460.
- Engels, T. C., Ossenblok, T. L., & Spruyt, E. H. (2012). Changing publication patterns in the social sciences and humanities 2000–2009. *Scientometrics*, 93(2), 373–390.
- Engels, T. C., & Guns, R. (2018). The Flemish performance-based research funding system: A unique variant of the Norwegian model. *Journal of Data and Information Science*, 3(4), 45–60.
- Engels, T. C., Starcic, A. I., Kulczycki, E., Pölonen, J., & Sivertsen, G. (2018). Are book publications disappearing from scholarly communication in the social sciences and humanities? *Aslib Journal of Information Management*, 70(6), 592–607.
- Garfield, E., & Merton, R. K. (1979). *Citation indexing: Its theory and application in science, Technology and Humanities* (Vol. 8). New York: John Wiley & Sons.
- Giménez-Toledo, E., Mañana-Rodríguez, J., Engels, T. C. E., Ingwersen, P., Pölonen, J., Sivertsen, G.,... Zuccala, A. A. (2016). Taking scholarly books into account: Current developments in five European countries. *Scientometrics*, 107(2), 685–699.
- Giménez-Toledo, E., Mañana-Rodríguez, J., Engels, T. C., Guns, R., Kulczycki, E., Ochsner, M.,... Zuccala, A. A. (2019). Taking scholarly books into account, part II: A comparison of 19 European countries in evaluation and funding. *Scientometrics*, 118(1), 233–251.

- Giménez-Toledo, E., Mañana-Rodríguez, J., & Sivertsen, G. (2017). Scholarly book publishing: Its information sources for evaluation in the social sciences and humanities. *Research Evaluation*, 26(2), 91–101.
- Guns, R., Eykens, J., & Engels, T. C. (2019). To what extent do successive Cohorts adopt different publication patterns? Peer Review, Language Use, and Publication Types in the Social Sciences and Humanities. *Frontiers in Research Metrics and Analytics*, 3, 1–16.
- Hammarfelt, B. (2018). Taking comfort in points: The appeal of the Norwegian Model in Sweden. *Journal of Data and Information Science*, 3(4), 85–95.
- Hammarfelt, B., & De Rijcke, S. (2015). Accountability in context: Effects of research evaluation systems on publication practices, disciplinary norms, and individual working routines in the faculty of Arts at Uppsala University. *Research Evaluation*, 24(1), 63–77.
- Hicks, D. (2004). The four literatures of social science. In H. Moed, W. Glänzel, & U. Schmoch (Eds.), *Handbook of quantitative science and technology research* (pp. 473–496). Dordrecht: Kluwer Academic Publishers.
- Hicks, D. (2012). Performance-based university research funding systems. *Research Policy*, 41(2), 251–261.
- Jonkers, K., & Zacharewicz, T. (2015). *Performance based funding: A comparative assessment of their use and nature in EU Member States*. Brussels: JRC Science for Policy Report.
- Kulczycki, E. (2017). Assessing publications through a bibliometric indicator: The case of comprehensive evaluation of scientific units in Poland. *Research Evaluation*, 26(1), 41–52.
- Kulczycki, E., & Korytkowski, P. (2018). Redesigning the model of book evaluation in the Polish performance-based research funding system. *Journal of Data and Information Science*, 3(4), 61–73.
- Kulczycki, E., Engels, T. C., Pölonen, J., Bruun, K., Dušková, M., Guns, R., ... Zuccala, A. (2018). Publication patterns in the social sciences and humanities: Evidence from eight European countries. *Scientometrics*, 116(1), 463–486.
- Kulczycki, E., Rozkosz, E. A., Engels, T. C. E., Guns, R., Hołowiecki, M., & Pölonen, J. (2019). How to identify peer-reviewed publications: Open-identity labels in scholarly book publishing. *PLoS One*, 14(3), e0214423.
- Kyvik, S., & Sivertsen, G. (2013). Økende forskningsformidling. *Forskningspolitikk*, 4(213), 1617.
- Ossenblok, T. L. B., Engels, T. C., & Sivertsen, G. (2012). The representation of the social sciences and humanities in the Web of Science – a comparison of publication patterns and incentive structures in Flanders and Norway (2005–9). *Research Evaluation*, 21(4), 280–290.
- Ossenblok, T. L., Verleysen, F. T., & Engels, T. C. (2014). Coauthorship of journal articles and book chapters in the social sciences and humanities (2000–2010). *Journal of the Association for Information Science and Technology*, 65(5), 882–897.
- Ossenblok, T. L., & Engels, T. C. (2015). Edited books in the Social Sciences and Humanities: Characteristics and collaboration analysis. *Scientometrics*, 104(1), 219–237.
- Ossenblok, T. L., Guns, R., & Thelwall, M. (2015). Book editors in the social sciences and humanities: An analysis of publication and collaboration patterns of established researchers in Flanders. *Learned Publishing*, 28(4), 261–273.
- Pölonen, J. (2018). Applications of, and experiences with, the Norwegian Model in Finland. *Journal of Data and Information Science*, 3(4), 31–44.
- Puuska, H. (2010). Effects of scholar's gender and professional position on publishing productivity in different publication types. Analysis of a Finnish university. *Scientometrics*, 82(2), 419–437.
- Savić, M., Ivanović, M., & Surla, B. D. (2017). Analysis of intra-institutional research collaboration: A case of a Serbian faculty of sciences. *Scientometrics*, 110(1), 195–216.
- Sile, L., Pölonen, J., Sivertsen, G., Guns, R., Engels, T. C., Arefiev, P., ... Macan, B. (2018). Comprehensiveness of national bibliographic databases for social sciences and humanities: Findings from a European survey. *Research Evaluation*, 27(4), 310–322.
- Sivertsen, G., & Larsen, B. (2012). Comprehensive bibliographic coverage of the social sciences and humanities in a citation index: An empirical analysis of the potential. *Scientometrics*, 91(2), 567–575.
- Sivertsen, G. & van Leeuwen, T. (2014). *Scholarly publication patterns in the social sciences and humanities and their relationship with research assessment*. Science, Technology & Innovation Indicators 2014. Thematic Paper 2. Utrecht: Dialogic.
- Sivertsen, G. (2016a). Patterns of internationalization and criteria for research assessment in the social sciences and humanities. *Scientometrics*, 107(2), 357–368.
- Sivertsen, G. (2016b). A bibliometric indicator with a balanced representation of all fields. In Rafols, I., Mollas-Gallart, J., Castro-Martínez, E., Woolley, R. (Eds.), *Proceedings of the 21ST International Conference on Science and Technology Indicators* (pp. 910-914). Valencia: Editorial Universitat Politècnica de València.
- Sivertsen, G. (2017). Unique, but still best practice? The Research Excellence Framework (REF) from an international perspective. *Palgrave Communications*, 3, 17078.
- Sivertsen, G. (2018a). *Balanced multilingualism in research*. BiD: textos universitaris de biblioteconomia i documentació, 40, <http://dx.doi.org/10.1344/BiD2018.40.25>.
- Sivertsen, G. (2018b). The Norwegian Model in Norway. *Journal of Data and Information Science*, 3(4), 2–18.
- Sivertsen, G., & Meijer, I. (2018). *Evaluating and improving research-society relations: The role of normal and extraordinary impact*. R-QUEST Policy Brief no. 3, NIFU.
- Sivertsen, G., Rousseau, R., & Zhang, L. (2019). Measuring scientific contributions with modified fractional counting. *Journal of Informetrics*, 13(2), 679–694.
- Sivertsen, G. (2019). Developing Current Research Information Systems (CRIS) as data sources for studies of research. In W. Glänzel, H. F. Moed, U. Schmoch, & M. Thelwall (Eds.), *Springer Handbook of Science and Technology Indicators*. Heidelberg: Springer Verlag.
- van Leeuwen, T. N., van Wijk, E., & Wouters, P. F. (2016). Bibliometric analysis of output and impact based on CRIS data: A case study on the registered output of a Dutch university. *Scientometrics*, 106(1), 1–16.
- Verleysen, F. T., & Engels, T. C. (2014). Internationalization of peer reviewed and non-peer reviewed book publications in the Social Sciences and Humanities. *Scientometrics*, 101(2), 1431–1444.

- Verleysen, F. T., & Engels, T. C. (2014). Barycenter representation of book publishing internationalization in the Social Sciences and Humanities. *Journal of Informetrics*, 8(1), 234–240.
- Zhang, L., Rousseau, R., & Sivertsen, G. (2017). Science deserves to be judged by its contents, not by its wrapping: Revisiting Seglen's work on journal impact and research evaluation. *PLoS One*, 12(3), e0174205.