

Emanuel Kulczycki  
Scholarly Communication Research Group  
Adam Mickiewicz University in Poznań  
Poland

## Short Term Scientific Mission (STSM)

### Report

#### **COST ACTION 15137**

European Network for Research Evaluation in the Social Sciences and the Humanities  
(ENRESSH)

Topic 3: Comparison of national and regional databases of social sciences and  
humanities research outcomes

**TSM Reference Number:** COST-STSM-CA15137-35312, CA15137

### 1. Summary

The main objective of the STSM ENRESSH is aimed at strengthening existing networks and fostering collaborations by facilitating researchers participating in a COST Action to visit an institution in another Participating COST Country.

My STSM was carried out at the University of Antwerp. The visit took place from 5th and 18th February 2017. During the visit, I worked with and learned from researchers working at the Flemish Centre for R&D Monitoring (ECOOM Antwerp). We have confronted the productivity and the outputs structure in various SSH disciplines, using data from the national information systems: The VABB-SHW (Flanders) and the PBN (Poland). We have analyzed characteristics of the diverse dissemination channels used in the SSH and focused on the publication patterns in SSH.

During my STSM main activities consisted of the meetings with the staff members of the ECOOM Antwerp, presentations of their current research tasks, discussing the design and structure of the Flemish and the Polish databases.

## 2. Contribution to the Goals of the ENRESSH action

My STSM has contributed to Tasks 1 and 2 of Workgroup 3: “Confront productivity and structure of outputs in various SSH disciplines, using data from existing databases and repositories (identify dissemination profiles, clusters and hybrids)” and “Analyse characteristics of diverse dissemination channels used in the SSH.”

## 3. Description of the main results obtained

The aim of my STSM work was twofold: to show what kind of data are available on the publications of Polish scholars in the social sciences and humanities (SSH) and to identify such elements in the structures of the Flemish and the Polish databases that might be compared. Below, I have described a process of preparing the data for a comparative analysis.

### PART I: Polish Scholarly Bibliography

#### Polish Scholarly Bibliography (PBN) – the Polish CRIS

Polska Bibliografia Naukowa [PBN] (Polish Scholarly Bibliography)

<https://pbn-ms.opi.org.pl/>

#### Institution:

Ośrodek Przetwarzania Informacji – Państwowy Instytut Badawczy (National Information Processing Institute)

The higher education institutions have to submit the data every 6 months. However, the database is daily updated by the PBN editors and the administrators in the higher education institutions.

The publication lists and the metadata are validated by the PBN editors and the administrators in the higher education institutions.

In a single record of publication (e.g. article), there are metadata about: journal, title, authors, institution, ISSN, article type, volume, year, start and end pages, language, DOI (if available), and sometimes other data.

### **Legal framework of the database**

The PBN is a part of the POL-on system. There are many regulations and acts designed for different parts of the POL-on. There are two the most important acts for the PBN:

1. Ustawa z dnia 30 kwietnia 2010 r. o zasadach finansowania nauki (Dz.U. 2010 nr 96 poz. 615)
2. Rozporządzenie Ministra Nauki i Szkolnictwa Wyższego zmieniające rozporządzenie w sprawie Systemu Informacji o Nauce. Z dnia 26 lutego 2016 r. (Dz. U. 2016 poz. 309)
3. Rozporządzenie Ministra Nauki i Szkolnictwa Wyższego w sprawie Systemu Informacji o Nauce z dnia 29 czerwca 2015 r. (Dz. U. 2015 poz. 944)

### **Officially declared uses of the database**

1. To create a public bibliography of a person or an institution
2. To get to know the achievements of Polish scholars
3. To get to know the achievements of Polish scholarly institutions
4. To submit a journal questionnaire during an evaluation period (for the Polish Journal Ranking purposes)
5. To enable users to deposit full texts of scholarly publications in central repository
6. To integrate the PBN resources with the institutional repositories of the Polish universities and scientific units
7. To allow users to adjust personal and institutional bibliographies according to the requirements of other institutions.

## **PART II: Publication types and criteria for inclusion in the VABB-SHW and the PBN**

### **Publication Types and Criteria for Inclusion**

In Table 1, I have compared the publication types and criteria for inclusion in the VABB-SHW and the PBN.

### **Final single publication record in the PBN**

A single publication record includes various information. However, the data quality is not so good. Therefore, I have reduced the data for such an information:

#### **Single publication record**

1. ID
2. Author
3. Institute (i.e. affiliation assigned to a publication which identifies a scientific unit)
4. Language of Publication
5. Title of Publication
6. Number of all authors of the publication
7. Type of publication
8. Year
9. Joint Evaluation Group (in Polish: Grupa Wspólnej Oceny) [JEG]
10. OECD field

**Table 1.** Publication types and criteria for inclusion in the VABB-SHW and the PBN.

VABB-SHW	Criteria for inclusion	PBN	Criteria for inclusion
Journal article	<ul style="list-style-type: none"> <li>• Be publicly accessible</li> <li>• Be unambiguously identifiable by an ISBN or an ISSN number</li> <li>• Make a contribution to the development of new insights or to applications resulting from these insights</li> <li>• Have been subjected, prior to publication, to a demonstrable peer-review process by scholars who are experts in the (sub)field to which the publication belongs. Peer review should be carried out by an editorial board, a permanent reading committee, external referees or by a combination of these. The review should contain input from outside the author(s)'s research team and should be independent from the author(s). The author cannot organize the peer review of her or his own draft manuscript*</li> </ul>	Journal article	<ol style="list-style-type: none"> <li>1. Articles in journals indexed on the Polish Journal Ranking prepared by the Ministry of Science and Higher Education in Poland. This ranking organizes journals into three lists—A, B, and C: <ul style="list-style-type: none"> <li>• The <i>A list</i>: journals indexed in the Journal Citation Reports (from 15 to 50 points)</li> <li>• The <i>B list</i>: Polish (until 2014, also foreign) journals without an impact factor (from 1 to 15 points)</li> <li>• The <i>C list</i>: journals indexed in the European Reference Index for the Humanities (from 10 to 25 points).</li> </ul> </li> <li>2. Articles in foreign journals (at least ½ author sheet long).</li> </ol>
Monograph		Monograph	<ul style="list-style-type: none"> <li>• it has to be scientific paper</li> <li>• it has to present an original research problem,</li> <li>• it has to be reviewed,</li> <li>• it has to contain a bibliography (or footnotes/endnotes): this criterion is not obligatory for the maps.</li> <li>• its length should be at least six author sheets,</li> <li>• it has to be published as a standalone volume (it is not obligatory for the maps) and copies of publication were sent to the libraries or a publication is published on-line,</li> <li>• it has to be identifiable by an ISBN, ISMN, ISSN or DOI.</li> </ul>
Edited book		Edited book	
Conference proceeding		Book chapter	<ol style="list-style-type: none"> <li>1. The length of chapter (or map) should be at least a half an author sheet.</li> <li>2. Entries in encyclopedias and dictionaries should be at least 0,25 author sheet</li> <li>3. If a book chapter is classified as conference proceedings indexed in the Web of Science, then the length of chapter does not matter.</li> </ol>
Book chapter			

*Note:* \* Extra criterion for individual publications eligible for inclusion introduced by the Gezaghebbend Panel (Authoritative Panel): at least four pages long.

## Fields & Disciplines classification

### Two Polish Fields classification and OECD Fields

In Poland, two classifications of the disciplines are used.

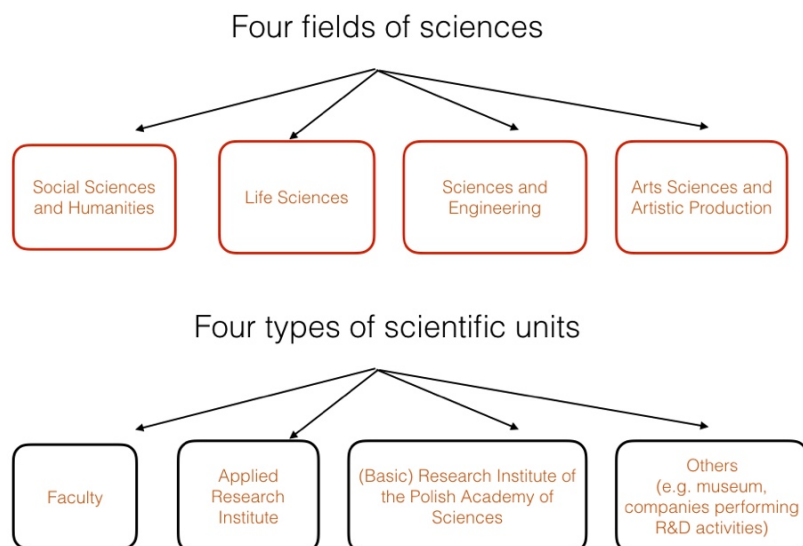
**The first** classification is for teaching and academic promotion purposes. In this classification, there are 8 areas, 22 fields, and 102 disciplines.

**The other** classification is for the performance-based research funding system (PRFS) purposes. In this classification – in the most cases – a few disciplines are combined into a Joint Evaluation Group (JEG). Thus, 22 fields are merged into 4 fields, and 102 disciplines are merged into 29 JEGs. Some JEGs are multiplied for each type of scientific unit. For instance, there is a JEG called ‘History’ for four types of scientific units (a faculty, an institute of the Polish Academy of Sciences, a research institute, and other). Finally, there are four ‘History’ JEGs. Below, I provide a more detailed explanation how this classification in the PRFS actually works.

None of this classification is based on the OECD fields.

### Scientific unit and fields of sciences

In the Polish research evaluation system, each scientific unit is assigned to: (1) one of four fields of sciences (e.g., SSH: social sciences and humanities), (2) one of four types of scientific units (e.g., faculties and research institutes) (see Figure 1).

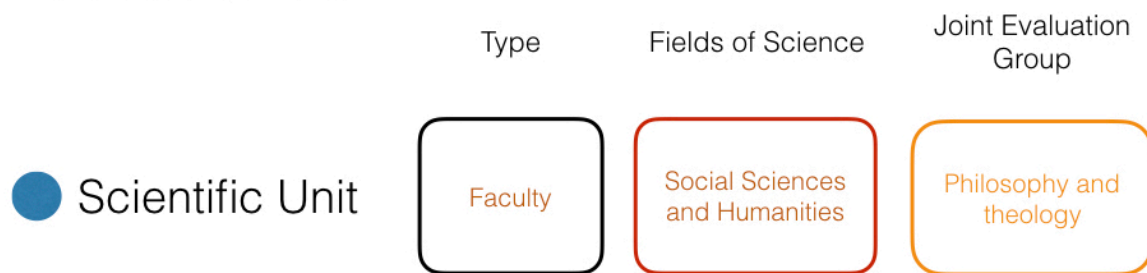


**Figure 1.** Fields of sciences and types of scientific units.

Moreover, as Figure 2 shows, each unit is assigned to a JEG (Joint Evaluation Group). Finally, each unit is characterized by: type, field of sciences, JEG. For example, faculties of philosophy were assigned to a single JEG (“Philosophy and theology”) designed for faculties from the SSH field.

**Each scientific unit has assigned:**

1. type
2. fields of science
3. joint evaluation group



**Figure 2.** Characteristics of scientific units.

Finally, all scientific units are mapped to 60 JEGs (29 unique JEGs in terms of disciplines).

## JEGs in the SSH

Two fields from the Polish PRFS cover the SSH: (1) social sciences & humanities and (2) art sciences & artistic production. In these two fields, there are 11 unique JEGs (in terms of disciplines):

### Humanities and Social Sciences

1. Philosophy and theology
2. Economics & Business
3. History
4. Social Sciences
5. Language, Bibliology, Culture Studies
6. Law

## Art sciences and artistic production

7. Music
8. Arts
9. Performing arts
10. Theatre
11. Plastic arts

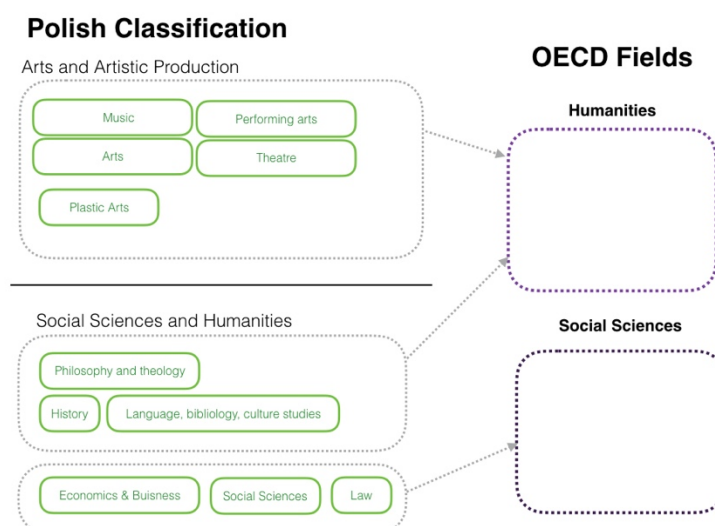
## Assigning the Publications to the JEGs and the OECD fields

All publications from a single scientific unit are assigned to one JEG. To the best of my knowledge, there is no other way for the publication classification by disciplines.

In the original set of 60 JEGs used in the 2013 evaluation, there are 963 scientific units. In our data, we have 1011 scientific units. This difference results from the scientific unit transformations (splitting or merging the faculty). I have assumed that in our analysis we do not use publications not assigned to the JEGs.

For the analyse purpose, I have mapped all the JEGS to the OECD fields. In this way, we could map all publications from the PBN to six OECD fields.

The JEGs mapping to the OECD field was based on the expert-based decision.



**Figure 3.** Mapping 11 JEGs within two fields of sciences to the OECD fields.

Table 2 presents the result of mapping the Joint Evaluation Groups on the OECD Fields in the social sciences and humanities.



**Table 2.** Mapping the Joint Evaluation Groups (classified according to the Polish fields classification) on the OECD Fields in the social sciences and humanities. *Note:* RI: Research Institute, PAN: Polish Academy of Sciences.

ID	Field of Science (Polish research evaluation system)	Type of scientific unit	Number of Scientific Units	JEG nam (English translation)	JEG name	OECD Field
HS1EK	Humanities and Social Sciences	faculty	93	Economics & Business	Nauki ekonomiczne	Social Sciences
HS1FB	Humanities and Social Sciences	faculty	29	Language, bibliography, culture studies	Nauki filologiczne, bibliologia, nauki o kulturze	Humanities
HS1FT	Humanities and Social Sciences	faculty	16	Philosophy and theology	Filozofia i nauki teologiczne	Humanities
HS1HS	Humanities and Social Sciences	faculty	20	History	Nauki historyczne	Humanities
HS1PR	Humanities and Social Sciences	faculty	25	Law	Nauki prawne	Social Sciences
HS1SP	Humanities and Social Sciences	faculty	93	Social Sciences	Nauki społeczne	Social Sciences
HS2EK	Humanities and Social Sciences	PAN	2	Economics & Business	Nauki ekonomiczne	Social Sciences
HS2FB	Humanities and Social Sciences	PAN	3	Language, bibliography, culture studies	Nauki filologiczne, bibliologia, nauki o kulturze	Humanities
HS2HS	Humanities and Social Sciences	PAN	5	History	Nauki historyczne	Humanities
HS2PR	Humanities and Social Sciences	PAN	1	Law	Nauki prawne	Social Sciences
HS2SP	Humanities and Social Sciences	PAN	3	Social Sciences	Nauki społeczne	Social

						Sciences
HS3EK	Humanities and Social Sciences	RI	4	Economics & Business	Nauki ekonomiczne	Social Sciences
HS3HS	Humanities and Social Sciences	RI	4	History	Nauki historyczne	Humanities
HS3SP	Humanities and Social Sciences	RI	1	Social Sciences	Nauki społeczne	Social Sciences
HS4EK	Humanities and Social Sciences	other	2	Economics & Business	Nauki ekonomiczne	Social Sciences
HS4HS	Humanities and Social Sciences	other	1	History	Nauki historyczne	Humanities
HS4SP	Humanities and Social Sciences	other	1	Social Sciences	Nauki społeczne	Social Sciences
TA1MZ	Arts Sciences and Artistic Production	faculty	35	Music	Nauki muzyczne	Humanities
TA1PK	Arts Sciences and Artistic Production	faculty	39	Arts	Sztuki piękne i konserwacja	Humanities
TA1PR	Arts Sciences and Artistic Production	faculty	14	Performing arts	Sztuki projektowe	Humanities
TA1TF	Arts Sciences and Artistic Production	faculty	14	Theatre	Sztuki teatralne i filmowe	Humanities
TA4PR	Arts Sciences and Artistic Production	other	1	Plastic Arts	Sztuki plastyczne i użytkowe	Humanities

As Table 3 shows, I have compared the discipline classification from the VABB-SHW with the JEGs from the Polish PRFS. In my opinion, we can compare and confront three disciplines (history, law, economics & business) and two other if we decide to merge 'philosophy' and 'theology'.

**Table 3.** Matching the discipline classification in VABB-SHW with the Joint Evaluation Groups in the social sciences and humanities.

<b>Disciplines in VABB-SHW</b>	<b>JEGs in the Polish system that could be matched</b>
Archeology	
Art history	
Communication studies	
History	History
Law	Law
Linguistics	
Literature	
Philosophy	Philosophy and theology
Theology	
Criminology	
Economics & Business	Economics & Business
Educational sciences	
Political science	
Psychology	
Social Health Sciences	
Sociology	

## Data from the PBN

I have 1011 files (XML format) from the PBN.

1 file = publications from 1 scientific unit

XML scheme in the XSD was published by the National Information Processing Institute on 30<sup>th</sup> of July 2016 (<https://pbn-ms.opi.org.pl>).

The good quality data is for the 2009-2015 period.

## Three data sets

**SET A: the whole dataset with duplicates**

**Variables:**

11. ID
12. Author
13. Institute (i.e. affiliation assigned to a publication which identifies a scientific unit)
14. Language of Publication
15. Title of Publication
16. Number of all authors of the publication
17. Type of publication
18. Year
19. JEG
20. OECD

If a publication is published by 3 authors from a given scientific unit, then in our data, there are three records for the same publication assigned for this scientific unit (only the Author variable has a different value).

If a publication is published by 6 authors: 3 authors were from the A scientific unit and 3 authors from the B scientific unit, then in our data there are six records for the same publication assigned to two scientific units (only the Author variable has a different value).

**Final numbers in whole data set (after merging 1011 files but before data cleaning)**

Number of records: 1,580,325

## SET B: the whole data set without duplicates on a scientific unit level

### Variables:

1. ID
2. Institute (i.e. affiliation assigned to a publication which identifies a scientific unit)
3. Language of Publication
4. Title of Publication
5. Number of all authors of the publication
6. Type of publication
7. Year
8. JEGs
9. OECD

In the SET B, there are no duplicated records for a single publication. It means that if a publication was published by 3 authors from a given scientific unit, then in our data, there is only a single row for this publication.

In the SET B, however, if a publication is published by authors from 2 scientific units, then in the dataset there are two records: each for one scientific unit. We do not avoid duplicated records between the scientific units because a publication can be published by scholars from the social sciences and from the natural sciences. In the final set, this publication will be assigned to the both fields.

If a publication was published by 6 authors: 3 authors were from the A scientific unit and 3 authors from the B scientific unit, then in our data there are two records for the same publication assigned to two scientific units (only the Author variable has a different value).

**Final numbers in whole data set (after removing duplicates within scientific units and after merging 1011 files but before data cleaning)**

Number of records: 445,894

## SET C: the whole data set without duplicates

### Variables:

1. ID
2. Language of Publication
3. Title of Publication
4. Number of all authors of the publication
5. Type of publication (book, article, chapter)
6. Year
7. JEGs
8. OECD

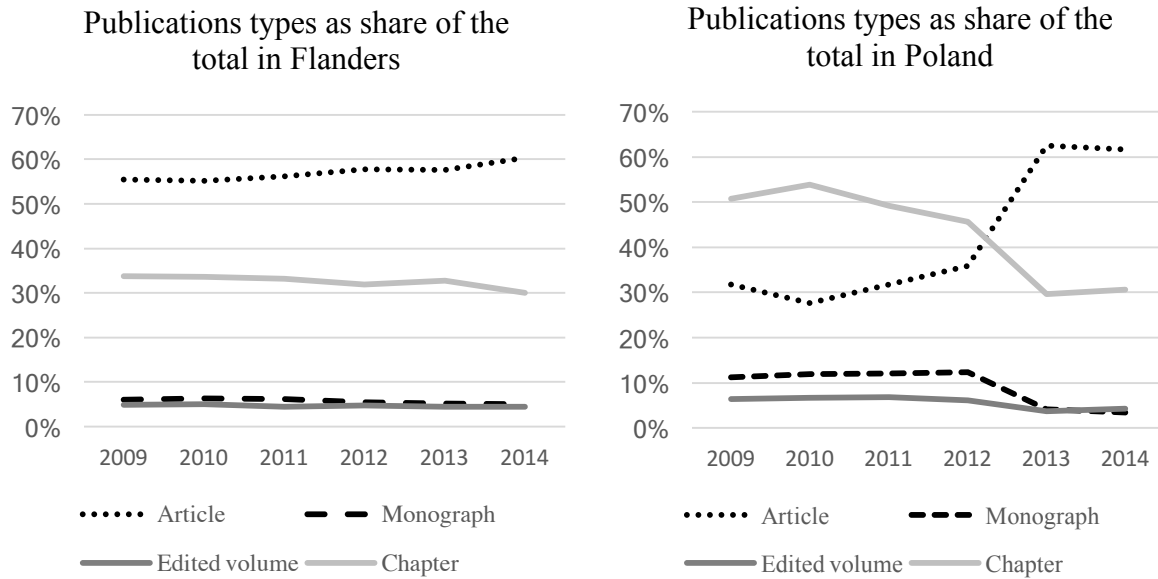
In the SET C, there are no duplicated records for a single publication in the data set. It means that if a publication was published by 6 authors from one or more scientific units, then in our data there is only a single row for this publication.

SET C has no duplicated records for a multi-authored single publication. On contrary, SET B has duplicated records for a multi-authored single publication if authors are from different Polish scientific units.

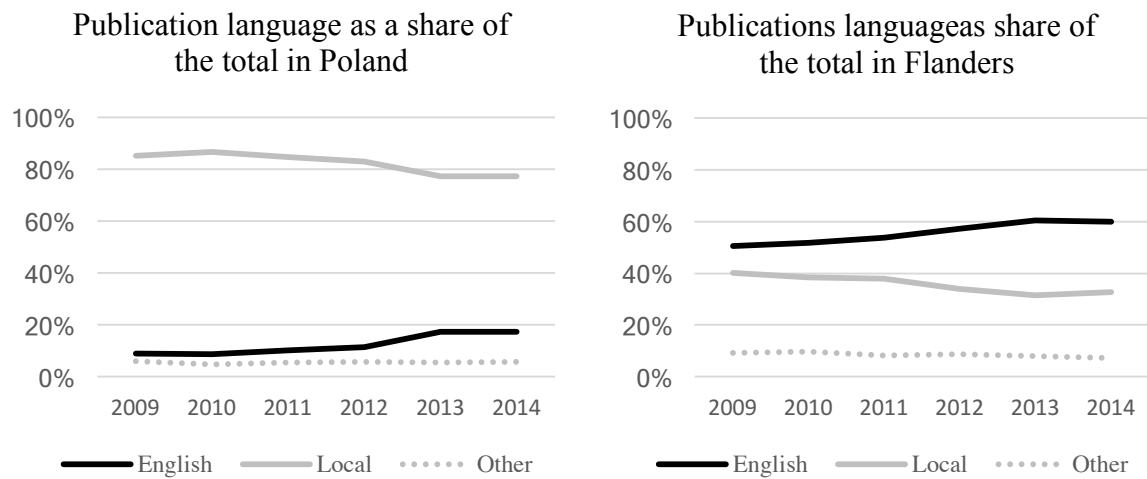
## 4. Results of comparison

**Table 4. Number and percentage publications per publication types in the social sciences and humanities in the 2009–2014 period**

	Flanders ( <i>N</i> )	Flanders (%)	Poland ( <i>N</i> )	Poland (%)
Article	44,419	57.0	35,091	26.2
Monograph	4,445	5.7	14,611	10.9
Edited books	3,652	4.7	9,565	7.1
Chapter	25,354	32.6	74,844	55.8
Total	77,870	100.0	134,111	100.0



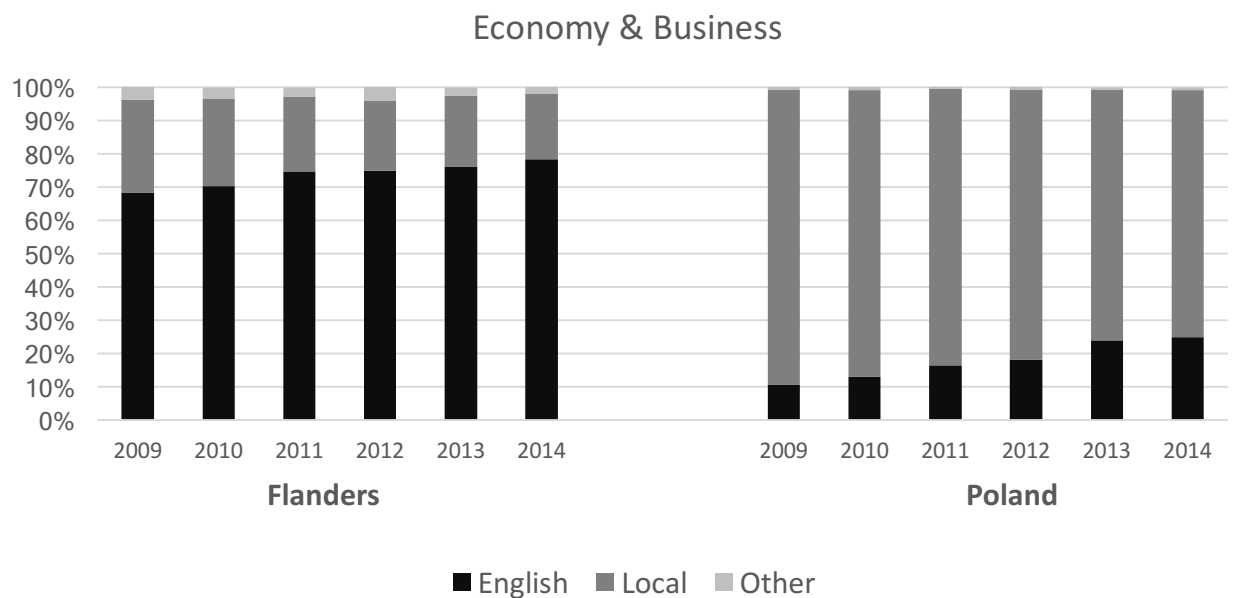
**Figure 4. Publication types as a percentage of the total publications in Flanders and Poland which includes publications in all languages.**



**Figure 5. Publications in English, local and other languages as a percentage of the total, which includes publications in all types of publications (articles, monographs, edited books, chapters).**

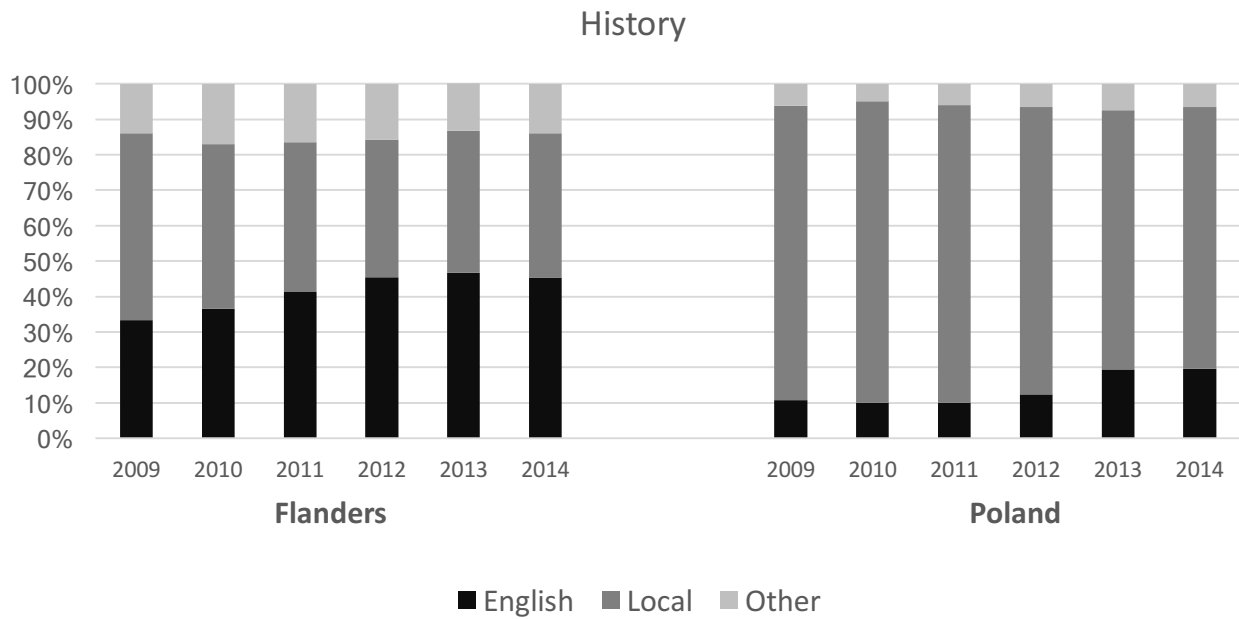
**Table 5. Publications per publication type in the social sciences and humanities in Flanders and Poland by discipline in the 2009–2014 period.**

<i>Publication Type</i>	<i>Country</i>	<i>Economics &amp; Business</i>	<i>History</i>	<i>Law</i>	<i>Philosophy &amp; Theology</i>
Article	Flanders	6,153	1,745	7,793	3,553
	Poland	9,264	3,945	6,775	1,179
Monograph	Flanders	633	313	1,208	321
	Poland	2,474	2,127	2,444	975
Edited books	Flanders	370	247	1,007	393
	Poland	2,201	1,172	1,534	470
Chapter	Flanders	2,798	1,849	5,445	2,440
	Poland	14,312	10,151	12,823	3,212
Total	Flanders	9,954	4,154	15,453	6,707
	Poland	28,152	17,395	17,740	5,836

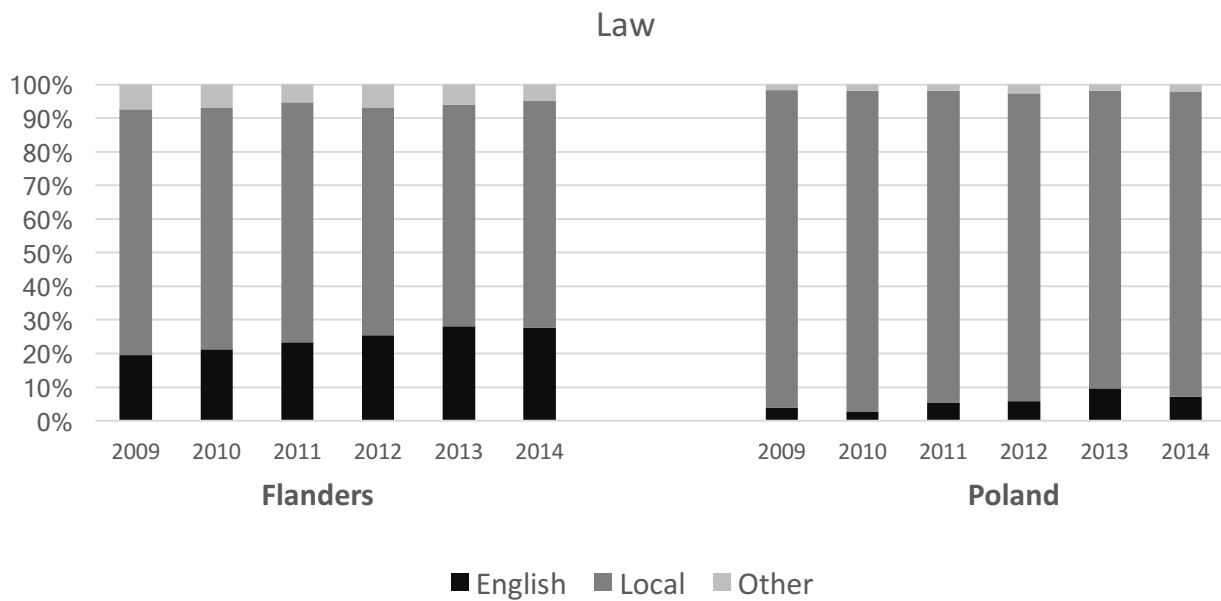


**Figure 6. Publications in English, local and other languages as a percentage of the total, which includes publications in all types of publications (articles, monographs, edited books, chapters).**



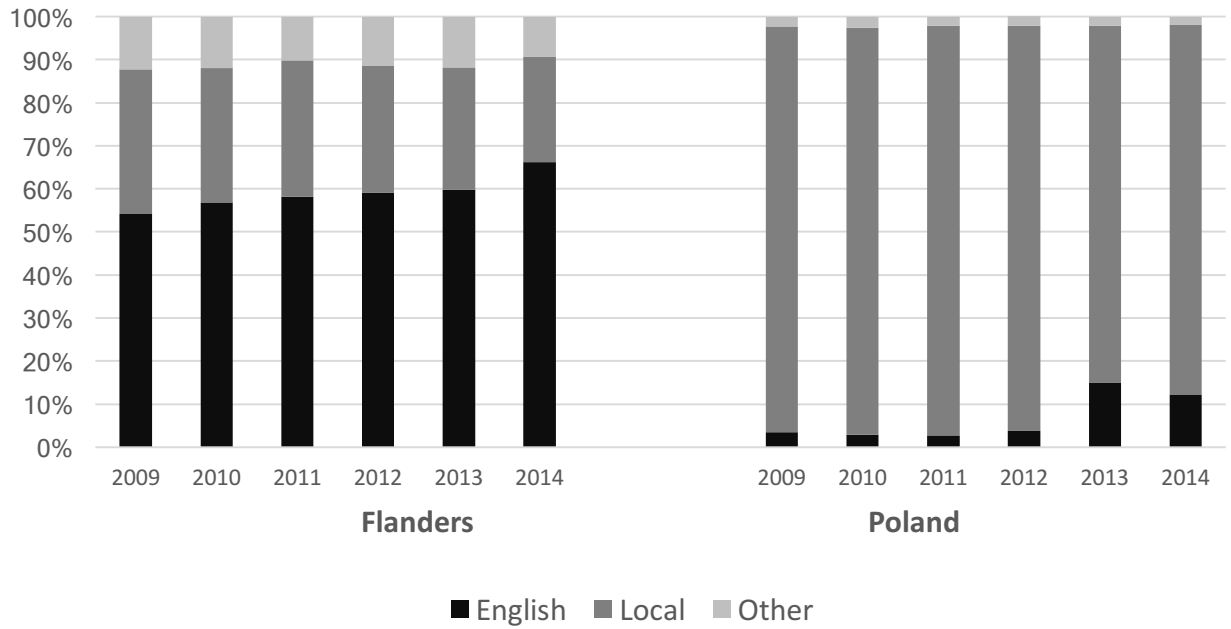


**Figure 7. Publications in English, local and other languages as a percentage of the total, which includes publications in all types of publications (articles, monographs, edited books, chapters).**

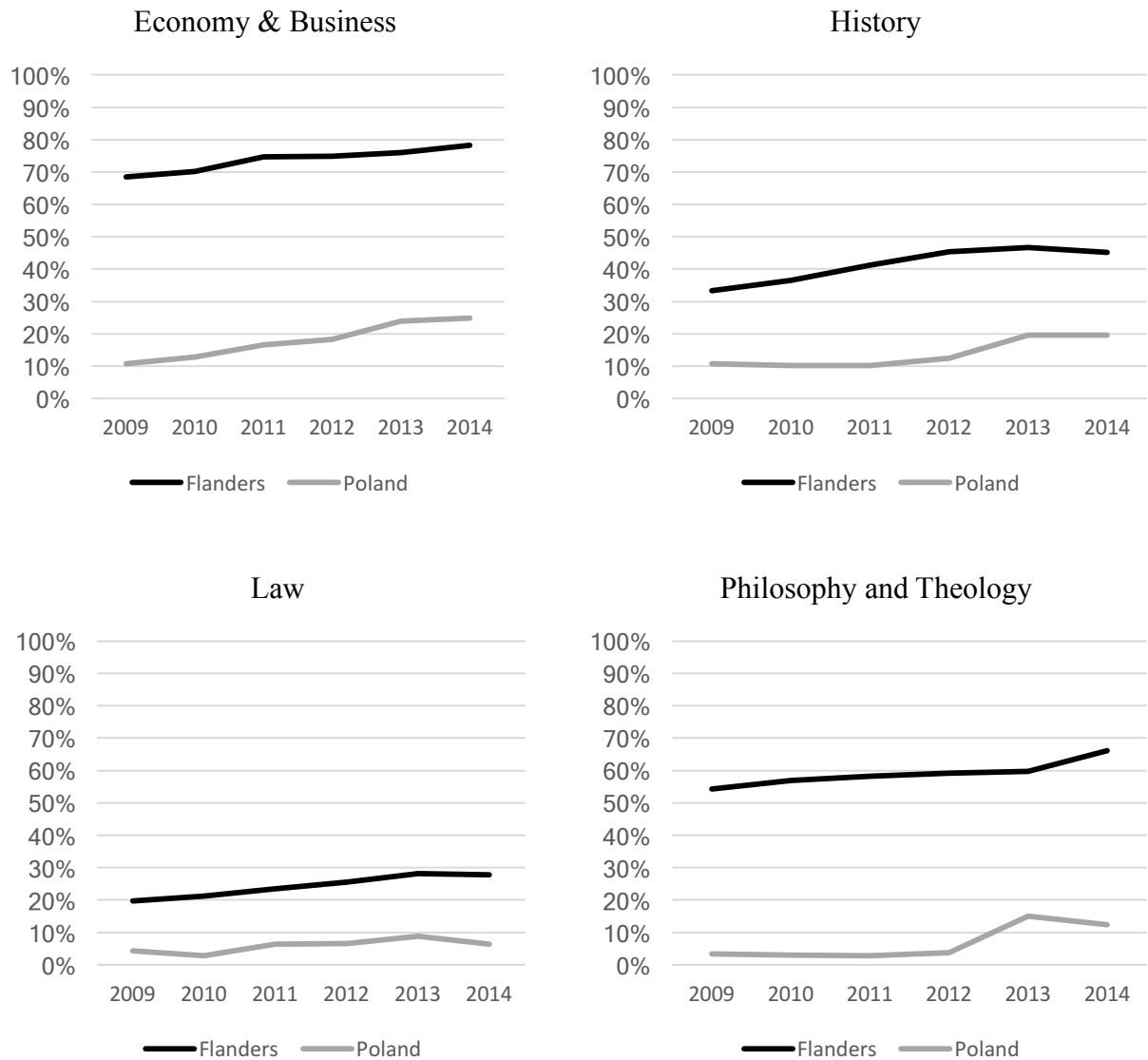


**Figure 7. Publications in English, local and other languages as a percentage of the total, which includes publications in all types of publications (articles, monographs, edited books, chapters).**

### Philosophy and Theology



**Figure 8. Publications in English, local and other languages as a percentage of the total, which includes publications in all types of publications (articles, monographs, edited books, chapters).**



**Figure 9. Publications in English as a percentage of the total, which includes publications in all types of publications (articles, monographs, chapters, conference proceedings) by discipline.**