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Barycenter representation of book publishing internationalization in the Social Sciences and Humanities

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ABSTRACT

This paper introduces a novel application in bibliometrics of the barycenter method. Using places of publication barycenters, we measure internationalization of book publishing in the Social Sciences and Humanities. Based on 2002–2011 data for Flanders, Belgium, we demonstrate how the geographic center of weight of book publishing is different for the Social Sciences than for the Humanities. Whereas the latter still rely predominantly on domestic Flemish and continental European publishers, the former are firmly Anglo-Saxon oriented. The Humanities, however, show a more pronounced evolution toward further internationalization. For the already largely internationally oriented Social Sciences, in most recent years, the share of British publishers has grown. The barycenter method proves to be a valuable tool in the representation of research internationalization of book publications. This is especially the case when applied non-Anglophone countries.

1. Introduction

In recent years scientometric research has seen an increasing use of spatial/geographic information for studying publication patterns and the development of science. One of the many applications of this information is measuring patterns of research internationalization. GIS-technology or other state-of-the-art visualization techniques are increasingly used as analysis and presentation tools (Wang, Ma, Li, Zhang, & Ma, 2013). In this paper, we propose a novel application of the barycenter method for representing internationalization of book publishing in the Social Sciences and Humanities (SSH).

Bibliometric studies have shown that research in the SSH is becoming more international. The rise of quantitative methods and the use of information technology have facilitated communication and comparison of research results with geographically distant colleagues (Melin, 2000; Borgman, 2009). In line with this, there is evidence of increasing international research collaboration as reflected by co-authorships (Benavent-Pérez, Gorraiz, & Gumpenberger, 2012; Newman, 2004; Kyvik, 2003; Leydesdorff, Park, & Wagner, 2013). Not surprisingly, scholars also seek to maximize the international visibility and impact of their research through more frequent use of English as publication language (Engels, Ossenblok, & Spruyt, 2012; Ossenblok, Engels, & Sivertsen, 2012). For their part, the leading citation indexes are expanding their coverage to include a larger share

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of the worldwide scholarly literature (Sivertsen & Larsen, 2012), thereby further facilitating the international exchange of research results.

Internationalization studies in bibliometrics have until now been foremost based on the journal and proceedings literature. The limited availability of sufficient and reliable bibliographic information on book publications (monographs, edited books and book chapters) has longtime prevented their inclusion in bibliometric studies (Hicks, 2004). There is, however, much to suggest that the publication of books by academic researchers is also part of the process of research internationalization. For one thing, over the last couple of decades, the scholarly book publishing trade has become far more globalized and competitive. Many European and North American publishers have expanded their radius of operations, both geographically and content-wise. To counter declining sales of scholarly monographs they have sought out new markets by extending their sales and marketing efforts overseas, and have put more effort in proactive commissioning by contracting the leading scholarly authors, often working in other countries (Thompson, 2005). For their part, scholars are increasingly aware of the symbolic and material rewards that come with publishing with a prestigious international publisher. They are conscious of differentiating aspects of 'publisher quality': the degree of specialization, the editorial process (esp. peer review), market position and marketing prowess, presence in major libraries and bibliographic databases, etc. (Giménez-Toledo & Román-Román, 2009; Giménez-Toledo, Tejada-Artigas, & Manana-Rodriguez, 2013; Goodson, Dillman, & Hira, 1999). Research on the outcomes of the British Research Assessment Exercise (RAE) has indeed shown the substantial benefits for research performance assessment scores of publishing with a first-rate academic publisher (Allen & Heath, 2013). Similarly, for acquiring tenure at (American) university humanities' departments, the esteem of a candidate's book publisher is explicitly or implicitly used as an assessment criterion (Cronin & La Barre, 2004).

In this article, it is our hypothesis that the parallel process of research internationalization in the SSH and the globalization of the academic book publishing trade has caused changes in the spatial dimension of book publishing by academic scholars. We show this for Flanders, Belgium, using a basic but fundamental indicator: the places of publication barycenters of book publications (monographs, edited books and book chapters).

2. Material and method

2.1. VABB-SHW book data

The bibliographic data used for our study is registered in the Flemish Academic Bibliographic Database for the Social Sciences and Humanities ('Vlaams Academisch Bibliografisch Bestand voor de Sociale en Humane Wetenschappen' or VABB-SHW) (see http://www.ecoom.be/en/vabb). The VABB-SHW was constructed in 2008–2010 in view of retrospectively collecting bibliographic information from the year 2000 onwards on all peer reviewed academic publications by authors affiliated with at least one of the five universities in Flanders, Belgium. It thus acts as a complement to data previously obtained solely from the Web of Science (WoS) and is used to calculate part of each university's share in the University Research Fund ('Bijzonder Onderzoeksfonds' or BOF), some 120 million euro yearly granted by the Flemish government to finance basic research. The VABB-SHW contains comprehensive data on almost all SSH publications by scholars working at Flemish universities, but only the peer reviewed publications are taken into account for distribution of the University Research Fund. Peer review procedures of publishers are evaluated by the Authoritative Panel ('Gezaghebbend Panel', or GP), an independent body of academic experts entrusted by the Flemish government to safeguard scientific standards for the VABB-SHW (Engels et al., 2012; Verleysen, Ghesquière, & Engels, 2014). In the present article, we have no intent to measure the effect of the Flemish funding model on internationalization. As the non-WoS publication output of the SSH has been used for the funding model starting in 2010 only, at any rate there is insufficient data to reliably analyze the possible influence of the current funding system.

Our analysis is based on 4098 peer reviewed book publications from the period 2002–2011 registered in the VABB-SHW database. In total, the publications originate from 115 publishers (cfr. Supplementary online material 1 (hereafter SOM1)). The distribution of publications over publishers is highly rightly skewed (min = 1, max = 961, avg = 40.54, SD = 109.05) but does not follow a Lotka or Poisson distribution (Kolmogorov–Smirnov goodness of fit $p < 0.01$ in both cases). All 4098 monographs, edited books and book chapters were published in either Flanders, the rest of continental Europe, the United Kingdom or the United States. Together, the four aggregated locations account for over 99.5% of all peer reviewed book publications registered in the VABB-SHW. Based on author affiliation(s), they are assigned to one or more SSH disciplines (Engels et al., 2012). The total comprises 319 monographs, 585 edited books and 3194 book chapters. Since the VABB-SHW collects publications by scholars affiliated with a Flemish university, not all chapters that appeared in the edited books are included. Equally, a number of the included chapters have been published in non-included book titles edited by scholars without a Flemish academic affiliation. For our study, all places of publication of books were identified as available in the VABB-SHW database. In the online supplementary data attached to the electronic version of this article (SOM2) the number of publications per place of publication is available. For 8% of all records, the data contained more than one place of publication. Here, the first one mentioned was used. Missing places of publication were searched for and added. All places of publication were labeled as belonging to either 1° Flanders, 2° the rest of continental Europe (defined as the EU-27 except the United Kingdom plus its acceding or candidate members Croatia, Iceland, Montenegro, Serbia, the FYR of Macedonia and Turkey; plus Albania, Belarus, Moldavia, Norway and Switzerland), 3° the United Kingdom or 4° the USA.

2.2. The barycenter method

A barycenter of book publications is defined as the geographic center of weight of their places of publication, or the imaginary point at which a flat, weightless but stiff map of the world would balance if weights of identical value were placed on it so that each weight represented the place of publication of one monograph, edited book or book chapter (Bartlett, 1985; Jin & Rousseau, 2001; Rousseau, 2008). Displacement of the publication barycenter over time visualizes changes in book publication patterns. In particular, it shows the growing or diminishing share of a place or region of publication within the total volume of book publications.

However, in (Verleysen & Engels, 2013) we observed that the geographic representation of barycenters results in difficulties in interpreting changes in distance to Flanders. In the present article, we therefore locate the barycenters within a standardized polygon, where each vertex represents one geographic location. The abstract polygonal representation is preferable over localization on a geographic map whenever, as is the case here, no geographic unity between the different locations (e.g. several neighboring countries) exists. As we here seek to determine the publication weight of four geographic locations, 1° Flanders, 2° the rest of continental Europe, 3° the UK and 4° the USA, the polygon is a square. The center of this square is the origin (0, 0) of an *X*- and a *Y*-axis, and would be the barycenter location if the system were completely in balance – that is, if each of the four geographic locations represented an exact same number of publications. Correspondingly, the relative proximity of a barycenter to one geographic location (vertex) is indicative of that location's share in the total of the 4098 publications studied here. Each vertex lies at the same distance of 1 to the origin of the *X*- and the *Y*-axis; consequently the four vertices each have two geometric coordinates: (1, 1); (1, −1); (−1, −1) and (−1, 1). Barycenter locations (C_1, C_2) within the polygon are now determined by calculating a weighted average of the vertices' coordinates according to the number of publications for each of the four geographic locations.

The barycentre is thus defined as $C = (C_1, C_2)$

$$C_1 = \frac{\sum_{j=1}^{n} m_j L_{j,1}}{M}; \quad C_2 = \frac{\sum_{j=1}^{n} m_j L_{j,2}}{M}; \quad \text{with} \quad M = \sum_{j=1}^{n} m_j$$

where $L_j = (L_{j,1}, L_{j,2})$ is the location of the *j*th element in the system (the place of the *j*th vertex of a regular *n*-gon), m_j is the contribution of the *j*th element, and m_j/M is the relative contribution of the *j*th element. For further methodological elaboration, we refer to Rousseau (1989) and Rousseau (2008).

In the results below, we first focus on the barycenters of the 12 SSH disciplines for which we have sufficient data. Then we look at barycenters for three book publication types. One of the issues addressed for both SSH disciplines and publication types is barycenter displacement over time. In view of this, we divided our data in two five-year series, 2002–2006 and 2007–2011, to allow for robust comparison. Only the 12 disciplines that represent at least 50 publications in each of the two periods have been included in the analysis. For each (aggregation) of SS and H discipline(s) and each of three publication types, the publication shares for the four geographic locations were determined. A Chi-square (χ^2) test of goodness of fit was performed on their absolute values to determine whether results for 2007–2011 are significantly different from those for 2002–2006. We calculated χ^2 based on the observed number of publications per geographic location for the second period (2007–2011) and the expected number for this period based upon the proportion of publications per geographic location for the first period (2002–2006). As our analysis is limited to four locations, there are three degrees of freedom. χ^2 reaches significance when it exceeds 7.81. Rejection of the null hypothesis (no change) is traditionally at $p < 0.05$. In our results, we use exact *p*-values (Schneider, 2013).

3. Results and discussion

3.1. 12 disciplines

Fig. 1 shows barycenter locations for 2002–2011 for 12 SSH disciplines, as well as for the aggregated SS and H. The actual distribution of publications per discipline over the (non-aggregated) places of publication is available in the online supplementary data file attached to the electronic version of this article (SOM2).

There is a striking contrast between the barycenter locations for the SS and the H: whereas H disciplines publish most frequently with a Flemish or continental European based publisher, the SS disciplines tend much more strongly toward British publishers. Two somewhat atypical cases for the Humanities are Linguistics and Law. The barycenter location for Linguistics can be explained by the market share of specialized continental European publishers (e.g. De Gruyter in Germany and John Benjamins in the Netherlands) for linguistic research conducted at Flemish universities. In the case of Law, a discipline with a large degree of domestic, Dutch language journal publishing, the less domestic barycenter location is most likely explained by the relatively high share of book publications on European and other international law and on the impact thereof on the Belgian legal system. For all SSH disciplines as practiced in Flanders, publishers located in the United States play a far more modest role than their British and continental European counterparts.

The presentation of the barycenter locations in Fig. 1 (and Fig. 2) is one of two essentially different options. In total, there are two sets of each 12 possible permutations of essentially the same representation. Fig. 1 presents the first option, the

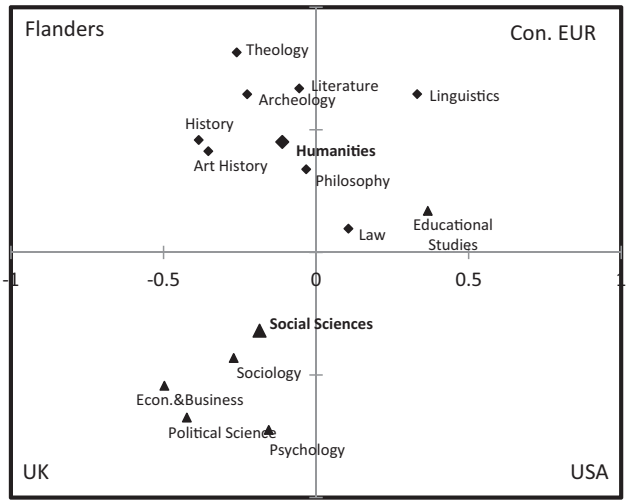

Fig. 1. Barycenters of SSH disciplines and aggregated Social Sciences (▲) and Humanities (♦) (2002–2011).

extra figure in the supplementary online material (SOM3) the second. In Fig. 1, the clockwise order of the locations assigned to the vertices starting in the left-hand corner of the polygon is (A) Flanders, (B) Continental Europe, (C) USA, and (D) UK. The alternative representation used for the extra figure changes this order to ABDC. In Fig. 1, the degree of internationalization is visualized by the maximum geometric distance in a square, away from Flanders (A) and diagonally toward the most geographically distant location, the USA (C).

By comparing the subperiods 2002–2006 and 2007–2011 it becomes apparent how the book publication barycenters of individual and aggregated SS and H have moved. Table 1 shows the changing shares of the four geographic locations, as well as the results of the Chi-square test based on the absolute values.

As Table 1 shows, at the level of the aggregated SSH the 35.24% share of Flemish-based publishers for 2002–2006 has diminished by 13.32% for 2007–2011, while those of continental European and British publishers have increased by 7.82% and 5.43%, respectively. The share of US-based publishers has remained virtually stable (+0.08%) for the SSH as a whole.

The evolution for the aggregated SSH hides a marked discrepancy between the aggregated SS and the H. For the whole 2002–2011 timeframe, the SS opt for more than nine out of ten book publications for an Anglo-Saxon (i.e. UK- or US-based) publisher, while the H adhere for seven to eight publications out of ten to a local Flemish or other continental European publisher. There has also been a different evolution: whereas for the aggregated SS the shares of Flanders, continental Europe and the USA have all three diminished by 2–3%, the share of British publishers has increased by almost 8%. In contrast, for the H the Flemish share has decreased by a substantial 18.3%, while the shares of continental European (+10.31%), British (+6.82%) and American (+1.17%) publishers have all grown.

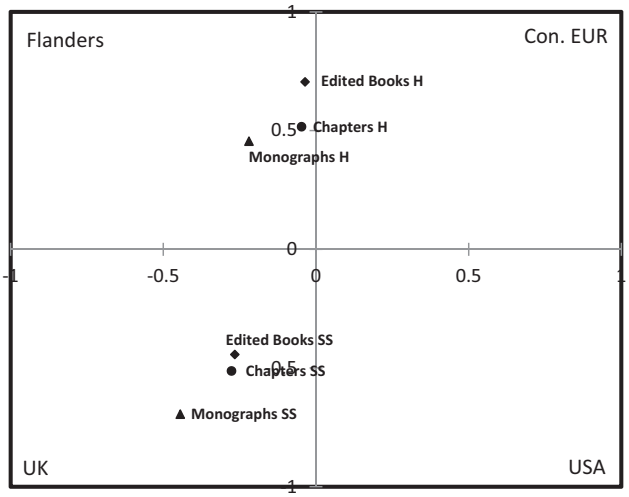

Fig. 2. Barycenters for monographs, edited books and book chapters (2002–2011).

Table 1
Shares of book publications for Flanders, Continental Europe (ConEur), United Kingdom (UK) and United States of America (USA) (2002–2006 and 2007–2011).

SSH discipline	Subperiod	*n*	Flan (%)	ConEur (%)	UK (%)	USA (%)	*p*-value	χ^2
Economics and Business	2002–2006	173	7.51	19.08	65.90	7.51	0.12	5.68
	2007–2011	169	3.55	15.38	72.78	8.28		
Educational Studies	2002–2006	79	6.33	54.43	20.25	18.99	0.03	8.94
	2007–2011	104	4.81	51.92	30.77	12.50		
Political Science	2002–2006	85	4.71	14.12	64.71	16.47	0.18	4.88
	2007–2011	203	0.49	14.78	71.43	13.30		
Psychology	2002–2006	59	3.39	15.25	45.76	35.59	0.01[a]	8.48[a]
	2007–2011	57	1.75	7.02	64.91	26.32		
Sociology	2002–2006	46	6.52	23.91	60.87	8.70	1.68E−19	79.58
	2007–2011	91	5.49	21.98	56.04	16.48		
All Social Sciences	2002–2006	442	6.11	24.43	54.30	15.16	7.40E−18	82.87
	2007–2011	624	2.88	21.47	62.18	13.46		
Art History	2002–2006	68	66.18	7.35	17.65	8.82	6.60E−35	162.05
	2007–2011	167	37.13	32.34	23.95	6.59		
History	2002–2006	90	63.33	14.44	17.78	4.44	1.45E−10	48.78
	2007–2011	235	42.13	28.94	22.55	6.38		
Law	2002–2006	164	7.93	56.71	28.66	6.71	5.18E−93	430.60
	2007–2011	270	3.33	45.56	46.30	4.81		
Linguistics	2002–2006	228	21.05	62.28	16.23	0.44	0.52[a]	1.27[a]
	2007–2011	427	16.16	65.57	15.22	3.04		
Literature	2002–2006	268	56.72	30.60	10.07	2.61	2.33E−22	103.83
	2007–2011	348	29.02	51.44	12.93	6.61		
Philosophy	2002–2006	179	42.46	36.87	15.08	5.59	1.04E−23	110.10
	2007–2011	283	14.49	44.52	33.57	7.42		
Theology	2002–2006	235	73.19	19.57	3.40	3.83	6.16E−34	157.56
	2007–2011	438	48.63	41.10	7.08	3.20		
All Humanities	2002–2006	1232	45.70	36.28	14.12	3.90	1.10E−74	345.99
	2007–2011	2168	27.40	46.59	20.94	5.07		
All SSH	2002–2006	1674	35.24	33.15	24.73	6.87	3.10E−56	260.74
	2007–2011	2792	21.92	40.97	30.16	6.95		

[a] For two disciplines, Psychology and Linguistics, the Chi-square test when applied to all four locations did not yield a reliable result, due to an expected number of publications for one of the four locations lower than 5. We therefore recalculated χ^2 and the *p*-value by omitting only these locations from the test.

These results imply that over the two subperiods, there has been a more profound evolution toward internationalization on the part of the aggregated H. While overall the SS are far more internationally oriented with regards to places of publication, the H are clearly gaining ground: in 2002–2006 the difference between the SS and the H regarding the total share of non-domestic places of publication was still 39.59%; in 2007–2011 this gap has diminished to 24.52%. All in all, given the already elevated internationalization of book publishing in the SS, a further modest increase has occurred, with an expansion of the British market share during the last five years. In the H, where there was ample room for growth, internationalization is more strongly on the rise, with expanding shares for continental European, British and American publishers alike.

At the lowest aggregation level the percentages and Chi-square results in Table 1 point out that for individual SSH disciplines as well, Political Science and Economics and Business likely excepted, the distributions of publications per geographic location for 2002–2006 and 2007–2011 are significantly different. Of the five Social Sciences, all but one show the same evolution: diminishing shares for Flanders, continental Europe and the USA, and an expanding one for the UK. The exception is Sociology, which shows the share of the USA almost doubling to 16.48%, at the expense of the other three locations. For the H disciplines, the pattern of change is more diverse. We can distinguish a first group consisting of Art History and Theology showing diminishing shares for Flanders and the USA, and growing ones for continental Europe and the UK. For these two disciplines, especially continental Europe has considerably increased its share (+24.99% for Art History; +21.53% for Theology). A second group consist of History, Literature and Philosophy, and shows a diminishing share for Flanders and growing ones for the other three locations. Here, most growth has occurred either for continental Europe (History: +14.50%; Literature: +20.84%) or for the UK (Philosophy: +18.49%). Finally two disciplines each show a distinct pattern. Law shows diminishing shares for all locations but the UK (+17.64%). In Linguistics, the shares of Flanders and the UK have diminished, while those of continental Europe and the USA have both grown by about 3%. It is notable that Linguistics is the only one of the twelve disciplines showing a slightly contracting UK share (−1.01%).

3.2. Three publication types

Publication barycenters for monographs, edited books and book chapters are situated at different locations in the polygon. Fig. 2 shows how barycenters for the three publication types are in a different location for the aggregated SS and the H Fig. 2. Again, it is shown how for the H, Flemish and even more so continental European publishers are predominant for all three publication types, while for the SS British publishers carry the most weight. Most telling in this regard are

Table 2
Shares of monographs, edited books and book chapters for Flanders, Continental Europe, United Kingdom and United States (2002–2006 and 2007–2011).

SSH discipline	Subperiod	*n*	Flan (%)	ConEur (%)	UK (%)	USA (%)	*p*-value	χ^2
Monographs SS	2002–2006	34	2.94	17.65	64.71	14.71	0.13[a]	3.99[a]
	2007–2011	38	2.63	7.89	73.68	15.79		
Monographs H	2002–2006	103	50.49	31.07	11.65	6.80	0.23	4.33
	2007–2011	143	32.87	33.57	27.27	6.29		
Edited books SS	2002–2006	30	3.33	26.67	53.33	16.67	0.004[a]	10.89[a]
	2007–2011	49	0.00	26.53	67.35	6.12		
Edited books H	2002–2006	165	52.73	38.18	6.67	2.42	3.89E−24	112.09
	2007–2011	310	33.87	48.39	13.87	3.87		
Book chapters SS	2002–2006	318	4.72	21.07	57.55	16.67	8.57E−36	166.16
	2007–2011	437	3.20	20.14	61.78	14.87		
Book chapters H	2002–2006	876	44.98	35.39	15.75	3.88	2.44E−74	344.38
	2007–2011	1531	26.00	47.22	21.62	5.16		
Monographs SSH	2002–2006	138	38.41	27.54	24.64	9.42	1.40E−06	29.96
	2007–2011	181	26.52	28.18	37.02	8.29		
Edited books SSH	2002–2006	215	41.86	40.47	13.49	4.19	1.47E−19	90.80
	2007–2011	370	28.38	46.22	21.35	4.05		
Book chapters SSH	2002–2006	1206	34.25	31.51	26.95	7.30	2.78E−72	334.89
	2007–2011	1988	20.77	41.30	30.53	7.39		

[a] For results marked, the Chi-square test when applied to all four locations did not yield a reliable result, due to an expected number of publications for one of the four locations lower than 5. We therefore recalculated χ^2 and the *p*-value by omitting only these locations from the test.)

the barycenters for monographs: while for the H monographs are the most Flemish-oriented type, for the SS they are the least Flemish and the most UK-oriented. Both for the SS and the H, the barycenters of edited books are located slightly closer to Flanders than barycenters for book chapters. This is explained by the fact that academic editors affiliated with a Flemish university will opt more easily for a Flemish or continental European based publisher, while Flemish affiliated chapter authors are often dependent on the choice of publisher of non-Flemish affiliated book editors (see Section 2.1), who obviously are more likely to choose a publisher located outside of Flanders Table 2.

In Table 2 we provide an overview of the evolving shares of the four geographic locations per publication type, as well as the Chi-square test results.

At the level of the aggregated SSH, for all three publication types the share of Flanders has diminished by 11–13%. Continental Europe shows a 5.75% increase for edited books and a 9.79% growth for book chapters, but near stability for monographs. The UK shows for all three types a share growing by 3–12%, while that of the US changes 1% or less for all three types. For the aggregated SS, the share of Flanders has diminished for each publication type, those of continental Europe and the US have also mostly diminished, while that of the UK has grown consistently by 4–14%. For the aggregated H, there has been a drop of 17–19% of the Flemish share for the three publication types. The continental European share for monographs has grown by 2.5%, for edited books and book chapters it has seen a 10–11% increase. Finally, there has been a clear growth of the share of the UK for all three publication types and a more modest one of that of the US.

4. Conclusion

The barycenter method is well applicable to places of publication of books. It offers a concise and easily apprehensible way to represent aspects of internationalization of academic book publishing. The most obvious aspect of internationalization measured by the barycenter method is the dissemination context: publishing books more internationally helps scholars to share their research with a larger circle of the global scholarly community. Undoubtedly, however, places of publication of books are also related to other, more intrinsic aspects of research internationalization. In order to be published with an international publisher based in another country, the topic of a book must hold relevance for a broader, non-local readership (Thompson, 2005). Hence the position of the disciplines in Fig. 1 can also be understood as their position on a spectrum of universality of the research presented. Publication language for books is also clearly linked to place of publication; UK- and US-based publishers, for instance, will only rarely publish books in other languages than English. Due to these considerations, the barycentre method appears to be especially applicable to internationalization studies on non-Anglophone nations, such as the Nordic countries (which have similar data on books available) (Sivertsen, 2009). In view of making comparisons between countries, care should be taken to account for all factors influencing the outcome, in particular the publisher selection at the national level (Verleysen, Ghesquière, & Engels, 2014). For Flanders, future research could analyze the relation between places of publication and international co-authorship and editorship of book publications. It is plausible, after all, that having a foreign co-author or editor facilitates access to publishers in other countries. The results in this article pertaining to the barycenter locations for different publication types already point in this direction. In the more distant future, a comparison between internationalization patterns of book publications and journal articles would be a considerable step forward. At present, such a direct comparison using the method outlined in this article, is not feasible in a reliable way. For journals, there is far greater ambiguity concerning the place of publication (the publisher of the intellectual contents vs. the commercial publishing enterprise), whereas for books, the unambiguous identification of publishers with an established peer

review procedure remains difficult. This has a profound influence on the selection of publications registered in bibliographic databases like the VABB-SHW (Verleysen, Ghesquière, & Engels, 2014). With regards to the relative weight of places of publications, this article has shown a stark contrast between the Social Sciences and the Humanities as practiced at Flemish universities. Humanities scholars more frequently publish their books and chapters with a domestic publisher. However, over the period under study, continental European publishers have overtaken their Flemish-based counterparts with regards to total volume of Humanities book publications. Meanwhile, the Social Sciences are far less reliant on domestic publishers. In 2007–2011, the share of Flemish publishers stood at less than 3% of all Social Sciences book publications. During these years, British publishers have increased their already substantial market share of Social Science book publishing. In spite of – or perhaps because of – their more modest starting point, however, the Humanities show a more pronounced evolution toward further internationalization than the Social Sciences.

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Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.joi.2013.11.008.

References

Allen, N., & Heath, O. (2013). Reputations and research quality in British political science: The importance of journal and publisher rankings in the 2008 RAE. *British Journal of Politics and International Relations*, *15*, 147–162.
Bartlett, A. A. (1985). U.S. population dynamics. *American Journal of Physics*, *53*, 242–248.
Benavent-Pérez, M., Gorraiz, J., & Gumpenberger, C. (2012). The different flavors of research collaboration: A case study of their influence on university excellence in four world regions. *Scientometrics*, http://dx.doi.org/10.1007/s11192-012-0638-4
Borgman, C. L. (2009). The digital future is now: A call to action for the humanities. *DHQ: Digital Humanities Quarterly*, *3*, 1–21.
Cronin, B., & La Barre, K. (2004). Mickey Mouse and Milton: Book publishing in the humanities. *Learned Publishing*, *17*, 85–98.
Engels, T. C. E., Ossenblok, T. L. B., & Spruyt, E. H. J. (2012). Changing publication patterns in the social sciences and humanities, 2000–2009. *Scientometrics*, *93*, 373–390.
Giménez-Toledo, E., & Román-Román, A. (2009). Assessment of humanities and social sciences monographs through their publishers: A review and a study towards a model of evaluation. *Research Evaluation*, *18*, 201–213.
Giménez-Toledo, E., Tejada-Artigas, C., & Manana-Rodriguez, J. (2013). Evaluation of scientific books' publishers in social sciences and humanities: Results of a survey. *Research Evaluation*, *22*, 64–77.
Goodson, L. P., Dillman, B., & Hira, A. (1999). Ranking the presses: Political scientists' evaluations of publisher quality. *PS: Political Science and Politics*, *32*, 257–262.
Hicks, D. (2004). The four literatures of social science. In H. F. Moed, W. Glänzel, & U. Schmoch (Eds.), *Handbook of quantitative science and technology research: The use of publication and patent statistics in studies of S&T systems* (pp. 473–496). Dordrecht: Kluwer Academic.
Jin, B., & Rousseau, R. (2001). An introduction to the barycentre method with an application to China's mean centre of publication. *Libri*, *51*, 225–233.
Kyvik, S. (2003). Changing trends in publishing behaviour among university faculty, 1980–2000. *Scientometrics*, *58*, 35–48.
Leydesdorff, L., Park, H. W., & Wagner, C. (2013). International co-authorship relations in the Social Science Index: Is internationalization leading the network? *arXiv*, *1305*(4242), 1–31.
Melin, G. (2000). Pragmatism and self-organization: Research collaboration on the individual level. *Research Policy*, *29*, 31–40.
Newman, M. E. J. (2004). Co-authorship networks and patterns of scientific collaboration. *Proceedings of the National Academy of Sciences of the United States of America*, *1010*, 5200–5205.
Ossenblok, T. L. B., Engels, T. C. E., & 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*, 280–290.
Rousseau, R. (2008). Triad or tetrad: Another representation. *ISSI Newsletter*, *4*, 5–7.
Rousseau, R. (1989). Kinematical statistics of scientific output. Part II: Standardized polygonal approach. *Revue Française de bibliométrie*, *4*, 65–77.
Schneider, J. W. (2013). *Caveats* for using statistical significance test in research assessments. *Journal of Informetrics*, *7*, 50–62.
Sivertsen, G. (2009). Publication patterns in all fields. In F. Aström, R. Danell, B. Larsen, & J. W. Schneider (Eds.), *Celebrating scholarly communication studies: A Festschrift for Olle Persson at his 60th birthday* (pp. 55–60). ISSI.
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*, 567–575.
Thompson, J. B. (2005). *Books in the digital age. The Transformation of academic and higher education publishing in Britain and the United States*. Cambridge, UK: Polity.
Verleysen, F. T., & Engels, T. C. E. (2013). Measuring internationalisation of book publishing in the Social Sciences and Humanities using the barycentre method. In *14th International Society for Informetrics and Scientometrics Conference* Vienna, Austria, 15th–19th July 2013, (pp. 1170–1175).
Verleysen, F. T., Ghesquière, P., & Engels, T. C. E. (2014). The objectives, design and selection process of the Flemish Academic Bibliographic Database for the Social Sciences and Humanities (VABB-SHW). In W. Blockmans, W. Blockmans, et al. (Eds.), *The use and abuse of bibliometrics*. Academiae Europaea: Portland Press.
Wang, M., Ma, M., Li, M., Zhang, Z., & Ma, J. (2013). Applications and researches of GIS technologies in bibliometrics. In *14th International Society for Informetrics and Scientometrics Conference* Vienna, Austria, 15th–19th July 2013, (pp. 1857–1860).