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Open access in translation studies.

A bibliometric overview of its distribution and development

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Abstract: This article provides an analysis of open access (OA) publishing in translation studies for the 1961-2015 period. To this end, we have taken advantage of the translation-studies (TS) bibliographical database BITRA, which comprised over 75,000 entries as of December 2018, over 21,000 of which had been labelled as OA. The main bibliometric factors we have examined from both synchronic and diachronic perspectives are the global status of OA, publication format, language, topic, kind of publisher and types of websites hosting OA publications, also providing an estimation of how these factors predict OA. The results indicate that open and toll access currently tend to reach a balance due to the dramatic growth experienced by OA in TS. We have also found that OA is still on the increase in TS, although with some notable variations within each of the factors under analysis.

Keywords: open access, translation studies, bibliometrics, publishing practices

1. Introduction

A spectre is haunting the Academia – the spectre of Open Access (OA). Promoters of free access to science are working hard towards a goal that for the first time in history seems feasible in terms of both availability and cost. More and more governments demand publicly funded research to be disseminated in OA. Commercial publishers try to adapt to the times and argue that the rigorous dissemination of science can hardly be performed by free-lancers and part-time publishers without the necessary funds and know-how,

while they declare their availability to furnish open access science - for a cost. Reckless adventurers under the form of predatory journals take advantage of anxious-to-publish academics and provide unfiltered science, also for a profit. However, as far as we know, the debate about the advantages and drawbacks of open access within Translation Studies (TS) has not started yet. The only works we are aware about this is the volume edited by García González and Sandrini (2015), which is basically a call for more OA in TS, and Desblache (2012), who argues that OA TS journals can be helpful in combatting the invisibility of the discipline. As the Plan S evidences,¹ the state of things is changing rapidly, and it is difficult to know to what extent these new winds are affecting our discipline. Open access is a complex phenomenon which urgently needs to be examined from a historical and bibliometric point of view. In this article, we will try to start to do this through a detailed analysis of its development and distribution in TS.

Despite the fact that, according to UNESCO (2015, p. 5), the first open access (OA) peer-reviewed journal dates back as early as 1990, the widespread use of the concept as we understand it nowadays appeared more recently, in 2002, when the Open Society Institute launched the Budapest Open Access Initiative (BOAI). Since then a series of declarations and manifestos, such as the Bethesda Statement on Open Access Publishing and the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, both in 2003, have been drafted and published in order to expand its scope and promote its adoption worldwide. Swan (2012, p. 18) considers that “these three (Budapest, Bethesda and Berlin), often used together and referred to as the ‘BBB definition of Open Access’, have become established as the working definition”.

For reasons of space we will neither review all the existing definitions of OA nor go into detail of its different technical and legal aspects. A working definition satisfying the needs of the present study would be that of the Budapest Open Access Initiative (BOAI) (Chan et al., 2002) which defined academic OA as:

[...] free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.

We borrow the words from Swan (2012, p. 11) to list the multiple and various kinds of benefits provided by OA:

[...] improves the speed, efficiency and efficacy of research, is an enabling factor in interdisciplinary research, enables computation upon the research literature,

¹ With initiatives like Plan S (calling for publishing in fully OA journals only) launched by Science Europe in September 2018, “[w]ith effect from 2021, all scholarly publications on the results from research funded by public or private grants provided by national, regional and international research councils and funding bodies, must be published in Open Access Journals, on Open Access Platforms, or made immediately available through Open Access Repositories without embargo” (European Science Foundation, 2020).

increases the visibility, usage and impact of research, allows the professional, practitioner and business communities, and the interested public, to benefit from research.

In sum, providing universal access to information with no bias or barriers of any kind is not only “an encouraging trend for free flow of information in the scientific worlds” but also “ensures true democratization of knowledge” (UNESCO, 2015, p. 13) and has, therefore, an ethical dimension that must not be neglected.

As pointed out by Björk (2016, p. 131), over the past two decades,

OA advocacy has inspired the actions of many stakeholders involved in this process, including academics who have founded OA journals, publishers who have started OA journals using innovative business models, librarians who have launched repositories for housing OA copies of article manuscripts, and research funders and policymakers who have defined mandates requiring open access to the results of largely publicly funded research.

Altogether this has promoted the spread of OA awareness and advocacy all over the world and has contributed to increase the panoply of OA modes. Lately, the concept of OA, as opposed to TA (toll access), is becoming more and more complex and should be understood as a gradation rather than a dichotomy, as the following list of routes to OA illustrates:

- Gold OA: refers to research outputs published OA from the very beginning and available directly from the publisher.
- Hybrid OA (mainly referring to journals): applies when the subscription model is maintained, but authors are given the choice to make their paper OA immediately after publication by paying the so-called article processing charges (APC).
- Delayed OA: when after an embargo period the publisher either completely removes access restrictions on its own website or allows the author to self-archive a copy of the publication in different possible versions.
- Gratis, public or bronze OA: is used when documents are free-to-read from the publisher, but do not have an OA license; for example, when they are complimentary articles for the interested reader as a commercial strategy but could be made TA at any time.
- Libre OA: applies when both price barriers and permission barriers are removed.
- Green OA: refers to publications available through legal self-archiving by the authors in personal websites, institutional repositories, academic social networks, scholarly societies or government agencies.
- Black OA, Robin Hood OA or rogue OA: have been coined for contributions “that infringe on copyrights by making them accessible to the public despite licenses that restrict them to being behind pay walls” (Archambault et al., 2014), via self-archiving to academic social media, such as Research Gate and Academia.edu, or pirate copy websites such as Sci-Hub.

From the above definitions we should realize that the concept of OA is dynamic, since the same document can belong simultaneously to more than one category or change

from one to another in its lifetime. Quite often, scholarly documents that were initially not OA may become in the mid- or long-run freely available in several ways, such as delayed or gratis OA, green OA via self-archiving in personal websites or institutional repositories or black OA by breaching the paywall.

Although “[t]he primary, and original, target for Open Access was the journal literature (including peer-reviewed conference proceedings)” (Swan, 2012, p. 10), our study comprises other bibliographic scholarly outputs common in TS, including doctoral theses, books and book chapters, some of which, especially theses, have embarked with enthusiasm on OA. However, as other scholars have already noted, open access is notoriously difficult to measure and analyses often need to resource to random sampling techniques (Melero et al., 2017). This is mainly due to two reasons - the lack of standardized tools and measurement methods to study the degree of openness in scholarly journal publishing, and the lack of clear and consistent identification of open access publications in bibliographic data (van Leeuwen et al., 2018), not to mention its dynamic nature.

Scholars willing to meet the OA mandate or to reach as many peers as possible to increase their impact in terms of citation counts have started posting their publications online, be it on their personal webpages, institutional repositories or academic social networks. The unawareness of publishers’ embargo conditions and copyright restrictions has led to the paradox that scholars either do not share manuscript’s versions they are legally allowed to or share versions of their papers that violate copyright or embargo restrictions. Moreover, to accurately determine the year that a journal moved from toll access to open access or whether a given output has become OA over time, is neither a straightforward nor an easy task.

In sum, since the discipline does not have a thematic repository, it is very difficult to have an exact number of OA publications dealing with TS, especially in the case of green and bronze OA. In the OA database BITRA (Bibliography of Interpreting and Translation), with over 21,000 entries detected as OA, all the above-mentioned modes are included as OA with the only exception of publications to be found in platforms focused on black OA, because its illegality means that access can be blocked at any moment. To our knowledge, BITRA is the only holistic TS database or repertoire including this kind of information, so that it has not been possible to contrast the data.

The slogan “publish or perish” reflects the great pressure scholars nowadays have to face to succeed in their academic careers. However, this pressure does not only involve making their research results available to other scholars through academic publishing, but even more so to publish in journals that are considered to be of the highest quality according to their relative ranking in “international” impact indexes. Lately, the pressure has increased even more through the OA mandate, since the target containers should satisfy this double condition, i.e., to be both open-access and high-impact journals. This notably narrows down the possibilities, especially in younger and smaller disciplines as compared with fields such as linguistics or literary studies, featuring thousands of journals worldwide, which is where TS is usually integrated in the international rankings. According to RETI’s data (2019), results in the case of TS cannot be more discouraging. If we understand high impact as being ranked within the first two quartiles (Q1-Q2) of

Clarivate Analytics' Journal Citation Reports (JCR) there are no OA TS journals² matching this double condition. In JCR *Linguistica Antverpiensia* is the only journal that comes close to both requirements, and it was placed in Q4 as of 2018. If we include Scopus-based Scimago Journal Rank (SJR), the other international prestigious bibliographical ranking, out of the 147 OA active TS journals we are aware of, only nine (13%) are found in Q1-Q2, namely, *MonTI*, *New Voices in Translation Studies*, *Translation & Interpreting* (Q1), *Hermeneus*, *Hermes*, *The Interpreter's Newsletter*, *Linguistica Antverpiensia*, *Panace@* and *Sendeban* (Q2) (RETI, 2019).

Another aspect that we need to be aware of is that almost all active TS open-access journals (96 out of 99) are edited by academics and translators working in professional associations or university departments. Therefore, these journals are generally supported by public funds, professional fees or sheer philanthropy. This means that most of them can only afford, in terms of money and human resources, issuing one or a maximum of two volumes per year. Moreover, some of these journals only publish under specific calls (such as *MonTI* or *Linguistica Antverpiensia*) or are limited in scope, such as *The Interpreter's Newsletter* or *Panace@*). All these factors have resulted in a situation where the demand exceeds the offer, bringing about a bottleneck effect on OA prestigious journals.

The need for new venues to absorb the growing demand has given birth to both new journals (not always based on sustainable projects than can guarantee their continuity) and old commercial ones changing their business models to make them compatible with OA requirements mandated by funders. The consequence is that authors are more and more frequently required to pay APCs if they want their papers to be gold OA. Although APC is not yet widespread, lately it has started to be common possibility in the case of TS subscription journals owned by big commercial publishers. Nowadays, the cost of publishing an article in such journals can range between 700 and 2200 €. This can bring about the paradox of having a free science for readers which is simultaneously inaccessible for authors, many of whom cannot pay the publishing fees. Even belonging to an affluent university system can still be a problem, especially for younger researchers, if you must pay 2000 € per each article you wish to publish in OA. An additional undesirable collateral effect of this emerging business model we need to be aware of is the irruption of the so-called predatory journals. Predatory journals offer questionable quick -if any- peer review and immediate publishing on the web without an embargo period, charging relatively low APCs. Although still not a too worrying phenomenon in terms of quantity, their focus on short-term profits and low-quality standards can easily deceive TS scholars anxious to publish if not alerted against them. Most worrying of all, this might cast a shadow of suspicion on OA as a whole, thus ruining the efforts of many serious researchers who promote OA for ideological and ethical reasons.

2. Objectives

This article aims to achieve a better understanding of OA in TS by providing a comprehensive picture of the conditions in which TS research is published as regards accessibility. The two main items we will address here are the global situation of the

² For a journal to be labelled as TS in BITRA, at least 50% of its articles must deal with TS. Thus, they are all highly specialized journals

OA/TA dichotomy and its relation to factors that can potentially affect it, and the evolution of accessibility in TS.

In this connection, we will try to answer the following five research questions, always within TS:

1. What is the current situation regarding OA/TA?
2. Has it significantly changed in the last 20 years, and can any trends be drawn?
3. Which bibliometric factors among the ones we can examine (format, research topic, language and kind of publisher) exert a significant influence on the decision or the mere possibility of publishing in OA or TA?
4. In what kind of websites OA documents are hosted?
5. Would it be possible to quantify the degree in which all these factors act as predictors of OA or TA?

3. Data and methods

3.1. From BITRA to a comprehensive ad-hoc database for the analysis of access types in Translation Studies

A copy of the BITRA database was created on the 29th of December 2018 and exported as a txt file. At that time, it contained 75,106 documents. A derived database for this article was then created using Excel and transferred to SPSS (v. 20) to check the consistency of the data and start the cleaning process (see 3.1.1. Data preparation).

The SPSS database contained an identification code for each document, the author(s) name(s), the year of publication, the title, the place of publication, the publisher, the type of publisher in the case of journal articles within TS journals (commercial or public), the access type (open or toll access), the language(s) of the document, the document format(s), the research topic(s) of the document, the URL to the document in the case of open access publications, and the number of citations accrued. For the present study, the number of citations was not analysed, since this will be discussed in another article which will be devoted to the impact of access type on citation counts. The final version of the database (1961-2015) contained 69,551 documents (92.6% of BITRA), 19,067 (27.4%) of which were available in OA.

3.1.1. Data preparation

In order to work with a homogeneous sample, a period of analysis ranging from 1961 to 2015 was established and documents published before 1961 (2047 documents) and after 2015 (3508 documents) were deleted from the database.³ Since OA was virtually unheard of before 1993, when the World Wide Web became public, we decided to divide this period of analysis in two sub-periods: documents published from 1961 to 1995 (the pre-WWW period) and documents published from 1996 to 2015 (the WWW period, using the same starting year as Archambault et al., 2014). Given that the 1996-2015 period is rather

³ We originally intended including open access citation advantage within the analysis, but the large amount of data and results obtained made it advisable to split the research into two papers, leaving impact related to citations out of this one. Since we wanted to use the same study periods for both papers and the cited half life in Translation Studies takes on average around six years, the cut-off point could not be established in 2018 because it was too near to the present. Taking 2015 as an endpoint ensured that at least first citation could be detected. Moreover, although BITRA prioritises reference mining for more recent publications, the nearer the year, the less possibilities for citations to be detected and included.

broad, and this could affect the data analysis, it was further divided in four five-year periods to better observe any possible changes or trends: 1996-2000, 2001-2005, 2006-2010 and 2011-2015.

The categories used to describe the document formats were: book, book chapter (in an edited volume), journal article, journal special issue, TS journal and Ph.D. thesis. Documents sometimes were assigned to more than one category (for instance, a few Ph.D. theses that have also been published as books under exactly the same title). Thus, in a few cases, a single document could have more than one format category. In the case of TS journals, the type of publisher was categorised as commercial (private publishers) or public (public universities, public institutes, research and professional associations and, generally speaking, nonprofit organizations).

As in the case of format, documents could also be assigned to more than one language. For example, some documents have been translated into several languages, whereas edited books or journal special issues occasionally contain chapters or articles in different languages. Thus, a single document could also have more than one language category. The database contained documents in 66 different languages. Since managing so many languages would have complicated the analysis procedure and the presentation of the results, only the 10 most frequent languages were selected for analysis. These languages are: English (34,565 documents), Spanish (13,478), French (8780), German (5908), Portuguese (2279), Italian (2131), Chinese (1068), Catalan (1027), Galician (402), and Polish (324). The 10 most frequent languages jointly represented 96.7% of the database.

Research topics are typically numerous within the same book and journal special issue. Even in individual journal articles or book chapters, subject combinations are much more frequent than isolated topics. In BITRA, there is a closed list of around 100 keywords to thematically describe each document. Given the diversity of keywords available, the ten most frequent research topics were once again identified and selected for analysis. The research topics included were: literary translation (17,793 documents), history (9262), training (8987), scientific and technical translation (8407), interpreting (7278), professional issues (5801), machine and computer-assisted translation (4441), audiovisual translation (4427), legal translation (3190), and religious translation (2926).

URLs to the OA documents were firstly classified into seven categories: 1) public journal website (OA document which is hosted on a public journal website); 2) commercial journal website (OA document which is hosted on a commercial journal website); 3) institutional repository (OA document hosted on the repository of an institutional entity, such as universities, research centres or public libraries); 4) private repository (OA document hosted on a repository which is not associated to an institutional entity regardless of whether the access is free or paid, such as ResearchGate, Academia.edu, Figshare, etc.); 5) public publisher website (OA document hosted on an institutional publisher website); 6) commercial publisher website (OA document hosted on a commercial publisher website); 7) personal website (OA document hosted on a researcher's or research group's website). Each URL was manually classified into one of these categories. In all, 16,664 URLs were classified (87.7% of all URLs pertaining to OA documents included in BITRA for the 1961-2015 period). While the categorisation process was performed manually, in some cases it was possible to automatize some processes by grouping URLs. All in all, 2336 (2.3%) of URLs remained to be manually checked to categorize them. Given the amount of time this would require, it was decided to select a random sample of 50 URLs and to classify them into the above-mentioned categories in order to determine whether not including them would distort the results

obtained with the 16,664 analysed URLs. No relevant discrepancies were found between the two sets of data.

3.2. Data analysis

The analysis is divided in two parts which are repeated for each analysis factor (the distribution of OA and TA in general, by format, by research topic, by language, and by journal publisher type). In the first level of analysis, the ratios of OA and TA are computed for the whole period of analysis (1961-2015), for the pre-WWW period (1961-1995), and for the WWW period (1996-2015). The distribution of OA and TA is compared for each factor in the 1961-2015 period, and also in the 1996-2015 period. The chi-squared test is used for this purpose given that all the data are categorical. While the data from the types of hosting of OA documents were also categorical, they were not distributed in different, independent groups that could be compared (as in the case of the OA-TA comparison). Hence, no significance tests were employed for these data. The data of the pre-WWW period is described for mainly informational purposes, since the comparison between OA and TA is not meaningful for a period when OA was not even possible, implying that all the OA documents from this period were re-issued in this mode on an unknown date, years after their original publication and, thus, really reflect current trends. The results of the first level of analysis are presented in tables.

In the second level of analysis, the diachronic evolution of OA and TA is described both in general and for each factor of analysis in four five-year periods (1996-2000, 2001-2005, 2006-2010 and 2011-2015). No statistical procedures were employed for this second level of analysis, since this was not relevant for the aims of our study. The results are presented in two figures for each factor of analysis: the first one shows the results of OA and the second one those of TA.

In another level of analysis, we carried out a binomial logistic regression (Pardo & Ruiz, 2012) to analyse what formats, research topics, languages, and publisher types were more likely to predict OA in Translation Studies. Binomial logistic regression is a procedure used to predict the probability of obtaining one of two possible categories (in this case, OA or TA) based on specific factors (in this case, format, research topic, language, and publisher type). This procedure allowed us to identify what factors currently predict OA in Translation Studies and which ones predict TA.

4. Results and Discussion

4.1 Open access vs. toll access. A global and diachronic view

As shown in Table 1, in our whole period of study (1961-2015), over one out of four documents (27.4%) has been published in OA ($\chi^2 [1] = 14,191.4, p < 0.001, W = 0.452$). Exactly 15% of the documents published in the pre-WWW period have later been re-issued in open access ($\chi^2 [1] = 8995.6, p < 0.001, W = 0.701$). This shows that in the last few years there has been a remarkable trend to re-publish via open access many documents that used to be out of print or non-accessible. More and more public or nonprofit initiatives and journals recover these pre-internet documents in a process which can only be cumulative. The difference between the two access types is less pronounced in the second period from 1996 to 2015, with 31.9% of OA ($\chi^2 [1] = 6738.6, p < 0.001, W = 0.363$). Generally speaking, this ratio situates TS in line with the average of OA for academic documents, which Swan (2012) places around 30% of current publications.

Table 1. Open access vs. toll access

	OA (%)	TA (%)
<i>All years</i>	27.4 (n = 19,067)	72.6 (n = 50,484)
<i>1961-1995</i>	15.0 (n = 2740)	85.0 (n = 15,576)
<i>1996-2015</i>	31.9 (n = 16,327)	68.1 (n = 34,908)

The percentage of documents published in OA features a steady increase as time advances, involving the consequent decrease in the case of documents published in TA ($\chi^2 [3] = 2386.8, p < 0.001, V = 0.216$). In the 2011-2015 period, the number of publications in OA and in TA (46.6% and 53.4% respectively) have already become very close. Assuming this trend is kept in the future, this may indicate that both access types could reach a balance in the forthcoming years and that OA might even leave TA behind. As we will presently see, this has already happened in some formats. An interesting milestone in this regard is the behaviour of TS journals born in the 21st century, with 72.6% (82 out of 113) publishing in OA since their inception.

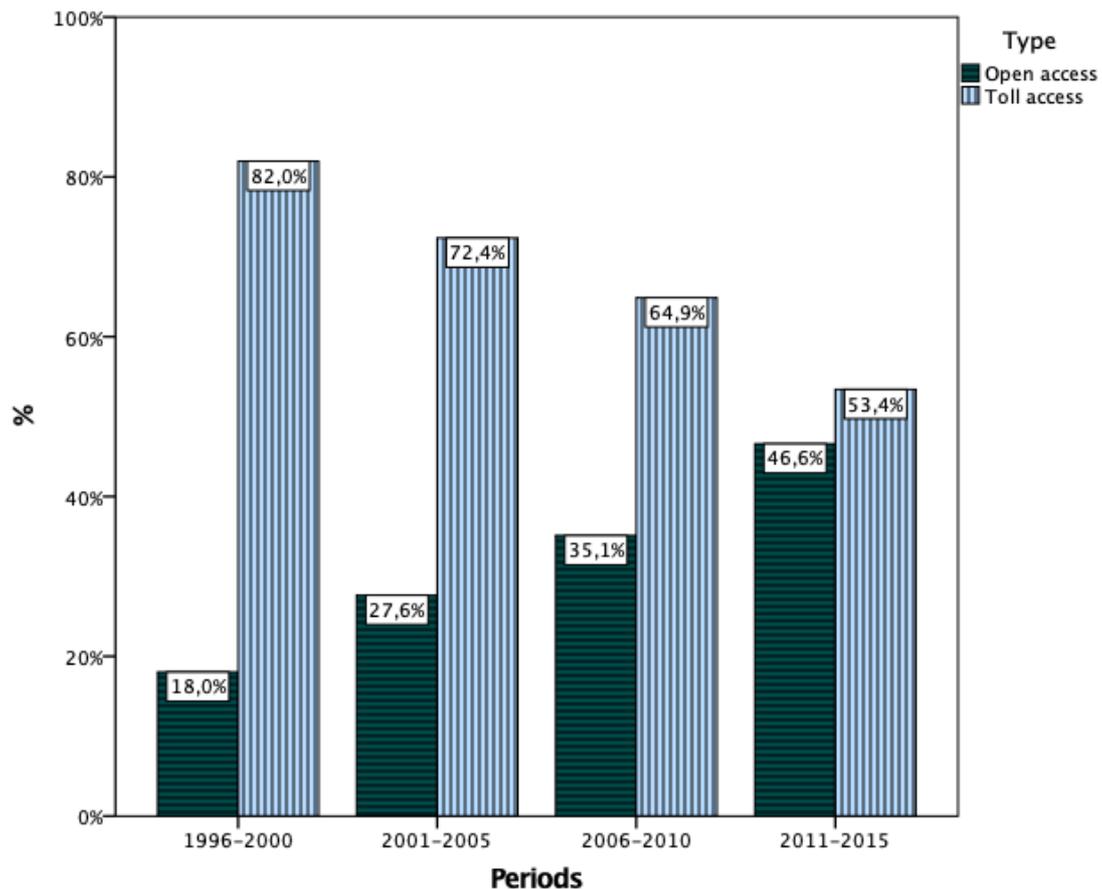


Figure 1. Diachrony of OA vs TA (1996-2015)

4.2 The evolution of access by format

TS books are the least frequent publication type that is published in OA in the whole period of study, followed by book chapters (Table 2).

Table 2. Access by format

	All years		1961-1995		1996-2015	
	OA (%)	TA (%)	OA (%)	TA (%)	OA (%)	TA (%)
<i>Journal special issue</i>	53.3 (n = 368)	46.7 (n = 323)	46.1 (n = 65)	53.9 (n = 76)	55.1 (n = 303)	44.9 (n = 247)
<i>Thesis</i>	51.6 (n = 1575)	48.4 (n = 1480)	21.5 (n = 105)	78.5 (n = 383)	57.3 (n = 1470)	42.7 (n = 1097)
<i>Journal article</i>	46.1 (n = 13,946)	53.9 (n = 16,321)	27.1 (n = 2356)	72.9 (n = 6327)	53.7 (n = 11,590)	46.3 (n = 9994)
<i>Book chapter</i>	10.6 (n = 2849)	89.4 (n = 24,018)	3.2 (n = 184)	96.8 (n = 5496)	12.6 (n = 2665)	87.4 (n = 18,522)
<i>Book</i>	3.9 (n = 343)	96.1 (n = 8539)	1.1 (n = 38)	98.9 (n = 3337)	5.5 (n = 305)	94.5 (n = 5202)
<i>TS Journal</i>	53.3 (n = 113)	46.7 (n = 99)	30.8 (n = 24)	69.2 (n = 54)	66.4 (n = 89)	33.6 (n = 45)

Despite the percentage of journal articles that have been published in OA being similar to the percentage of articles published in TA ($\chi^2 [1] = 186.4, p < 0.001, W = 0.078$), the difference is statistically significant. No difference is found when comparing journal special issues in OA and in TA ($\chi^2 [1] = 2.9, p = 0.087, W = 0.065$) and also in the case of Ph.D. theses ($\chi^2 [1] = 2.9, p = 0.086, W = 0.031$). There are slightly more journals published in OA, but the difference is not significant ($\chi^2 [1] = 0.9, p = 0.336, W = 0.066$).

For the 1961-1995 period, almost half of the journal special issues are currently to be found in OA. In the other formats, TA is the most frequent access type for that same period. In the 1996-2015 period, TA is also the most frequent access type in most formats,⁴ although in the case of journal articles, journal special issues, and Ph.D. theses both access types are balanced, especially in the case of journal articles (OA = 54%; TA = 46%). In this period, TS journals are more frequently published in OA than in TA ($\chi^2 [1] = 14.5, p < 0.001, W = 0.328$). For a correct interpretation of this data, it is important to bear in mind that journals are classified in BITRA as OA or TA according to their present (2018) status. This means that historical journals which currently publish in OA are wholly considered OA, even if in some cases they have not (yet) uploaded all the past issues which were published before the WWW was launched. The situation is the same with TA pre-WWW journals, many of which have not (yet) published their oldest issues on the internet, even in TA mode.

Figure 2 shows two clear groups of formats that present different patterns of evolution regarding access type. In the first group, Ph.D. theses and journal articles are published in OA more and more frequently. The trend observed in the case of journal articles is related to the increasing number of (both new and old) journals that are published in OA over time. This is also related to the increase of journal special issues published in OA. To illustrate this point, it might be interesting to consider the situation

⁴ Books: $\chi^2 [1] = 4354.6, p < 0.001, W = 0.889$; book chapters: $\chi^2 [1] = 11,867.9, p < 0.001, W = 0.748$; journal articles: $\chi^2 [1] = 118.0, p < 0.001, W = 0.074$; journal special issues: $\chi^2 [1] = 5.7, p < 0.05, W = 0.102$; Ph.D. theses: $\chi^2 [1] = 54.2, p < 0.001, W = 0.145$.

in Spain, a relatively peripheral country. According to Kienć (2017), in this group of countries “commercial publishers are less developed due to limited profits available”. Most Spanish TS journals were born as TA only-print ventures. However, in 2012, sixteen were published in OA and only three in TA (Franco Aixelá, 2012). Nowadays (2018), there are 24 active TS journals in Spain. They are all published by nonprofit organizations and they are all OA.

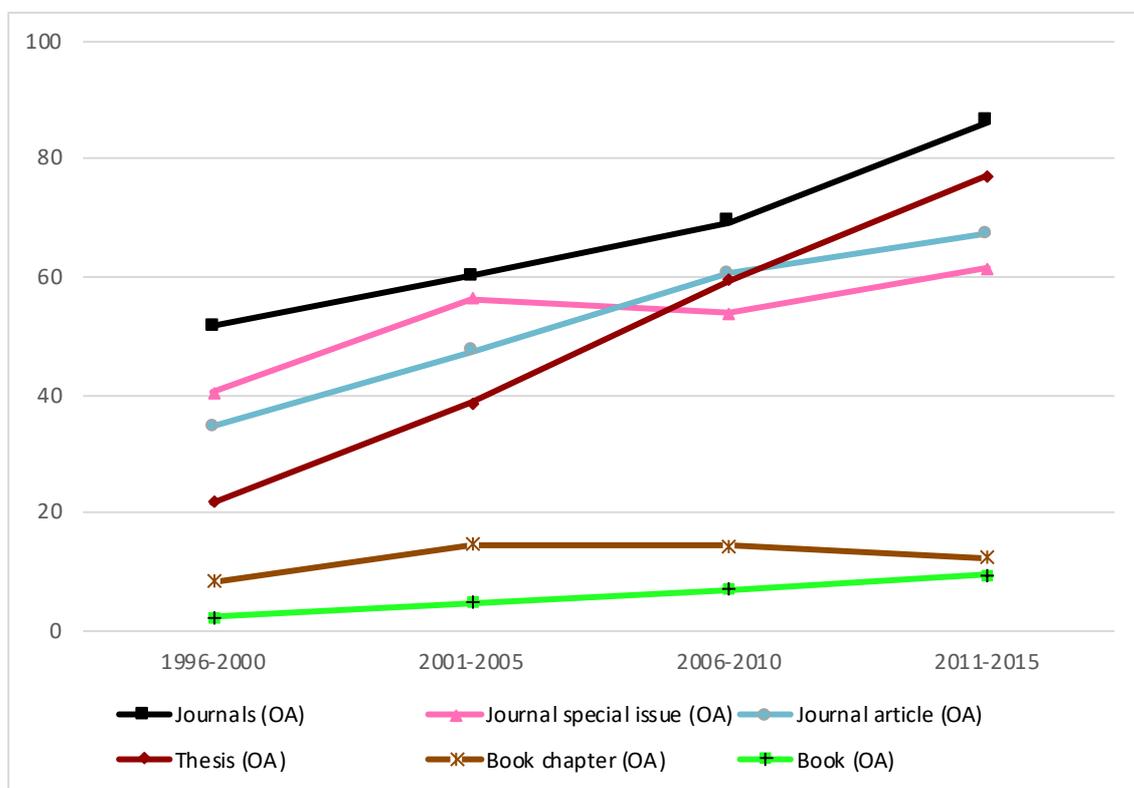


Figure 2. Evolution of access by format in percentages (1996-2015)

The very high ratio (57.6% for 1996-2015) of TS Ph.D. theses available on OA is also noteworthy and symptomatic of the times, since it is a consequence both of university policies encouraging this mode of publication worldwide and the free decision of the new generation of researchers, who more and more consider OA as the natural way of disseminating science.

In the second group, TS books and book chapters present a much lower tendency towards a more frequent publication in OA as time advances. In the case of book chapters, the trend is even slightly reversed in the last period of analysis (12.4%) compared with the third one (14.3%). In Green’s words (2017), the progress towards OA in the case of books “has been glacial.” The difference regarding OA between books and chapters on the one hand, and Ph.D. theses and journals on the other is really remarkable and needs to be explained in a specific study. In principle, there is no reason why the same universities and public institutions that publish cost-free academic journals should not publish at least the most specialized research-oriented books following the same rationale. The cost-based explanation does not seem to bear a close examination, since the publication of a journal issue is as expensive and as laborious as a book, not to mention the effort invested in a Ph.D. thesis. Probably, part of the explanation has to do with tradition, i.e. with the different way books and journals are addressed in the academia. Thus, books and journals seem to be managed by different agents. A university

department wishing to contribute to a discipline will consider it natural to launch a journal but not a book series, leaving this format in the hands of centralized publication services. In this connection, journals have the advantage of traditionally being able to include any branch of the discipline, whereas books which are not linked to an academic conference tend to be monographic, making it more difficult to maintain a regular publication schedule. It is also noteworthy to include here a reference to a recent Spanish regulation (Law 14/2011, cited by Giménez Toledo, 2018, p. 21), where OA based on publicly funded research is encouraged in journals, ignoring books altogether. Also, especially in the humanities, there is still a powerful market for printed books comprised by university libraries, making it especially attractive for commercial publishers. To this, it must be added that book processing charges, which Giménez Toledo (2018, p. 19) places around 10,000-15,000 dollars, can be prohibitive, as compared with the above-mentioned APCs.

4.3 The evolution of access by research topic

Even if the difference between the proportion of documents published in TA and OA for all years is statistically significant for all research topics,⁵ they are all placed within a relatively limited range: between 20 and 35% of the documents are published in OA, and 65 to 80% are published in TA (Table 3). The difference in the case of documents concerning religion is slightly more pronounced (with only 17.6% published in OA), whereas in the case of documents related to machine and computer-assisted translation, the percentage of publications in OA reaches 35%.

Table 3. Access by research topic

	All years		1961-1995		1996-2015	
	OA (%)	TA (%)	OA (%)	TA (%)	OA (%)	TA (%)
<i>Machine and computer-assisted translation</i>	35.2 (n = 1562)	64.8 (n = 2879)	20.3 (n = 296)	79.7 (n = 1159)	42.4 (n = 1266)	57.6 (n = 1720)
<i>Scientific and technical translation</i>	34.9 (n = 2936)	65.1 (n = 471)	24.9 (n = 394)	75.1 (n = 1191)	37.3 (n = 2542)	62.7 (n = 4280)
<i>Audiovisual translation</i>	34.7 (n = 1535)	65.3 (n = 2892)	10.0 (n = 43)	90.0 (n = 389)	37.3 (n = 1492)	62.7 (n = 2503)
<i>Legal translation</i>	32.4 (n = 1032)	67.6 (n = 2158)	15.5 (n = 87)	84.5 (n = 474)	35.9 (n = 945)	64.1 (n = 1684)
<i>Professional issues</i>	32.0 (n = 1858)	68.0 (n = 3943)	15.4 (n = 201)	84.6 (n = 1108)	36.9 (n = 1657)	63.1 (n = 2835)
<i>Literary translation</i>	29.1 (n = 5181)	70.9 (n = 12,612)	11.8 (n = 523)	88.2 (n = 3921)	34.9 (n = 4658)	65.1 (n = 8691)
<i>Interpreting</i>	25.3 (n = 1841)	74.7 (n = 5437)	13.0 (n = 191)	87.0 (n = 1282)	28.4 (n = 1650)	71.6 (n = 4155)
<i>Training</i>	25.3 (n = 2270)	74.7 (n = 6717)	10.7 (n = 223)	89.3 (n = 1870)	29.7 (n = 2047)	70.3 (n = 4847)

⁵ Audiovisual translation: $\chi^2 [1] = 416.0, p < 0.001, W = 0.307$; machine and computer-assisted translation: $\chi^2 [1] = 390.6, p < 0.001, W = 0.297$; training: $\chi^2 [1] = 2200.5, p < 0.001, W = 0.495$; history: $\chi^2 [1] = 2738.2, p < 0.001, W = 0.544$; interpreting: $\chi^2 [1] = 1776.8, p < 0.001, W = 0.494$; legal translation: $\chi^2 [1] = 397.5, p < 0.001, W = 0.353$; literary translation: $\chi^2 [1] = 3103.5, p < 0.001, W = 0.418$; professional issues: $\chi^2 [1] = 749.4, p < 0.001, W = 0.359$; religion: $\chi^2 [1] = 1231.2, p < 0.001, W = 0.649$; scientific and technical translation: $\chi^2 [1] = 764.4, p < 0.001, W = 0.302$.

<i>History</i>	22.8 (n = 2113)	77.2 (n = 7149)	11.2 (n = 296)	88.8 (n = 2342)	27.4 (n = 1817)	72.6 (n = 4807)
<i>Religion</i>	17.6 (n = 514)	82.4 (n = 2412)	10.2 (n = 142)	89.8 (n = 1253)	24.3 (n = 372)	75.7 (n = 1159)

In the 1961-1995 period, the ratio of OA for almost all research topics ranges from 10 to 16%. The percentage of documents related to machine and computer-assisted translation, and scientific and technical translation published in OA is slightly higher: 20% and 25%, respectively. In the 1996-2015 period, the percentage range of documents published in OA is slightly larger: 24-37%. Only documents related to machine and computer-assisted translation exceed that range: 42%. However, the difference between the percentage of documents published in OA and TA is significant for all research topics in the WWW period (1996-2015).⁶

Generally speaking, there seems to be an association between technical orientation and OA, perhaps due to different academic publishing behaviours within the discipline. In this connection, topics could be classified in three broad groups: firstly, publications dealing with machine, computer-assisted and technical and scientific translation, which are the most liable to be published in OA (34.6%) (see 4.6. Factors that predict open access). A second, intermediate level (32.0%), is comprised by specialized (especially legal) translation and professional issues, whereas essays related to humanistic translation (i.e. basically literature, history and religion) are placed in the lower level (26.5%). The difference between these three groups is statistically significant, even if the effect is small. To this hypothesis it must be added that machine and computer-assisted translation are probably one of the most difficult fields to detect for their compilation in BITRA, since it is quite frequent for them to publish conference proceedings directly on the internet, without an intermediate lodging in a journal or book. Thus, there are probably many more OA essays dealing with MT pending to be included in BITRA than with other, more traditional fields as regards their publishing behaviour.

Figure 3 shows a steady increase in the percentage of publications in OA from the first (1996-2000) to the third period (2006-2010) for all research topics. This increase is more pronounced from the third to the fourth period (2011-2015) in the case of religion and translation, history, legal translation, and literary translation. In the case of audiovisual, scientific and technical translation, interpreting, training, and professional issues, the increase in the last period is less marked than in the previous ones. Machine and computer-assisted translation is the research topic that is most frequently published in OA, although the increase from the third to the fourth period is one of the least marked ones.

⁶ Audiovisual translation: $\chi^2 [1] = 255.9, p < 0.001, W = 0.253$; machine and computer-assisted translation: $\chi^2 [1] = 69.0, p < 0.001, W = 0.152$; training: $\chi^2 [1] = 1137.2, p < 0.001, W = 0.406$; history: $\chi^2 [1] = 1349.7, p < 0.001, W = 0.451$; interpreting: $\chi^2 [1] = 1081.0, p < 0.001, W = 0.432$; legal translation: $\chi^2 [1] = 207.7, p < 0.001, W = 0.281$; literary translation: $\chi^2 [1] = 1218.5, p < 0.001, W = 0.302$; professional issues: $\chi^2 [1] = 308.9, p < 0.001, W = 0.262$; religion: $\chi^2 [1] = 404.6, p < 0.001, W = 0.514$; scientific and technical translation: $\chi^2 [1] = 442.8, p < 0.001, W = 0.255$.

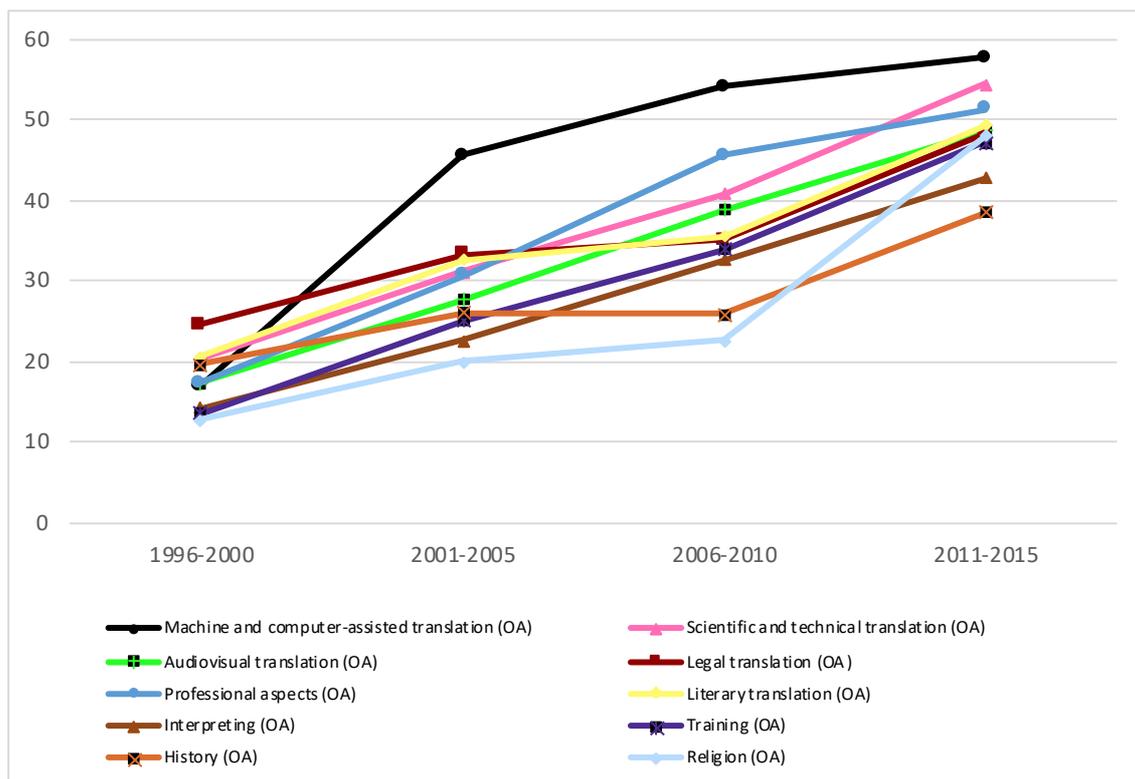


Figure 3. Evolution of access by research topic in percentages (1996-2015)

4.4 The evolution of access by language

While the difference between the percentage of publications in OA and that of publications in TA is statistically significant for all languages,⁷ two groups can be clearly differentiated (Table 4). In the first group (English, Spanish, French, Italian, and Polish) approximately one out of four documents has been published in OA. In the second group (Catalan and Galician), the proportion rises to nearly half of the documents. There are some cases that do not fall within these two groups: documents in Portuguese published in OA rise to 64%, while documents in German and Chinese in OA only represent 6.1% and 9.7%, respectively.

Table 4. Access by language

	All years		1961-1995		1996-2015	
	OA (%)	TA (%)	OA (%)	TA (%)	OA (%)	TA (%)
<i>Portuguese</i>	64.7 (n = 1475)	35.3 (n = 804)	19.9 (n = 58)	80.1 (n = 233)	71.3 (n = 1417)	28.7 (n = 571)
<i>Galician</i>	57.7 (n = 232)	42.3 (n = 170)	42.9 (n = 15)	57.1 (n = 20)	59.1 (n = 217)	40.9 (n = 150)
<i>Catalan</i>	46.2 (n = 474)	53.8 (n = 553)	5.7 (n = 8)	94.3 (n = 133)	52.6 (n = 466)	47.4 (n = 420)

⁷ English: $\chi^2 [1] = 9337.2, p < 0.001, W = 0.520$; Spanish: $\chi^2 [1] = 1264.3, p < 0.001, W = 0.306$; French: $\chi^2 [1] = 644.1, p < 0.001, W = 0.271$; German: $\chi^2 [1] = 4562.8, p < 0.001, W = 0.879$; Portuguese: $\chi^2 [1] = 197.6, p < 0.001, W = 0.294$; Italian: $\chi^2 [1] = 570.9, p < 0.001, W = 0.518$; Chinese: $\chi^2 [1] = 692.5, p < 0.001, W = 0.805$; Catalan: $\chi^2 [1] = 6.1, p = 0.05, W = 0.077$; Galician: $\chi^2 [1] = 9.6, p < 0.01, W = 0.154$; Polish: $\chi^2 [1] = 79.0, p < 0.001, W = 0.494$.

<i>French</i>	36.5 (n = 3201)	63.5 (n = 5579)	34.7 (n = 1252)	65.3 (n = 2353)	37.7 (n = 1949)	62.3 (n = 3226)
<i>Spanish</i>	34.7 (n = 4675)	65.3 (n = 8803)	13.4 (n = 328)	86.6 (n = 2128)	39.4 (n = 4347)	60.6 (n = 6675)
<i>Polish</i>	25.3 (n = 82)	74.7 (n = 242)	2.1 (n = 1)	97.9 (n = 46)	29.2 (n = 81)	70.5 (n = 196)
<i>Italian</i>	24.1 (n = 514)	75.9 (n = 1617)	6.3 (n = 33)	93.7 (n = 489)	29.9 (n = 481)	70.1 (n = 1128)
<i>English</i>	24.0 (n = 8300)	76.0 (n = 26,265)	12.8 (n = 1091)	87.2 (n = 7455)	27.7 (n = 7209)	72.3 (n = 18,810)
<i>Chinese</i>	9.7 (n = 104)	90.3 (n = 964)	1.5 (n = 3)	98.5 (n = 202)	11.7 (n = 101)	88.3 (n = 762)
<i>German</i>	6.1 (n = 358)	93.9 (n = 5550)	1.2 (n = 28)	98.8 (n = 2344)	9.3 (n = 330)	90.7 (n = 3206)

In the pre-WWW period (1961-1995), the percentage range of documents published in OA is very broad but remains for almost all languages under 20%. The exceptions are French (34.7%) and Galician (42.9%). In the WWW period (1996-2015), TA is still the most frequent access type for most languages,⁸ except for Portuguese ($\chi^2 [1] = 360.0, p < 0.001, W = 0.426$) and Galician ($\chi^2 [1] = 12.2, p < 0.001, W = 0.183$), in which OA is more frequent than TA. In the case of Catalan, the percentage of open-access and toll-access documents is balanced ($\chi^2 [1] = 2.4, p = 0.122, W = 0.052$).

The general picture of language distribution regarding OA brings about a mixture of disarray and too large differences to be attributable to chance. As a tentative hypothesis, a combination of national traditions/academic policy and the degree of international presence of a given language seems to crisscross here. Currently (1996-2015) there are three broad groups, those around 10% OA (German and Chinese), an intermediate level between 29-40%, which broadly corresponds with majority languages in science (English, Spanish, French, Italian and the Polish exception), and a third group comprised by minority languages in science but with a notable presence in TS, currently with over 50% OA (Portuguese, Catalan, Galician). The Chinese and German cases are exceptions whose explanation seems to revolve around national traditions and the way they address TS. China seems to be a country where TA science still has a notable plus of prestige that hinders OA journals (interestingly, in this vein, the only TS journal mainly in Chinese classified as OA in BITRA is published in Taiwan). In the German case, 74% of all TS documents in BITRA in this language are books or book chapters (as opposed to 51% in BITRA as a whole), and there are only three active TS journals published in German-speaking countries that we know of. This preponderance of the less OA-friendly formats seems to go a long way towards explaining this exception. The other two groups are quite homogeneous from a sociolinguistic perspective, with the only exception of Polish, which should probably have a higher level of OA but seems to be rapidly opening up to this publication mode (cf. Kieńć, 2017). The case of the other scientifically peripheral languages (Portuguese, Catalan and Galician) seems to be derived from a clear need to maximize the dissemination of research results among a limited academic community together with the lack of commercial profitability of publishing TA journals

⁸ English: $\chi^2 [1] = 5172.5, p < 0.001, W = 0.446$; Spanish: $\chi^2 [1] = 491.7, p < 0.001, W = 0.211$; French: $\chi^2 [1] = 315.1, p < 0.001, W = 0.247$; German: $\chi^2 [1] = 2339.2, p < 0.001, W = 0.813$; Italian: $\chi^2 [1] = 260.2, p < 0.001, W = 0.402$; Chinese: $\chi^2 [1] = 506.3, p < 0.001, W = 0.766$; Polish: $\chi^2 [1] = 47.7, p < 0.001, W = 0.415$.

dealing with TS, due once again to the shortage of scholars able to read in these languages. Public centralized platforms specifically designed for OA, such as the Brazilian Scielo, are also an important support for this publication mode.

In the first WWW period (1996-2000), the percentage of publications in OA by language is very ample, ranging from zero to approximately 50%. In the last period, it ranges from 20% to nearly 90%. Thus, while the increase has been remarkable for some languages (Portuguese, Catalan, Galician, Italian, and Polish), it was not so for others (German and Chinese). In the middle of these two groups some cases are found in which there has been little evolution in the percentage of publications in OA (English, Spanish, and French). In the cases of Spanish, Galician, Italian, Polish, and German, the increase from the third to the fourth period is more marked than those between other consecutive periods. Portuguese, Catalan, French, English, and Chinese show the opposite trend: the most pronounced increases are found between the first and second period, or between the second and third one, or in both. This could be due to an earlier introduction of OA by the publishers that work with these languages.

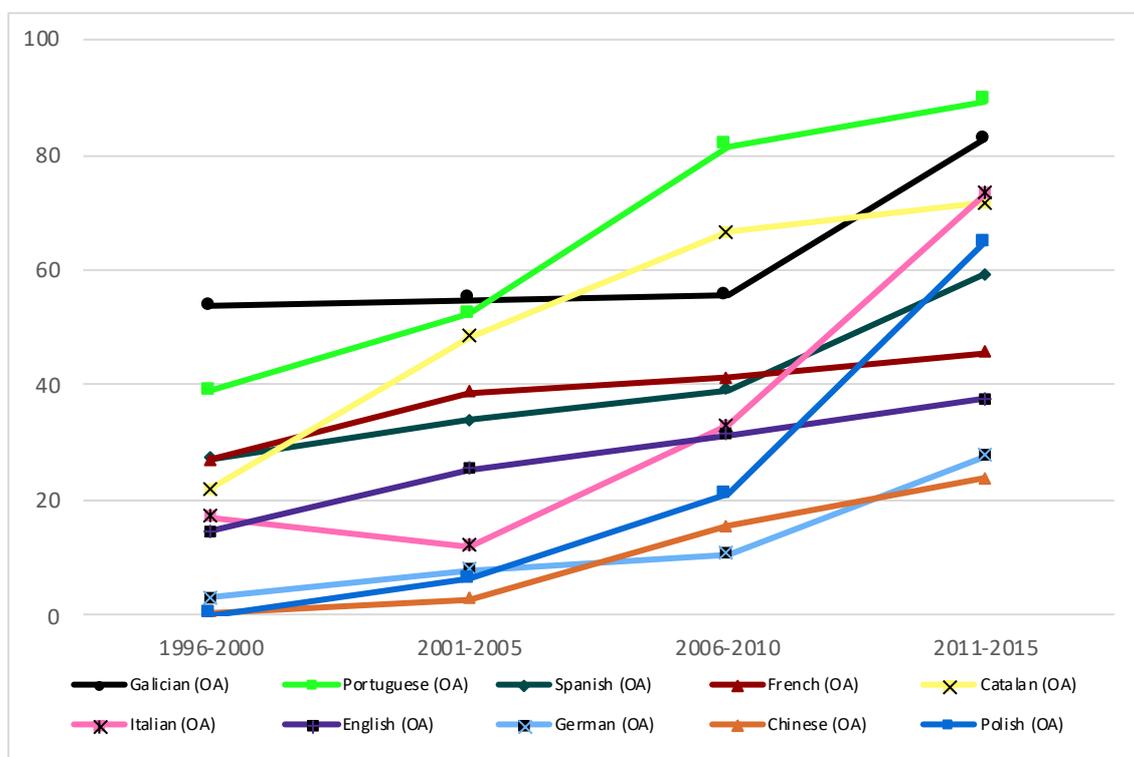


Figure 4. Evolution of access by language in percentages (1996-2015)

4.5. The evolution of the online hosting of OA publications

All in all, 87.4% of the OA documents in BITRA from 1961 to 2015 are accessible through nonprofit URLs, which are public journal websites, institutional repositories, public publisher websites and personal websites (Table 5). This clearly indicates a tendency in TS toward making OA research accessible free of charge or without needing to register in platforms that might be free in their non-premium mode (such as private repositories) but have commercial ends.

For the whole period of analysis (1961-2015), public journal websites host almost half of the existing OA documents, followed by institutional repositories (23%) and

commercial journal websites (20%). All other options analysed jointly account for 9% of the documents only.

In the 1961-1995 period, public URLs accounted for 40.2% of the OA documents, while in the 1996-2015 they doubled the ratio of documents (83.3%). The increase of OA journal articles published in public journal websites rose abruptly, while OA journal articles in commercial journal websites decreased. There is also a slight increase both in institutional and private repositories, but with a more marked growth in institutional websites.

Table 5. Types of online hosting of OA publications

	All years (%)	1961-1995 (%)	1996-2015 (%)
<i>Public journal website</i>	47.9 (n = 7987)	18.0 (n = 462)	53.3 (n = 7525)
<i>Institutional repository</i>	23.0 (n = 3825)	18.1 (n = 463)	23.8 (n = 3362)
<i>Commercial journal website</i>	20.0 (n = 3341)	58.9 (n = 1509)	13.0 (n = 1832)
<i>Public publisher website</i>	4.5 (n = 758)	2.2 (n = 56)	5.0 (n = 702)
<i>Private repository</i>	2.3 (n = 390)	0.5 (n = 14)	2.7 (n = 376)
<i>Personal website</i>	1.3 (n = 217)	1.9 (n = 48)	1.2 (n = 169)
<i>Commercial publisher website</i>	0.9 (n = 146)	0.3 (n = 8)	1.9 (n = 138)

OA documents disseminated in public journal websites present a gradual increase as time advances in the period comprised from 1996 to 2015 (Table 6). The opposite trend is observable in the case of OA documents published in commercial journal websites. This is especially remarkable since commercial journals incorporated APCs to enhance open access publishing, but it does not seem to have had a positive effect: the decrease is found both in terms of relative percentages and in absolute terms (from 477 documents in 2006-2010 to 401 documents in 2011-2015).

In the case of institutional repositories, there is an increase in the second five-year period, and it remains almost stable in the third and fourth periods. The percentage of OA documents published in private repositories fluctuates from one period to the following one, and there is a small increase in the fourth one, which is possibly due to the creation of private repositories such as Academia.edu or ResearchGate (both in 2008), which are widely accepted and used in academia. Both public and commercial publisher websites decrease as the periods advance, reflecting the abovementioned stagnation of OA in books. This same trend is applicable in the case of personal websites, which only account for 0.3% of the OA documents in the 2011-2015 period.

The decrease in OA documents published in personal websites may be due to the fact that both institutional and private repositories allow scholars to create their own profiles and keep their publications together, at the same time that they are placed in much more visited and visible spaces than exclusively personal websites could ever be. Another complementary explanation of this trend favouring private repositories might be that they

tend to allow uploading documents without any previous check of licenses and copyright issues, whereas librarians in charge of institutional repositories exert a tight control in this regard. Therefore, scholars find it more friendly and straightforward to share their publications in the former. Moreover, self-maintaining a personal website tends to be more time-consuming than just uploading or sending a paper to a repository, where other people perform this task on behalf of the researcher.

Table 6. Evolution of types of online hosting of OA publications

	1996-2000 (%)	2001-2005 (%)	2006-2010 (%)	2011-2015 (%)
<i>Public journal website</i>	38.6 (n = 713)	44.7 (n = 1400)	57.2 (n = 2493)	61.1 (n = 2919)
<i>Commercial journal website</i>	21.9 (n = 406)	17.5 (n = 548)	11.0 (n = 477)	8.4 (n = 401)
<i>Institutional repository</i>	19.5 (n = 384)	24.7 (n = 774)	23.6 (n = 1028)	24.6 (n = 1176)
<i>Public publisher website</i>	9.3 (n = 236)	4.2 (n = 132)	5.2 (n = 225)	2.3 (n = 109)
<i>Commercial publisher website</i>	5.8 (n = 14)	2.2 (n = 69)	0.8 (n = 34)	0.4 (n = 21)
<i>Personal website</i>	3.3 (n = 60)	1.8 (n = 57)	0.8 (n = 36)	0.3 (n = 16)
<i>Private repository</i>	1.6 (n = 29)	4.8 (n = 151)	1.4 (n = 62)	2.8 (n = 134)

4.6 The evolution of access to active TS journals by the nature of the publisher

In this same connection, it might also be interesting to specifically analyse TS active journals as an especially relevant sign of how OA and TA have developed within the discipline. For a journal to be considered as TS in BITRA, at least 50% of its contents must directly deal with translation or interpreting. Table 7 presents the distribution of active TS journals published in OA and TA by public and commercial publishers. As could only be expected, public TS publishers tend to publish OA journals more frequently than TA journals ($\chi^2 [1] = 7.8, p < 0.01, W = 0.211$), whereas commercial TS publishers tend to publish TA journals more frequently than OA journals ($\chi^2 [1] = 11.1, p < 0.001, W = 0.556$). The same tendencies are observed in the WWW period (1996-2015): TS public publishers tend to publish OA journals ($\chi^2 [1] = 12.3, p < 0.001, W = 0.273$), while commercial publishers tend to publish TA journals ($\chi^2 [1] = 11.1, p < 0.001, W = 0.556$).

Table 7. Access to active journals by nature of the journal publisher (public vs. commercial)

	All years		1961-1995		1996-2015	
	OA (%)	TA (%)	OA (%)	TA (%)	OA (%)	TA (%)
<i>Public</i>	60.6 (n = 106)	39.4 (n = 69)	36.6 (n = 23)	63.4 (n = 40)	63.6 (n = 105)	36.4 (n = 60)
<i>Commercial</i>	22.2 (n = 8)	77.8 (n = 28)	14.3 (n = 2)	85.7 (n = 12)	22.2 (n = 8)	77.8 (n = 28)

While the percentage of TS journals published in OA by public publishers increases as time goes by, it does not in the case of commercial publishers that publish OA TS journals, since it is stable from the first (1996-2000) to the second period (2001-2005), it descends markedly in the third period (2006-2010) and slightly rises in the fourth one (2011-2015) (Figure 5). The difference between public and commercial publishers regarding the access type of this kind of journals has grown over time with a generalized change of TA into OA of pre-existing public journals and the choice of OA by the new ones.

There are two noteworthy conclusions to be drawn in this analysis. Firstly, the systematicity with which older public journals have migrated to OA, or chosen this mode since their inception in the case of the newer ones (cf. the revealing example of Spanish TS journals in 4.2.) A majority of OA for public journals was to be expected, but -with the exception of very few countries such as China- it could be termed as a veritable landslide. This implies a turning point for this kind of access in active journals, which in the field of TS are currently public in almost 80% of the cases. Secondly, as explained above, the stagnation or reduction of OA within very modest ratios in commercial journals seems to indicate that, in TS at least, the APC model is so far not working if the intention was to use it in order to integrate commercial journals into the OA movement.

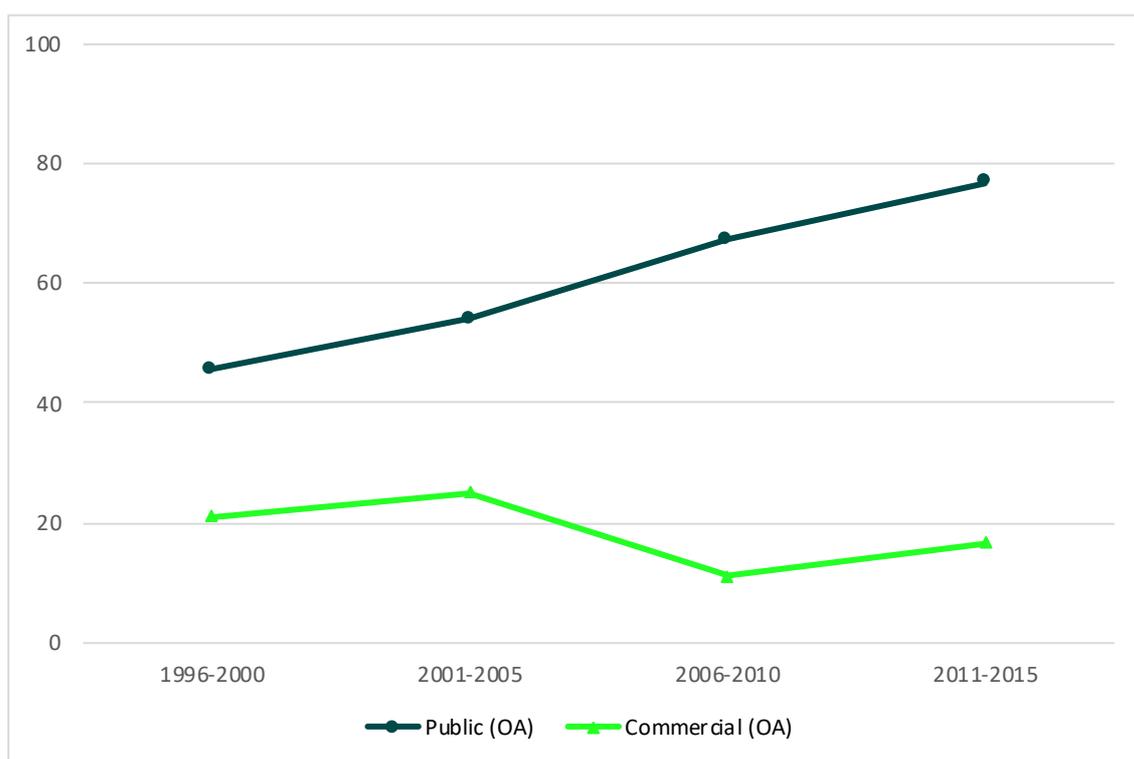


Figure 5. Ratios for the evolution of access type to active TS journals by nature of the publisher (1996-2015)

4.7. Factors that currently (2011-2015) predict open access

A binomial logistic regression was performed to determine which factors predict OA in the 2011-2015 period successively based on the format (journal article, book chapter, book, journal special issue, and Ph.D. thesis), the research topic (literary translation, training, history, scientific and technical translation, interpreting, professional issues, machine and computer-assisted translation, audiovisual translation, religion and legal

translation), and the language (English, Spanish, French, German, Portuguese, Italian, Chinese, Catalan, Galician, and Polish).

The logistic regression model was statistically significant ($\chi^2[8] = 167.7, p < 0.001$). The model explained 49.8% (Nagelkerke R^2) of the variance in OA and correctly classified 77.7% of cases. Table 8 classifies the odds ratio of the factors included in the regression equation in two groups: factors predicting OA and factors predicting TA.

Table 8. Factors predicting open access

Factors	
<i>Factors predicting OA</i>	<p>Format</p> <p>Ph.D. theses are 1.3 times more likely to be published in OA than in TA (Wald [1] = 13.4, $p < 0.001$).</p> <p>Research topic</p> <p>Publications devoted to machine and computer-assisted translation are 2.5 times more likely to be published in OA than in TA (Wald [1] = 63.234, $p < 0.001$).</p> <p>Publications devoted to scientific and technical translation are 1.6 times more likely to be published in OA than in TA (Wald [1] = 25.7, $p < 0.001$).</p> <p>Publications devoted to audiovisual translation are 1.6 times more likely to be published in OA than in TA (Wald [1] = 35.2, $p < 0.001$).</p> <p>Publications devoted to professional issues are 1.3 times more likely to be published in OA than in TA (Wald [1] = 8.2, $p < 0.01$).</p> <p>Language</p> <p>Publications in Galician are 22.3 times more likely to be published in OA than in TA (Wald [1] = 59.1, $p < 0.001$).</p> <p>Publications in Portuguese are 9.8 times more likely to be published in OA than in TA (Wald [1] = 147.8, $p < 0.001$).</p> <p>Publications in Polish are 9.8 times more likely to be published in OA than in TA (Wald [1] = 58.8, $p < 0.001$).</p> <p>Publications in Italian are 5.6 times more likely to be published in OA than in TA (Wald [1] = 76.1, $p < 0.001$).</p> <p>Publications in Catalan are 4.5 times more likely to be published in OA than in TA (Wald [1] = 42.9, $p < 0.001$).</p> <p>Publications in Spanish are 3 times more likely to be published in OA than in TA (Wald [1] = 85.6, $p < 0.001$).</p>
<i>Factors predicting TA</i>	<p>Format</p> <p>Books are 38.8 times more likely to be published in TA than in OA (Wald [1] = 101., $p < 0.001$).</p> <p>Book chapters are 21.8 times more likely to be published in TA than in OA (Wald [1] = 78.4, $p < 0.001$).</p> <p>Research topic</p> <p>Publications devoted to translation history are 1.2 times more likely to be published in TA than in OA (Wald [1] = 6.8, $p < 0.01$).</p> <p>Language</p> <p>Publications in Chinese are 5.7 times more likely to be published in TA than in OA (Wald [1] = 83.2, $p < 0.001$).</p> <p>Publications in English are 1.5 times more likely to be published in TA than in OA (Wald [1] = 11.5, $p < 0.001$).</p>

Format: articles (Wald [1] = 0.1, $p = 0.815$) and journal special issues (Wald [1] = 0.1, $p = 0.815$) do not predict OA nor TA. Research topic: publications devoted to didactics (Wald [1] = 1.3, $p = 0.251$), religion (Wald [1] = 0.001, $p = 0.970$), literary translation (Wald [1] = 0.01, $p = 0.908$), interpreting (Wald [1] =

0.08, $p = 0.777$) and legal translation (Wald [1] = 0.261, $p = 0.609$) do not predict OA nor TA. Language: Publications in French (Wald [1] = 0.2, $p = 0.645$) and in German (Wald [1] = 1.8, $p = 0.183$) do not predict OA nor TA.

5. Conclusions

Regarding our two first research questions, we can start by stating that the evolution of open access has been remarkable in TS, with a sustained growth from 18.0% in 1996-2000 to 46.6% in 2011-2015, almost reaching a balance with toll-access publication. Figure 1 on the diachrony of OA vs TA (1996-2015) is probably one of those pictures worth a thousand words, and it speaks for itself.

As to the bibliometric factors that exert a significant influence on the decision or the mere possibility of publishing in OA or TA, there are some interesting points to make here.

Public journals specializing in TS perhaps feature the most dramatic sign of this development, reaching almost 80% of OA publication in 2011-2015. At the same time, there are niches where OA clearly lags behind, such as the book format, and countries - e.g. China- which show signs of resistance against this trend. Financial reasons -books are still published almost always in print- and, especially, academic management - journals tend to be responsibility of university departments, whereas books tend to fall into the hands of centralized publishing services-, and prestige -subscription and payment are still generally considered to contribute added value in many parts of the world- seem to at least partly explain this marked difference between journals and books. Ph.D. theses, for their part, might be taken as a sign of the institutional commitment with free science, since it is the universities that promote this access mode, which involves almost no cost, with a growth from under 22% of OA in 1996-2000 to 77% in 2011-2015.

Thematically, there do not seem to be very marked correlations between object of study and publication access mode, with a slight trend for machine-translation and specialized issues to be further published in OA. Language distribution of OA, finally, shows also some disarray, indicating that a combination of cultural traditions and the degree of internationalization of each language results in various attitudes towards this issue.

Regarding our fourth research objective, we have quantified the degree in which these variables act as predictors of OA or TA, providing a detailed list of how these bibliometric factors apply to the publication mode.

Finally, our fifth research question about the kind of URLs hosting OA publications dealing with TS reveals that public agents are by far the main online spaces where this mode of publication is to be found. Currently, open access in TS is a very generalized practice among public agents, and this is increasingly so, passing from 75.5% of OA by non-commercial publishers in 1996-2000 to the current 88.4%. This has brought about the inverse process in commercial publishers, whose OA productivity has been more than halved, from 24.5% in 1996-2000 to 11.6% in 2011-2015. This seems to indicate that the attempt to embark on the free-science movement through the article-processing-charges (APCs) method proposed by many commercial journals is not working for the moment, if their intention is to provide generalized free access to science. Possibly, the cost of APCs is still too dear for many researchers, who increasingly publish preprints or other versions of their contributions on all kinds of OA repositories to overcome this barrier.

All in all, after a sustained growth which is still in force, open access seems to be reaching a turning point whose final outcome is still to be seen. The data we have analysed

seem to clearly indicate that open access is here to stay, with nonprofit agents featuring a very strong commitment towards it, and commercial publishers lagging far behind. Perhaps a notable reduction of APCs might change this trend.

The present study has been a first critical analysis of the presence and evolution of open access in TS. In our following study on this same topic, we will analyse the impact (measured in number of citations) of OA publications devoted to TS and we will compare it to that of TA publications in order to test the general hypothesis (Kurtz & Brody, 2006, p. 1; Li et al., 2018, p. 3) that OA involves a citation advantage.

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