

Translation history and scientific development: enlightened knowledge in Portuguese

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ABSTRACT: This article aims to bring to the attention of Translation Studies scholars and Translation historians outside Brazil a specific phenomenon in the historiography of translation into Portuguese. The focus rests on the scientific translation boom which took place in Portugal between 1799 and 1808, in a movement of books and knowledge which molded Enlightenment in the Portuguese Empire. In that context, a group of translators born in Brazil played a decisive role while working for the *Tipographia Casa do Arco do Cego*, run by Friar José Mariano da Conceição Veloso, a publishing house known for its publications on enlightened science.

KEYWORDS: Translation history, Enlightenment, Portuguese, *Casa do Arco do Cego*, Brazilian translators

ZUSAMMENFASSUNG: Das Ziel dieses Artikel ist es, die Aufmerksamkeit von Forschern im Bereich der Übersetzungswissenschaften und der Geschichte der Übersetzung außerhalb Brasiliens auf ein spezifisches Phänomen in der Historiographie der Übersetzungen ins Portugiesische zu lenken. Der Schwerpunkt liegt dabei in dem in Portugal zwischen 1799 und 1808 stattfindenden "Übersetzungsboom" von wissenschaftlicher Literatur. Durch Letzteren wurde die Entwicklung der Aufklärung im gesamten portugiesischen Imperium entscheidend beeinflusst. Im Kontext dieses Prozesses spielte eine Gruppe von Übersetzern brasilianischer Herkunft eine enorm wichtige Rolle, da sie für die *Tipographia Casa do Arco do Cego*, deren Reputation vor allem auf der Veröffentlichung von wissenschaftlicher Literatur der Aufklärung basierte, unter der Leitung von Friar José Mariano da Conceição Veloso arbeitete.

SCHLÜSSELWÖRTER: Geschichte der Übersetzung, Aufklärung, Portugiesisch, *Casa do Arco do Cego*, brasilianische Übersetzer

1. Introduction

In 1790, a Franciscan friar born in Brazil boarded a ship headed for Lisbon, which was, at the time, the capital of a large Empire stretching from South America to India. A man of books and rhetoric, a lover of botany and knowledge in general, Friar José Mariano da Conceição Veloso¹

¹ Various spellings have been given to the Friar's surname: Veloso, Velozo, Velloso and Vellozo. Here, the form 'Veloso' will be adopted throughout the text, as this is the form used

stood on that ship as a person who had a reputation as a describer and collector of Brazilian species, his main activity for around eight years, during which he dedicated himself to scientific expeditions funded by the Portuguese government. Although he was supposed to continue to work with the plant collections at the Portuguese royal gardens, little did he know that his life would take a different direction. Rather than acting as a botanist, he spent most of his time in Lisbon dealing with books, and, in 1799, was appointed to run a publishing house whose role for the history of translation in Portuguese is still to be fully understood and cannot be underestimated: the *Casa Tipográfica do Arco do Cego*.

The relevance of the *Arco do Cego* for history and historiography is multifaceted. Its publications ranged from manuals on how to grow potatoes to descriptions of methods of drawing and printing, being therefore of interest to different areas of academic research, such as the history of agriculture and the history of fine arts. As for the history of translation in general and the history of translation in each of these areas, its significance is made obvious by the fact that translation was the great motto underlying its feverish activities: Friar Veloso and his collaborators managed to prepare and publish 84 works, of which at least 45 are translations. They did this in a very short time span – two years, as the *Casa* was founded in 1799 and closed its doors in 1801, a period during which the Portuguese Crown covered for all its expenses. It seems safe to deem the *Casa do Arco do Cego* the first and only translation into Portuguese enterprise that has been fully state-financed up to these days (Oliveira Harden, 2010a, 112).

That fact alone would suffice to guarantee the place of the *Casa* as worthy of close examination in translation history. However, a second characteristic brings it closer to the heart of those who work with Brazilian translation history: most of the translators who worked for the *Casa* were born in Brazil.

These men and the translations they produced are the topic of this article. The aim here is to present an overview of the translation activity carried on by Brazilian translators for the *Casa* under the supervision and coordination of Friar Veloso, who was also a prolific translator. The guideline to be followed, both for textual organization and for methodological purposes, will be based on the list of questions asked by Bastin (2006) as basic for research in translation history: who, what, where, when, and more importantly, why.

The object of the research presented here is approached at different levels according to D'Hulst (2001). Firstly, the focus rests on “segments or configurations of segments belonging to the past”, or “occurrences of translations”, that is, the study of “a number of texts, the work of a [...]”

by most researchers writing on the friar. However, in quotations taken from his texts, the spelling will be ‘Velloso’, which is used in the bibliographical data of the works quoted.

group of translators, [...], belonging to one language or more, to a geographical or a political area” (D’Hulst 2001, p. 6). The discussion is centered on translators born in Brazil who worked with Friar Veloso and published their translation through the *Casa do Arco do Cego* or one of the publishing houses cooperating with it, from 1799 to 1808, as some books reached the market after the *Casa* was incorporated by the Portuguese Royal Printing House (*Impressão Régia*).

The research question ‘why’ can easily be combined to what D’Hulst describes as a second level of historical studies (7), or those in which researchers want to better understand the “contextual factors that generate or influence translation”, [...]: a practical and intellectual demand on the side of the individual [...], a social, political and economical demand (why is translation as such tolerated, promoted, forbidden in societies?).”

D’Hulst goes on to explain what he deems as third and fourth level studies, which in fact seem to be more of a cause and/or a consequence of his second level concerns. The notion of change (third level) brings in the correct notion that “facts and contexts belong to systems that changes (sic) [...] be it ideas on translations, functions of translations, [...]” (p. 7). Systems, be them cultural, literary, or political, are to be viewed as historical (work in a specific time and place), dynamic, and complex. and, “the correlations between the changing systems of translations + their contexts and changes in other, adjacent systems” (p. 7). In the case of the *Casa do Arco do Cego*, one has to take into consideration, for example, the correlations between Enlightenment philosophy and translation, between book culture/production and monarchical patronage, between scientific knowledge and colonial regimes, and how all of these factors interact with each other (one could add many other elements to this list, of course, such as the relationship between the so-called cultivated nations or languages and the Portuguese language).

In trying to show how translation was at the same time a reaction to Enlightenment and a force promoting the scientific changes it brought, this article is built on sections based on the ‘who’, ‘where’, ‘when’, ‘what’ questions mentioned earlier, answers to which were also used to complete a catalogue built according to suggestions given by Pym in his *Method in Translation History* (1988), still very helpful. The question ‘why’ will be indirectly addressed and will hopefully become clear in the following sections.

2. Real people, science, and patronage

It seems obvious that any research project in translation history is based on a list, catalogue or group: of books, of translations in a specific period of time, of translators working with one author or another or even of publishing houses. That is the first attempt to impose methodological boundaries to what could otherwise be an unachievable task. As Anthony

Pym puts it, lists and catalogues give order to data available to researchers and, at the same time, frame these data within a certain context because of the relationships which are formed and can be identified between their items (Pym 1998, 40).

The investigation which is the object of this article began with a preliminary list² of translators into Portuguese of scientific or technical books in the years of Enlightenment. This was the most important methodological criterion for the investigation: to put the spotlight on people, “real men [and women] with their own life stories and evolving ideologies” (Pym 10), in an attempt to contribute to the humanization of translation history or to the writing of a translation history in which people are rightly seen as “significant cultural figures” (10), placed within a certain historical context - a “history of translators and interpreters”, as Chesterman would put it (2009, 15).

This was followed by a second decision: working with scientific or technical texts allowed for the search of bibliographical data, which resulted in the identification of a scientific “translation boom” (Oliveira Harden 2010a, 4) in Portugal, involving especially Lisbon-based publishing houses between 1785 to 1808, a period which was then established as limits for data collection.

It may be useful to address the matter of why the year 1808 was used as a time limit. That year, the Portuguese royal family and the entire court settled in Rio de Janeiro after leaving Lisbon to avoid the take over of Portugal’s Crown (not to mention the dominion over the colonies) by the French. That same year, Prince Regent Dom João VI put an end to the ban on the printing press in the Brazilian territory, by founding the *Impressão Régia* in Rio de Janeiro. From then on, publications in Brazil were allowed and the translator being a Brazilian-born subject ceased to be an issue.

Through the process of gathering data about translators and translations within these boundaries, it soon became clear that the *Oficina Tipográfica Casa do Arco do Cego* played an essential role as far as scientific translation in Portugal was concerned. In fact, Brazilian translation historian Lia Wyler describes the Portuguese translation movement at the end of the 18th century as being “idealized and executed by Brazilians aiming directly at Brazil” and as reflecting “the ideology of the Enlightenment” (Wyler 2003, 73)³.

Contrasting and comparing bibliographical and biographical data led to the identification of 15 Brazilian translators who worked mainly

² One of the products of my research was a catalogue with translators and translations. Its contents are explained in this article, but it has not yet been possible to publish it in a digital format. Those interested should feel free to contact me at oliveira.ales@gmail.com for more information.

³ All translations from Portuguese for this article are my own.

within an editorial project which focused on enlightened science and was coordinated by friar Veloso⁴:

- a) Martim Francisco Ribeiro de Andrada (Machado);
- b) Antonio Carlos Ribeiro de Andrada (Machado da Silva Araujo);
- c) Manuel Rodrigues da Costa;
- d) Manuel Ferreira de Araújo Guimarães;
- e) Hipólito José da Costa Pereira (Furtado de Mendonça);
- f) José Joaquim Viegas de Meneses;
- g) Manoel Jacinto Nogueira da Gama;
- h) Jose Feliciano Fernandes Pinheiro;
- i) Manuel Joaquim Henrique de Paiva;
- j) João Manso Pereira;
- k) Antonio Pires da Silva Pontes (Leme);
- l) Antonio de Moraes e Silva;
- m) José Ferreira da Silva;
- n) Vicente Coelho de Seabra da Silva Teles;
- o) Friar José Mariano da Conceição Veloso (Velloso).

Readers who are familiar with Brazilian and Portuguese history could perhaps recognize among the names above at least six who were actively involved in the process of gaining Brazilian independence and in the independent Brazilian politics (a, b, c, d, g, h), two who are part of the history of printed press (e and f), two who are chemists (i and n). Of all of them, Friar Veloso was the most productive, with at least 43 known translations published in a period ranging from 1797 to 1806 (Oliveira Harden, 2010a).

And who were these men? It is not possible, in this article, to give an account of the lives of each one of them, but presenting general features that can characterize them as a relatively homogeneous group can shed light both on the nature of their relationship with the *Arco do Cego* and on their activity as translators.

With few exceptions, the translators listed were the sons of an agrarian Brazilian elite, men who had, in European universities, the chance to further their formal education and therefore combine economic and political influence with cultural prestige. For that goal, the main

⁴ Unfortunately, no woman was found among the translators working with scientific texts within the scope of the investigation. There was only one translation supposedly done by a woman, a Portuguese version of Thomas Martyn's translation into English of Rousseau's *Lettres Elementaires sur la Botanique: per Madame de L**** (Rousseau, 1782), published by "Uma senhora desta corte" (A Lady of this court), but it has not been possible to establish her identity or even if the person who authored the translation was really a woman.

option was the University of Coimbra, the only university in the whole Portuguese Empire and an institution where the rich young male coming from all of the colonies would be exposed to the same ideology (in a different manner from what happened in the Spanish Empire, which allowed colonies in America to found universities). The French university in Montpellier was also a destination for Brazilians.

On European soil, they would go for degrees in law, mathematics, natural sciences and medicine, being financed by their families during the time of their studies. Having graduated, many would be appointed to some administrative position or as judges in one of the Portuguese colonies, becoming part of a group responsible for keeping the Empire going (Pereira, 2017, 505). However, for different reasons, some would not find a position right away and making a living would become literally vital. Here one finds the first point of contact between the soon-to-be translators and the *Casa do Arco do Cego*.

In a letter written by José Feliciano Fernandes Pinheiro, the author shows his enthusiasm with an offer to work, especially with French and English”, in “a literary and typographic establishment that was to be founded in [...] a place called *Arco do Cego*”, as the advantages were many:

on-site housing, including boarding expenses, and, most of all, the acknowledgement of our skills by the government; our task was the translating of works which would be assigned to us [...]. (Fernandes Pinheiro 1874 quoted by Leme 1991, 81-2) (my emphasis)

More than housing and boarding, the *Casa do Arco do Cego* also offered them payment for their work. Financial records show that, in general, translators and authors were paid the same, with “200 copies of the relevant work, or the corresponding value in cash, if they resold the copies to the Casa” (Leme 1999, 82). This high standing enjoyed by the translators in terms of valorization of their work is rare even by today’s standards, and the fact that all expenses of the Casa were paid for with crown funds makes it even clearer how important translation was for the editorial project put in place by Friar Veloso.

Some general features have characterized the Brazilian translators working at the *Arco do Cego*. The first one is the brief duration of their activity as translators, an aspect also noted by Wyler (2003, 76). Their biographies show that they did not pursue a career in translation at all, and most of them never translated again once they started their professional life as public servants, judges or journalists. When working with Friar Veloso, translation was for them a safe step towards acceptance into a patronage system that would go far beyond their time, and it is in this context that the passage “acknowledgement of our skills by the

government”, quoted from Fernandes Pinheiro above, should be understood.

At the end of the 18th century, Portuguese society was still immersed in a system in which the granting of favours played a crucial role. For young and ambitious Brazilians, it was essential to find a way into the good graces of the powerful, as that was one means to guarantee a position in public service or a successful career in any other field. This explains Pinheiro’s excitement at the idea of working at *Arco do Cego*: being involved in Veloso and Coutinho’s editorial project was a sure way of being noticed by the Portuguese authorities, and of being recognised as a valuable scientist or as a possible future public servant.

In this sense, one is correct to see the *Casa do Arco do Cego* as a patronage institution in the terms put forth by Lefevere, since the three components of patronage are clearly present: economic, status-related and ideological (1992, 16). And this was true not only for the typical Brazilian young intellectual, such as Fernandes Pinheiro, whose collaboration with friar Veloso and the consequent publication of his translations would prove his intellectual skills and his value as a good subject of the Crown, and therefore award him the good graces of the government. The friar himself benefitted immensely from his ties with the powerful, especially from his friendship with Dom Rodrigo de Souza Coutinho, who was at the time the State Minister for the Navy and Overseas Territories and was in fact the man who ruled the empire.

The friendship between the two was close and long-lasting, Coutinho having even invited Veloso to live in his house in Lisbon. The two shared a strong belief in the principle of the monarchical regime and in the power of books as a medium of instruction. Their confidence in the dissemination of knowledge through translation and publishing proved decisive for Portuguese cultural and scientific history (Oliveira Harden 2009).

Having lived abroad as a diplomat, and having had contact with political and intellectual movements, Dom Coutinho’s main objective was to place Portugal among the modern nations of Europe. He was a man of the Enlightenment, whose faith in the future of the Portuguese Empire was based on scientific and cultural development. He was one of the so-called *estrangeirados*, Portuguese intellectuals who lived abroad, distinguished, according to Silva (1993, xxxix),

for their scientific education, their culture, their cosmopolitanism, and for their ambition in taking part in the great transformation they envisioned for their country.

It was this representative of a new Europe that allowed for the special moment in the history of translation into Portuguese for which the *Casa do Arco do Cego* stands. He entrusted Friar Veloso with part of the

solution for the 'lateness' and lack of progress he felt his country was suffering from. Veloso was to translate and publish foreign books useful to those who were interested in attaining progress, especially the farmers of the Kingdom, "in order to expand their horizons of knowledge, making them familiar with new products, new techniques [...], for the Old World and above all for the astounding and exotic New World, Brazil" (Nunes; Brigola 1999, 63). Within the editorial project put in motion by the *Arco do Cego*, Dom Rodrigo can be seen as its political mentor and Veloso as its manager and promoter, the actions of one never independent of those of the other (Leme 1999, 77). It has been argued that Veloso became a powerful name within Portuguese intellectual circles because of the enormous influence of the *Casa do Arco do Cego*. However, one should understand his power as a second-hand or derivative one, since Dom Coutinho seemed to have the last word even on what should be published by the *Casa* (Pereira 2014, 505).

Differently from the other translators at the *Casa do Arco do Cego*, Friar Veloso dedicated his life in Portugal to books and to the dissemination of useful scientific ideas. Although he went to Lisbon to work with plant species in the Portuguese Royal Botanic Garden (*Jardim Botânico d'Ajuda*), as mentioned at the beginning of this article, his path took him to the world of texts. His first translations date from 1796, when he began publishing the *Palladion Português e Clarim de Palla*, in which he disseminated colonial news and "translated foreign texts concerned with rural life" (Priore; Venâncio, 2006, 104). The list of his translations shows 43 titles, and even though some are still to be confirmed as translations or as translations authored by him, this is undoubtedly an impressive number⁵ (Oliveira Harden, 2010a). In a dedicatory preface written to the Portuguese Regent Prince (a clear sign of his taking part in a patronage relationship in which the Crown was the patron), Veloso explains the reasons for taking on this task (Lages 2002), informing that he had been "charged with collecting and translating" into Portuguese "all foreign memoirs" that could be

convenient to the Establishments of Brazil, for the improvement of Brazil's rural economy and the factories that depend on it, which if helped would come out of the tardiness and atonia in which they presently are [...]. (Velloso 1798, i)

Veloso does not mention when he was given such directions, either in this preface or in any of the many others he wrote to introduce the works published by the *Casa do Arco do Cego* and dedicated to the Regent Prince. However, the quasi-official role played by the *Casa* is confirmed by history

⁵ The list of Veloso's translations is soon to be electronically published by the Brazilian journal on translation studies *Belas Infêis*, based at the University of Brasília.

researchers, who recognize it as a “regime enterprise” (Domingos 1999, 92) not only due to the financing of its activities but also for the censorship privileges it enjoyed, as the publications were all done by order of His Majesty or under his auspices (Oliveira Harden 2019).

The patronage deal between the Portuguese government and the translators would be reflected in the text of the books’ title pages. As showed elsewhere (Oliveira Harden, 2019), as a rule, one would find the name of the translator followed by a line or two telling of his skills, what Genette called a classical title (1997, 33), which would often be “a description of the book, a summary of its action, a definition of its subject, a list of its appendixes, and so forth”. On the title page of his translation of Marcandier’s *Traité du chanvre*, Martim Francisco Ribeiro de Andrada was duly identified as having a degree in philosophy (natural sciences) and mathematics:

Tratado sobre o canamo, composto em francez por Mr. Mercandier, Conselheiro da Eleição Burges (Traduzido de ordem de Sua Alteza Real o Principe do Brazil, Nosso Senhor – em beneficio d’agricultura, e marinha do Reino e Dominios Ultramarinos, por Martim Francisco Ribeiro d’Andrade, *bacharel em philosophia, e mathematicas*, publicado por Fr. José Marianno da Conceição Velloso (Jubet amor patriae, natura juvat, sub nomine crescit.). (Marcandier 1799) (my emphasis)

As a textual device, such mention would seal the patronage contract and would work as a guarantee of the good quality of the translation, supposedly done by someone who had ties with the new ways of making science already in place at the University of Coimbra after its reform in 1750, a step of the progressist government of Joseph I through his minister the Marquis of Pombal.

In fact, Enlightenment represented the foundation of the whole publication activity coordinated by Veloso. Being himself a self-taught botanist, he compensated his lack of higher education by surrounding himself with intellectuals who could transfer knowledge from France and England into the Portuguese language without posing a danger in terms of the political and ideological context of the Enlightenment. Veloso and his group of translators helped to introduce new ideas through traditional discursive and textual practices, such as the use of dedicatory epistles that accompanied the translation (the activity itself, and the actual book resulting from it) meant for the Prince (Oliveira Harden, 2011).

3. Books, topics, languages and *Officinas* of progress

Their connection with the Enlightenment, as well as Dom Coutinho’s concern for Portugal’s progress influenced the decision on what

books and authors should be translated by the men at the *Casa do Arco do Cego*. The idea of ‘useful science’ was combined with topics of relevance in agriculture, since the intention was to reinforce colonial ties which kept Portuguese colonies, especially Brazil, as suppliers of commodities. The topics ranged from the cultivation of tabacco to potash production, from how to grow spices to how to make cheese, from the building of canals and bridges to the correct way to use dyes. In fact, there was “no subject useful to the progress of Brazil that was left untouched by friar Veloso” (Moraes 2006, 83).

For most part, Portuguese versions were performed from source texts in French, English, German, Italian, Spanish, and Latin, in this order of preference, with French being the source language of 47% of the publications and English of 29% (Faria 1999, 117). This does not mean that these languages were the ones used by the author of the work, since indirect translation was an accepted practice and a valid way of rendering in vernacular a work which was written in a language for which there was no translator available at the time. Difficulties in finding the original edition in the language of the author may also have been an issue. In an article on the translation of texts on medicine and pharmacy in Portugal between 1770 to 1810, Brazilian historian Claudio DeNipoti confirms, based on the data he collected, the prevalence of French as a source language, both in direct and in indirect translations. His study also listed English and Latin as other source languages for translations into Portuguese (DeNipoti 2017, 917).

Be it as it may, the preference for works in French depicts a general tendency in terms of foreign language usage in Portugal at the time, as French replaced Spanish as a second language of culture in the 18th century (Teyssier 1993, 38). French was largely used in Portugal and, in regards to Brazil, French culture was particularly decisive for the formation of Brazilian culture. Certainly, editorial choices as to the selection of texts to be translated took into consideration the growing prestige given to French as the language of educated nations. However, the turn towards French-language scientific texts (written by French and Swiss scientists) was also due to the vigour and dynamism of science and technology produced by such authors, among whom there were Claude Louis Berthollet, Jean Louis-Muret, for example.

A consequence of French-language influence, particularly in the exact sciences, was that the translations published at the time of Veloso and the *Casa do Arco do Cego* consolidated the path of science in Portugal and in Brazil, and helped to establish scientific traditions based on French science and technology. As science is not made without language, French scientific writing has left its marks on the vocabulary, morphology, syntax and phraseology of scientific texts produced in Portuguese in the 18th century, a probable result both of the habit of reading in French and of the interferences, borrowings, and terminological neologisms coming from

translations of scientific works originally written in French, as Sinner (2001, 92) has noted in relation to publications of the *Academia de Sciencias de Lisboa*.

Although there can be no doubt about the role played by French science and language, the position of English as the second most translated language is an indication of a cultural and scientific shift. For Portugal at the end of the 18th century, Britain was becoming an increasingly strong influence politically and economically. Caught in the middle of hostilities between France and Britain, the Portuguese were pressured by both sides, until the situation was somehow resolved by the transfer of the royal court to Brazil, not without the help and under the supervision of the British. In addition to this, many of the British texts on science and agriculture were accounts of the production of sugar-cane, cotton or spices in British colonies. For sure, works on such topics would classify as useful books worthy translating for the progress of the Portuguese Kingdom. For sure, works on such topics would classify as useful books worthy of being translated for the progress of the Portuguese Kingdom.

More approachable and down-to-earth than their French counterparts, British texts often had the right appeal for publications aimed at spreading practical knowledge to farmers, which was the objective of many of the works published by the *Casa do Arco do Cego*. This feature of the texts in English has been associated with the “healthy amateur constituency of the English science” (Gross; Harmon; Heidy, 2002, 91) and Veloso has resorted to them on several occasions. His series *O Fazendeiro do Brazil*, for example, had XXX tomes, each dedicated to an agricultural topic dear to the Portuguese colonial enterprise (sugar-cane, spices, coffee and so on). Tome I, Part I, on Sugar cane and sugar (Velloso, 1798), is an assemblage of 11 texts, taken from distinct sources. Of these, eight were originally in English, telling of experiences of farmers or plantation owners in the British colonies in North-America and the West Indies.

In broader cultural terms, by engaging themselves with the translation of important scientific works in prestigious languages, Portuguese speaking intellectuals, such as the translators of the *Arco do Cego*, became part of a network of science and books, the Republic of letters of the 18th century. Within this cosmopolitan circle, a book or a successful author of success in Europe would be known to other authors on the old continent. For translation, this meant that there was a tendency to translate works which had previously been rendered into other languages, renewing once more the interconnections within the Republic and establishing the writings other cultivated people should get acquainted with. Veloso, for example, apparently followed the steps of other idealistic men: his textual activities (as editor and translator) bears similarities to the work of Casimiro Gómez Ortega and Miguel Jerónimo Suárez y Núñez, Spanish translators who, without much financial support,

were able to introduce “all the practical progress which they saw in the Enlightened Europe to Spain” (Aguilar Piñal 2006, 110-111).

The scientific translators felt, for they were themselves intellectuals, that they were contributing to the advancement of science in Portugal. Manoel Jacinto Nogueira da Gama, a mathematician, natural philosopher, and lecturer, was the only translator within the scope of the investigation to write paratexts expressing his views on translation (Oliveira Harden, 2010b). He advocated in his preface to *Ensaio sobre a theoria das torrentes e rios* that translators had the duty to coin neologisms to recreate French terms which had no equivalent in Portuguese due to the “poverty, in which the Portuguese language still finds itself” (Nogueira da Gama, 1800). By refusing to maintain French terms in his Portuguese text, Nogueira da Gama believed he was helping to enrich his vernacular language and therefore advancing science in such language. He expresses a further deal of patriotic concern, as he confesses that he deems it not fair that the Portuguese language should not have its own terms for such an important field of knowledge (hydraulic engineering), and therefore

[...] gave each kind of building a name that would express some of its main objects, or its constructions, even if such a name had no analogy with the French name, having adopted, however, those which were well known among us. (Nogueira da Gama, 1800)

Having established who the Brazilian-born translators of the Portuguese enlightenment were and what sort of works they translated, it is necessary to answer the question ‘where’. Although there were at the time publications outside Lisbon, for example, in Coimbra, the scientific translation boom can be characterized as a Lisbon-based phenomenon which involved several publishing houses, again, very much as a result of Veloso and, more indirectly, Dom Coutinho.

Bibliographical data show that, together with the *Casa do Arco do Cego* and Veloso, other publishers were eager to bring progress to Portugal through translation. In fact, within the editorial project devised by the friar and by his benefactor, Dom Coutinho, four other places were used for the printing of the pages already prepared by Veloso: *Officina Simão Thaddeo Ferreira*, *Officina (Patriarcal) João Procópio Correa da Silva*, *Officina Antonio Rodrigues Galhardo*, *Régia Officina Typographica (Impressão Régia)*. This operation involving the main publishing houses in Lisbon has come to the attention of book historians, who wanted to understand why some printings were initiated in one typographic shop and finished in another, even after the founding of the *Typographia do Arco do Cego* (the name of Veloso’s publishing house and the nature of work done there changed according to the techniques of printing Veloso would implement with time). A credible explanation was given by Manuela Domingos

(1999), for whom resorting to different typographers was actually part of Veloso's editorial plan (96), which was too ambitious to be accomplished only within the facilities of the *Casa do Arco do Cego*. Turning to other typographers and workshops (*officinas*) was a strategy which enabled the production of a large number of titles, with considerable quantities of copies.

Again, resorting to the series *O Fazendeiro do Brazil* is illustrative. Three tomes were published in 1800. At this time, Veloso's Casa was in full operation. However, none of these tomes was published there. Tome 2, Part 2 (on textile dyeing), and Tome 3, Part 1 (on coffee) were issued by the *Officina Simão Thaddeo Ferreira* (Beauvais Raiseau, 1800; Velloso, 1800) while Tome 2, Part 3 (also on textile dying, more specifically on the insect cochineal) was released by the *Officina (Patriarcal) João Procópio Correa da Silva* (Mononville, 1800). As observed by Domingos (1999), if one regards the "material history" of these books, all of which show a high printing quality for the time, this sort of editorial network demands uniformity in typefaces and shaping techniques, and in the dimensions for matrices and plates, finishings and bindings, and the use of the same type of paper and ink, in order to "allow for the reproduction of extremely large quantities of the final product" (97). The author concludes by calling attention to the level of organization and funding necessary for such enterprise:

Only a well-thought out and consistent editorial plan — which enabled the printing of different volumes at the same time, combined with large and guaranteed funding, regardless of selling and distribution conditions — could make this possible. (Domingos 1999, 97)

4. Bio and bibliographical data, and catalogue entries

As a by-product of the information gathered on the translators and the works they translated within the scientific translation boom that has been discussed up to here, a catalogue with bibliographical data was elaborated (Oliveira Harden 2010a). As mentioned before, the translator was deemed as the starting point for registering the data collected. An entry included in the section on Martim Francisco Ribeiro de Andrada Machado can be given here as an example.

After a text with biographical information on Andrada Machado, his three translations, all published within Veloso's editorial project, are listed in the most detailed way possible. About his *Manual do Mineralogico*, this is the entry:

Manual do Mineralogico, ou esboço do reino mineral, disposto segundo a analyse chimica (por Mr. Torben Bergman, Cavalleiro

da Ordem de Wafa, Professor de Chimica em Upfal, Membro de muitas academias, publicado por Mr. Ferber, Professor de Chimica em Mittaw; traduzido, e augmentado de notas por Mr. Mongez o Moço, author do Jornal de Phisica, e Membro de muitas Academias. Nova Edição, consideravelmente augmentada por M. J. C. De La Metherie. Ultimamente traduzido por Martim Francisco Ribeiro de Andrada Machado, formado em Mathematica, e Bacharel em Philosophia. Publicado por Fr. José Mariano da Conceição Velloso). Tomo I. Lisboa: Off. João Procopio Correa da Silva, 1799.

Language: French

Source Text (for the translation into Portuguese): Manuel du Minéralogiste, Ou Sciagraphie Du Règne Minéral, Distribué D'Après L'Analyse Chimique Par M. Torbern Bergman, (...) Mise au jour par M. Ferber, Professeur de Chimie à Mittaw. Et traduite et augmentée de Notes Par M. Mongez le jeune, Chanoine Régulier de Sainte-Geneviève, Auteur du Journal de Physique, & Membre de plusieurs Académies. Paris: Chez Cuchet, 1784.

Author: Torbern (Olof) Bergman

Original text in Latin: Torberni Bergman, Chemiæ Prof. Upsal. Et Equitis Aurti Regii Ordinis De Wasa (etc), Sciagraphia Regni Mineralis, Secundum Principia Proxima Digesti. Londini: 1783.

Topic/fields of interest: Mineralogy, geology, physics, chemistry.

Notes:

The title page does not mention the Regent Prince, but informs (at its bottom) that the printing was ordered by 'Sua Magestade' (Her/His Majesty).

The translation into Portuguese is available on the website of the Biblioteca Nacional Digital de Portugal, at <http://purl.pt/12070/4/>.

Mineralogy was a highly important topic for the Portuguese, especially if one takes into account the amount of gold which was transferred from Brazil to Portugal in colonial times. It was certainly part of the list of topics Veloso and Coutinho could have made. As to the relevance of the work itself, the choice of a book by the Swedish scientist Torbern Bergman indicates an intention to introduce into the Portuguese culture the writings of a famous author, known for his many contributions for the fields of chemistry, physics, geology, and mineralogy, especially for his work on the chemistry of metals (Shuffle 1985).

The title of the work in Portuguese is given in full, to include additional information related to the history of such an edition, that is, the fact that it was translated and augmented by Mr. Mongez, for example. The connection with Veloso is also clear not only because of the mention of his name as publisher but also by the identification of the *Officina João*

Procopio Correa da Silva, which was under his influence and coordination.

Following the format of titles and title pages, the publisher includes a small text on the translator to tell the potential reader that he is a mathematician and a natural philosopher (“formado em Mathematica, e Bacharel em Philosophia”). It is a textual indication of the patronage relations bringing together Andrada Machado, Veloso, Dom Coutinho, and ultimately the Portuguese Regent Prince. Interestingly, the Prince is not mentioned on the title page, but the fact that the translation was published by His Majesty (as informed under “Notes”) leaves no doubt about the governmental participation in the publication of the book.

As the catalogue was aimed at helping not only translation researchers but also those investigating science history and book history, the expression “Source text” and “Original text” were used despite the many theoretical discussions which are part of literature in Translation Studies. The intention was only to make a distinction between the text used by the Brazilian translator (in this case, a French version) and the text in the language in which the author first wrote his work (Latin).

Finding the actual books, whether source text or translation, proved a very difficult task, even in these digital times. Therefore, the entry provides sites on which researchers can access digitalized versions of the books, which will surely make life very much easier.

Other entries on the catalogue proved more complex to prepare. Some works listed are collections of several works, from different languages and different sources. This makes them more interesting in terms of textual connections, but poses a great challenge for the research, since it may be hard to find the source texts. Even identifying the author can be sometimes difficult, due to the Portuguese tradition of adapting personal names. An example is the indication of “D. G. Falconer” as the author of *Memoria sobre as molestias dos agricultores* (Falconer 1801), in a translation accredited to Friar José Mariano da Conceição Veloso. The author is William Falconer, probably the British physician who wrote for publications of scientific societies in his time. In the Portuguese translation of his name, the “D” stands for ‘Doutor’ and “G” for ‘Guilherme’, which is the Portuguese version for ‘William’.

Final considerations

The aim of this article was to present an account of a research project which started with a list of names of translators, men of science and books, moved by new findings and discoveries which found no counterpart in their Portuguese-speaking home. Their new way of looking into science, however, did nothing to stop them from entering into patronage relations with the Portuguese Crown, a fact which creates an apparent paradox: new enlightened science offered within an ancien régime political practice.

Friar Veloso and the other 14 translators who helped him in the *Casa do Arco do Cego* used translation to promote the Empire, that is, as a way of importing knowledge which was registered mainly in French and English. But they did it also to their own benefit, as a way to show their dedication to the Empire and gain the favors of the Crown.

In their efforts to write science in Portuguese and promote progress, they were part of a network of books, authors, and Lisbon-based publishing houses, inscribing themselves in the Republic of Letters typical of 18th-century Europe. In that sense, more than just giving information about the translation of scientific books, this article aimed to call attention to what research in translation history can tell us about: the ties between cultures, the connections between one field of knowledge and another.

In this article, the description of the process of elaborating a catalogue of translators and books was also meant to discuss methodological and research decisions. Ultimately, it should be interpreted as a reminder that sciences, histories, and nations are produced by human beings, connected by means of linguistic contact and thus of translation.

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