Chronotopos
A Journal of Translation History

Andreas Gipper

On the role of translation in the stabilization of national scientific cultures

1/2023
DOI: 10.70596/cts146

Herausgegeben am / Éditée au / Edited at: Institute of Applied Linguistics and Translatology (IALT), Leipzig University
ISSN: 2617-3441

Abstract

Translation is usually understood primarily as a mediating movement between different cultural and linguistic spheres. Recent translation studies, on the other hand, have often emphasised that translations not only facilitate the crossing of national borders, but also contribute significantly to the establishment of the very borders they subsequently overcome. The same phenomenon can be observed in the emerging sciences. This seems all the more remarkable given that in view of the decidedly universalist self-conception of the sciences, one would hardly expect translations to have their role in the stabilisation of national scholarly spheres. The present article aims to show how translation in the seventeenth and eighteenth centuries was not only a precondition for the emergence of science as a transnational project, but also contributed significantly to the development of national scientific communities and cultures.

Keywords: Scientific communities, function of scientific translation, early modern period, universality claim, national hegemony

Zum Zitieren des Artikels / Pour citer l'article / To cite the article:
Gipper, Andreas (2024): On the role of translation in the stabilization of national scientific cultures, *Chronotopos* 5 (1), 8–22. DOI: 10.70596/cts146

Andreas Gipper

On the role of translation in the stabilization of national scientific cultures

Abstract:

Translation is usually understood primarily as a mediating movement between different cultural and linguistic spheres. Recent translation studies, on the other hand, have often emphasised that translations not only facilitate the crossing of national borders, but also contribute significantly to the establishment of the very borders they subsequently overcome. The same phenomenon can be observed in the emerging sciences. This seems all the more remarkable given that in view of the decidedly universalist self-conception of the sciences, one would hardly expect translations to have their role in the stabilisation of national scholarly spheres. The present article aims to show how translation in the seventeenth and eighteenth centuries was not only a precondition for the emergence of science as a transnational project, but also contributed significantly to the development of national scientific communities and cultures.

From the res publica litteraria to national scientific cultures

Since their beginnings, modern natural sciences have positioned themselves as inheritors of the old *res publica litteraria*, communicating in Latin. The foundational self-perception of the modern natural sciences encompasses a pronounced claim to universal validity and a strong commitment to the benefits of mankind.[1] This claim to universal validity and accessibility, however conflicts with the massive vernacularisation of scientific discourse, as it was promoted by the European academies of sciences in the 17th century. This shift is in part a consequence of the transformation of formerly private scholarly circles into state institutions under monarchical patronage. Notably, 'national' academies, especially the *Royal Society* in London and the *Académie des Sciences* in Paris (similar tendencies can also be observed in the Italian academy system), foster the formation of national scientific communities with their own corporate reflexes and career mechanisms.

Despite their professed universal claims and the current inclusion of foreign members, these academies have shown from their beginnings an often-underestimated tendency to consider themselves exponents of a national community of honour. In some respect vernacularisation and nationalization seem to go hand in hand. Although there is a broad consensus in the historical and political sciences that the emergence of nations, especially in the sense of nation states, is essentially a phenomenon of the 19th century,[2] recent research

[1] This aspect was specifically emphasized by one of the founders of modern sociology of science, Robert Merton, in his book *The Sociology of Science* (Chicago: UP 1973).

[2] Peter Burke, for example, assumes in his *Social History of Knowledge* that the nationalization of the sciences was a nineteenth-century phenomenon (BURKE 2012).

has clearly shown, that national attribution patterns and phenomena of national competition have been omnipresent in Europe at least since the time of humanism and that the idea of national communities of honour was already widespread in the 16th century, especially in humanist scholarly circles (HIRSCHI 2005). This raises the question of whether the emphasized universalism of modern sciences has obscured their de facto national constitution and the continuities linking them to the national reflexes of humanist scholarly circles. In fact, a closer look at the founding phase of modern scientific societies in the 17th century reveals a pronounced dimension of national competition that in some instances even displayed overtly nationalistic characteristics.[3]

If it seems clear that the founding of national scientific academies and the corresponding vernacularisation has massively fostered the formation of national scientific communities, the question arises of which role the new form of translational scientific communication has played in this process. And since the genre of scientific translation, especially in the mode of 'intranslation' (intraduction) in the sense of Ganne and Minon (1992),[4] represents a form of text production that, by definition, primarily addresses the scientific community of the target culture and aligns with its interests, this corpus of texts appears particularly suitable for examining this very process.[5]

In this sense, the following observations confirm what recent translation research has underscored: Translations not only facilitate the crossing of national borders, but also – as emphasized by Naoki Sakai – contribute significantly to the establishment of the very borders they subsequently overcome (SAKAI 1997, 2010; DIZDAR & GIPPER & SCHREIBER 2015).

Several aspects highlight the alignment of scientific translations with the interests of the target community:

1. Scientific translations can serve practical national economic interests. This is evidenced, for example, by various French translations from German in the field of mining.
2. Scientific translations focus on gaps in the research activities of their own community, signalling underdeveloped research areas and trends.
3. Science translations frequently serve young scientists in establishing themselves within their community (see the article by Diego Stefanelli in this issue). Their translational activity often functions as a means of testing and quality assurance. Translations often include a critical assessment of the translated text and a re-examination of its results via experimental replication (see the article by Garda Elsherif in this issue).

---

[3] In fact, it seems important to distinguish between national competition and nationalism. But if nationalism is understood as the exaltation of one's own nation and the development of an exaggerated sense of national honour, including a sense of superiority associated with hegemonic tendencies, then many phenomena of national competition in the sciences of the early modern period can be regarded as forms of 'nationalism'. Caspar Hirschi uses the term 'overheating economy of honour' to describe the origins of nationalism (HIRSCHI 2012).

[4] The term has since been introduced to the English-speaking world by Antony Pym and others (PYM 2005).

[5] The following analyses demonstrate that this applies not only to 'intranslations' but also to 'extranslations' into Latin. These translations continue to hold significant importance in scientific communication during this period (GIPPER 2025a).

4. National academies explicitly commission scientific translations to promote their own research.
5. In specific cases, scientific translations serve to propagate the theoretical models of their own community or to refute competing models.
6. Scientific translations, in general, contribute to establish one's own community and one's own scientific language as the dominant one.

The subsequent exploration attempts to show that the scientific translation market, whose establishment from the 17th century onwards constitutes the necessary condition for the possibility of vernacularisation in the field of scientific literature, not only reflects and mirrors the formation of national scientific communities but often actively promotes it, serving as a tool for establishing their respective supremacy.

National competition between early modern European scientific societies

Our examination will begin by elucidating how national competition and the pursuit of national superiority manifested in early modern sciences and subsequently explore the role of translations within this context.

A look at the founding phase of the *Royal Society* and the *Académie des sciences* illustrates how strongly this dimension of national competition permeated the early communication between these two major European academies. Thus, from the outset there is a bitter debate on the question which academic tradition is older and which country plays the pioneering role. Although the *Royal Society* was founded six years before the *Académie des Sciences*, there has been an intense debate between English and French scholars about who influenced whom in its founding.[6] Numerous are the testimonies of French academicians from Chapelain, Cassini, Du Hamel, Thevenot, to Fontenelle, who point out that English researchers went in and out of the private French predecessor academies Monmort and Thévenot, and that in particular the first secretary of the Royal Society Henry Oldenburg was an avid visitor to both academies during his time in Paris. Cassini for instance states in his work *De l'origine et du progres de l'astronomie*:

Plusieurs années avant que cette Academie [Académie des sciences] fust etablie, on faisait à Paris diverses conférences de physique & de mathématique. Dés l'an 1638 le P. Mersenne commença à faire de ces sortes de conférences qui furent depuis continuées par M. de Montmor & par M. Thevenot. Quantité de sçavans hommes prenoient plaisir à venir s'y entretenir des observations astronomiques, des problemes d'analyse, des expériences de physique, & des nouvelles découvertes dans l'anatomie, dans la chimie & dans la botanique. […] Plusieurs étrangers s'y trouvoient aussi, & entr'autres Mr Oldembourg, qui ayant depuis passé en Angleterre et ayant inspiré aux Anglois le dessein de faire de semblables conférences, donna occasion à l'établissement de la societé royale d'Angleterre. (CASSINI 1693: 26.)

[Several years before this Academy [Académie des sciences] was established, various lectures on physics and mathematics were given in Paris. As early as

[6] This debate has been analysed by Syfret as early as 1948, but it has subsequently received little attention regarding its implications for the history of scientific communities (SYFRET 1948).

1638, Father Mersenne began to give these kinds of lectures, which have since been continued by M. de Montmor and M. Thevenot. Many learned men enjoyed coming to talk about astronomical observations, analytical problems, physical experiments and new discoveries in anatomy, chemistry and botany. [...] Several foreigners were also there, including Mr Oldembourg, who, having since passed to England and having inspired the English to hold similar conferences, gave rise to the establishment of the Royal Society of England.]

This view is echoed in Du Hamel's official history of the *Académie des sciences*, titled *Regiae scientiarum academiae historia* (DU HAMEL 1700). Du Hamel recounts the gathering of distinguished scholars in Oxford, underscoring their travels through France and Italy and their attendance at meetings of the academies of Montmort and Thevenot:

Sub finem dominationis Olivarii Cromvelii complures viri nobiles, quibus et hae diciplinae cordi erant, quique magna ex parte Galliam et Italiam peragrarunt, atque Eruditorum coetui apud D. D. Montmort et Thevenot interfuerant, Oxonii una convenerunt, […]. (DU HAMEL 1700: 8–9)

[At the end of Oliver Cromwell's reign, many distinguished men who were interested in these disciplines, and who had to a great extent travelled through France and Italy and had attended the meetings of scholars at the residence of Mr. Montmort and Thevenot, gathered together in Oxford.]

In this perspective, the Royal Society appears as an imitation of French models, a view vehemently rejected by figures like Robert Hooke:

The first [objection] is concerning the beginning, and original, of the Royal Society, concerning which he [i.e. Cassini] might have been much better informed, if he had taken notice of what has been said concerning it in Dr Sprat's History thereof; but that, it seems, did not so well suit his design of making the French to be the first. He makes, then, Mr Oldenburg to have been the instrument, who inspired the English with a desire to imitate the French, in having Philosophical Clubs, or Meetings; and that this was the occasion of founding the Royal Society, and making the French the first. I will not say, that Mr Oldenburg did rather inspire the French to follow the English, or, at least, did help them, and hinder us. But 'tis well known who were the principal men that began and promoted that design, both in this city and in Oxford; and that a long while before Mr Oldenburg came into England. (HOOKE 1726: 388)[7]

What we see is a competitive relationship with strong national undertones, which find significant confirmation in the cited *History of the Royal Society* by Thomas Sprat (cf. GIPPER 2025b).
It is worth noting that Italian researchers claimed early on the invention of the scientific academy system for Italy. Such a claim is not a coincidence and more

[7] Hooke's criticism of Cassini reflects his deep dislike of Oldenburg. Incidentally, Hooke also disputes a whole series of priority claims made by Cassini in the aforementioned article, especially with regard to the development of telescopes and the pendulum clock. The latter is particularly curious because its inventor Christiaan Huyghens was a member of both academies, and the invention was now claimed by each of them.

than an ironic side note. In 1667, the year in which the *Saggi* were published, Geminiano Montanari (MONTANARI 1667: 6) wrote that the northern nations had followed the Italians in establishing philosophical societies, resulting in the flourishing of experimental philosophy in countries such as France, England, and Holland ("ond' è, che in Francia, in Inghilterra, in Olanda , & in tant' altri luoghi fiorisce ad imitatione della Toscana Accademia la filosofia sperimentale." ["therefore in France, England, the Netherlands, & in so many other places experimental philosophy flourishes in imitation of the Tuscan Academy."])
Indeed, questions of priority represent a crucial field wherein competitive relationships are predominantly played out. The initial letter that Henry Oldenburg addressed to Newton in his function as secretary of the Royal Society (NEWTON 1955–77, vol. I: 73), in which he warned him of the need to protect his optical discoveries from being appropriated by foreigners, is symptomatic of this. Subsequently, another letter to Newton from the same year states:

[…] this discourse should without delay be printed, there being cause to apprehend that the ingenious and surprising notion therein contained may easily be snatched from you, and the Honor of it be assumed by forainers, some of them, as I formerly told you being apt enough to make shew of and to vend, what is not of the growth of their country. (NEWTON 1955–77, vol. I: 107–108)

Translation in the interest of particular scientific communities

The ideal instrument to prevent such unauthorized appropriations by 'foreigners' is, undoubtedly, translation in one of the dominant languages of scientific communication (that is in the 17th century Latin or French). Once a scientific discovery is recognised outside its own linguistic community, the risk of its authorship being disputed diminishes. The dispute between Newton and Leibniz over differential calculus illustrates this problem. The establishment of one's own vernacular scientific community necessitates not only a translational import, i.e. the publication of the most innovative research in one's own language, but also, as long as the own language is not established as a scientific standard, a significant translational export.
Oldenburg's correspondence testifies to both. It shows the extent to which the work of the *Royal Society*, and especially the publication of the *Philosophical Transactions*, is characterized by the daily struggle to provide suitable translations of the texts of foreign contributors, and to what extent Oldenburg's own work consisted in translating contributions from Latin, French, German, and Italian into English for the *Transactions*. In addition, however, members of the Royal Society have from the beginning endeavored to promote the dissemination of their work in other European languages. This included a large number of translations into Latin, which were undertaken to a considerable extent by Oldenburg himself. These translations had the same purpose as Oldenburg's exhortations in his letter to Newton. Their aim was to secure the first authorship of English researchers in specific discoveries against the usurpation by foreigners. This is illustrated by a whole series of Latin translations of Robert Boyle's works, which – just for the sake of curiosity – also seem to have contributed to Oldenburg's income. The correspondence between Oldenburg and Boyle reveals that Boyle paid him the noteworthy amount of 10 shillings per page for his translations (BOAS HALL 2002: 85). These translations thus served the

Royal Society's international prestige. Given this context, it is unsurprising that Oldenburg was highly interested in having the *Philosophical Transactions* translated into Latin to make them available to non-English-speaking audiences. Though Oldenburg initially planned to do this himself, first Sterpin and then Sands preceded him, even though Oldenburg was extremely dissatisfied with both translations (cf. GIPPER 2025a).

Actually, the translation activities of the early *Royal Society* are a particularly interesting topic. Single analyses featuring Robert Hooke or Theodore Haak only scratch the surface of a much larger subject area (HENDERSON 2017 and 2013; VAN DE KAMP 2017). Of particular interest in this context are prominent Fellows of the Royal Society such as Alexander Pitfield or Richard Waller, who not only contributed countless smaller translations to the *Philosophical Transactions*, but also produced extensive translations that are among the most important early publications of the *Royal Society*. Special mention should be made of the translation of the *Saggi di naturali esperienze* (1667) of the Accademia del Cimento. This was penned by Waller and published in 1684 under the title *Essays of Natural Experiments*. Another example is Alexander Pitfield's translation of Claude Perrault's *Memoir for a natural history of animals: containing the anatomical descriptions of several creatures dissected by the Royal Academy of Sciences at Paris* (1688).

Both translations have interesting implications. The publication of the *Saggi* raises the question of the *Royal Society*'s relationship with the *Academia del Cimento*. Quite interestingly, the Italians, through Finch and Southwell, had communicated their desire for close collaboration with the *Royal Society* as early as the 1660s. Boyle's mistrust seems to have been the reason why no collaborative efforts with the Italians took place. He feared that his experiments, particularly those regarding the vacuum, could be claimed by them. The rivalry between the two parties may also have contributed to the initial downplaying of the *Saggi*'s significance by Boyle and his colleagues. Considering this background, it is somewhat surprising that it was the *Royal Society* that commissioned a translation almost twenty years later. However, in an instructive article, Luciano Boschiero (2010: 79) has shown that the translation of the *Saggi* was apparently commissioned less for its novelty value than because the group around Hooke, Boyle and Papin in the 1680s was interested in presenting to the English public a confirmation and reaffirmation of their mechanistic approach to physics, particularly concerning the description of the properties of gases. It is interesting to note that Waller emphasises in his preface that many of the experiments described in the *Saggi* had already been carried out in London before their publication (WALLER 1684).

We are dealing here with a recurring pattern in scientific translation literature. Many examples exist in the 17th and 18th centuries of translations created not primarily for their substantial content, but instead as tools for gaining external confirmation in internal theoretical or methodological debates, and to strengthen certain theoretical positions.[8]

[8] Another example of this mechanism is the translation of Ludwig Friedrich Ehrmann's work, *Versuch einer Schmelzkunst mit Beyhülfe der Feuerluft*, commissioned by the Paris *Académie des sciences*. Elsherif's meticulous analysis shows that its primary purpose was to support Lavoisier's theoretical position in the context of the great debate about the phlogiston theory. Incidentally, the translation served also to transfer Lavoisier's

The translations mentioned also deserve special attention because they testify to the *Royal Society*'s early efforts to appropriate the results of foreign scientific academies through translation. Oldenburg justified this activity and the dense network of informants associated with it as early as 1673, stating that, "it adds not a little to the renown of England, now admired abroad for advancing Experimental Knowledge as well as Academical Learning" (OLDENBURG 1965–1986, vol. X: 175; GREENFIELD 1987: 119). The Parisian *Académie des Sciences* adopted a similar approach to make the results of the *Royal Society* accessible to French scientists by translating the *Philosophical Transactions* into French. The specifics of these significant undertakings will not be discussed in this text, as they are relatively well studied. (TURNER 2008; PEIFFER 2020). However, it should be observed in our context that François de Brémond's and Pierre Demours's translations are clearly embedded in a national framework. It is worth noting that state authorities, in particular Minister d'Aguesseau (himself a member of the *Académie des Sciences*), immediately took an interest in Brémond's initially private translation project and urged Brémond, who had previously only translated excerpts, to undertake a complete translation. Demours, who carried on with Brémond's work after his premature death, explains in his "Préface du traducteur" that the main reason for the project of a complete translation of the *Philosophical Transactions* was the rivalry between England and France, and that it was precisely for this reason that it was important not to fob off French scholars with extracts, but to give them a complete overview of the work of the *Royal Society*. If the translation was to be interpreted as "[to] the honour of the English nation", then France should be credited for spreading the work of the *Royal Society* globally within the science community (DEMOURS 1759: xxxii).[9]

While the translation activities of the academies seem to be driven by the goal of conceiving the space of scientific knowledge as a transnational space, they equally prove to be in the service of establishing the national space of knowledge as a universal space. Thomas Sprat's *History of the Royal Society* (1767) for instance shows clearly how much the project of the Improvement of Learning is linked from the beginning to the conviction, that the flourishing of the sciences and arts legitimates hegemonical claims. In other words, both intranslations and extranslations serve to a considerable extent to stabilise the prestige of the national scientific community.

The rivalry in particular between the French and English scientific communities runs through the whole of the seventeenth and eighteenth centuries and is epitomised not least in the struggle between Cartesians and Newtonians, to which Rupert Hall, already fifty years ago, attested a considerable dimension of national chauvinism (HALL 1975). Descartes and Newton quickly emerged as leading figures in their respective scientific communities. The debate between the Newtonian attraction theory and the Cartesian vortex theory was also a battle for scientific supremacy (SHANKS 2008). It is clear that this debate largely took place

terminology to the German research working with different concepts (ELSHERIF forthcoming).

[9] "L'émulation qui régne aujourd'hui entre toutes les Nations sçavantes de l'Europe, éxige une connoissance plus complette des travaux communs aux unes & aux autres, pour que le Lecteur impartial puisse juger sainement de leur mérite." ["The rivalry that reigns today between all the learned nations of Europe requires a more complete knowledge of the works common to all of them, so that the impartial reader can judge their merit."]

through translations and adaptations. The well known contributions of Voltaire in disseminating Newtonian physics through his *Éléments de la philosophie de Newton* and Mme du Chatelet's translation of the *Principia* will not be explored in detail here. Rather, as an example, I would like to highlight an intriguing case where national undertones are both apparent and unexpected. This text is a translation of one of the most successful Newton popularizations of the 18th century – *Dialogues on Light and Colours* – published by the Venetian Francesco Algarotti in 1737 under the title *Il newtonianismo per le dame*. This treatise is particularly interesting in our context as it represents a kind of remake of a famous popularization of Descartes' vortex-theory, Fontenelle's *Entretiens sur la pluralité des mondes*. Despite openly following Fontenelle's literary model and even dedicating his work to him, Algarotti's main objective is to promote Newtonian physics as the ultimate triumph over Descartes' 'scientific novels'. This very argument is what led the book translator, Duperron de Castera, to accuse Algarotti of exhibiting disrespect towards the French nation.

Cependant j'ai peur qu'on ne lui reproche d'avoir le ton un peu trop décisif. Zelé partisan des Savans d'Angleterre, il n'en parle qu'avec vénération, & sans doute il n'a pas tort. Prévenu contre Descartes & contre tous nos Philosophes François, il les traite de tems en tems avec un mépris souverain: ce sont, si l'on veut l'en croire, des esprits Romanesques, livrés à la témérité des Conjectures, entraînés par la fureur de fabriquer des Systêmes, toujours exposés aux insultes des Observations & de l'Experience. Notre Nation n'est guères plus respectée on nous donne de la gentillesse & du feu; mais dès qu'il s'agit du solide, c'est chez les Anglois qu'on va le chercher. (DUPERRON DE CASTERA 1738: xvii)

[However, I am afraid that he may be reproached for having a somewhat decisive tone. A zealous advocate of the English scholars, he speaks of them with nothing but veneration, and undoubtedly he is not wrong. Prejudiced against Descartes and against all our French philosophers, he occasionally treats them with supreme disdain: they are, if we were to believe him, romanesque minds, given to the temerity of conjectures, driven by the fervor of constructing systems, always exposed to the insults of observations and experiments. Our nation is hardly more respected; we are attributed with elegance and spirit; but as soon as it comes to the substantial, it is among the English that one looks for it.]

So, we are dealing with a typical illustration of how scientific issues are declared to be a matter of national honour, and it is precisely in the field of scientific translation, the contact zone par excellence between scientific communities, that this aspect seems to be particularly virulent.

Translation as a means of establishing a particular scientific culture as a universal one

I will conclude my paper by providing two further examples that illustrate the extent to which the translational appropriation of global scientific research must be understood not least as a means of strengthening one's own community. Initially, I will examine the *Collection académique*, the most considerable and audacious translation initiative of the 18th century. Jean Berryat initiated the project in the early 1750s, and nearly 33 volumes were published from 1755

onwards by Philippe Guéneau de Montbeillard.[10] Pierre Brunet has already highlighted the direct link between this project and the spirit of Diderot's *Encyclopédie*, to which Gueneau himself and a number of other translators of the *Collection* (Daubenton, Laviroux, Roux) contributed (BRUNET 1926 and 1929). The Collection undoubtedly endeavours to establish the French-speaking world as the central hub and place of communication for contemporary scientific discourse. Its objective is to consolidate the most significant publications of the foremost European scientific academies such as the *Academia del Cimento*, the *Royal Society*, and the *Leopoldina* into one collection and to offer them in French. If the *Discours préliminaire* of the Collection, written by Gueneau de Montbeillard, is examined, its spirit, clearly influenced by that of Diderot's and d'Alembert's *Encyclopédie*, reveals that alongside the omnipresent pathos of natural sciences as a transnational scientific endeavour, the *Collection Académique* also expresses the competition between national scientific communities, which the *Discours préliminaire* addresses as the central motor of progress in scientific communication:

Depuis qu'il est des Académies on sent la nécessité d'établir entr'elles une communication réciproque & d'appliquer au commerce littéraire le principe de la concurrence, qui est l'âme de toute sorte de commerce (GUENEAU DE MONTBEILLARD 1755: 46).

[Since there are Academies one feels the need to establish between them a reciprocal communication & to apply to the literary trade the principle of competition, which is the soul of any kind of trade.]

It is characteristic that Gueneau de Montbeillard's *Discours* does not fail to serve the narrative that the *Royal Society* was founded under the influence of the French academies of Monmor and Thévenot. Thus, the Collection académique symbolically reinforces this implicit preeminence of French science.

En un mot la Collection Académique réunira en moins de quarante volumes tous les faits relatifs à son objet, lesquels sont répandus dans plus de huit cens volumes originaux écrits en Latin, en Italien, en Espagnol, en Anglois, en Allemand, &c. & dont la suite complète ne se trouve peut-être dans aucune Bibliothèque de l'Europe. Cet ouvrage sera tout en François parce que la langue Françoise est devenue par une espèce de convention générale la langue courante de l'Europe, & que par la sagesse & la précision qui la caractérisent elle semble devoir être regardée comme la langue de la Philosophie. (GUENEAU DE MONTBEILLARD 1755: 37)

[In a word, the Academic Collection will gather in less than forty volumes all the facts relative to its object, which are spread out in more than eight hundred original volumes written in Latin, Italian, Spanish, English, German, &c. & the complete continuation of which is perhaps not found in any Library of Europe. This work will be all in French because the French language has become by a sort

[10] Unfortunately, the state of research on the origins and conception of the *Collection académique* is extremely unsatisfactory. With the exception of Brunet's essays, there appears to be no other research on this historical mega-project. Very little is known about its initiator, Pierre Berryat (1718–1754), except that he was a medical doctor and correspondent of the Académie des Sciences in Paris. What we do know is that the project was based mainly around the Académie des sciences, arts et belles lettres de Dijon.

of general convention the common language of Europe, & that by the wisdom & precision which characterize it, it may be regarded as the language of Philosophy.]

In this perspective, making the accumulated knowledge of the natural sciences available in one place and in one language for all interested parties not only promotes research in France, but it also simultaneously makes the French language the symbolic hub of transnational scientific communication.
It is this very perspective that the second document, which will be briefly mentioned, centres on. In fact, Louis Bernard Guyton de Morveau's "Mémoire contenant des vues pour conserver à la langue française la prérogative d'être la langue universelle" (1787) programmatically summarises the link between scientific translation policy and the desire for dominance by certain national scientific communities. Caroline Mannweiler has emphasised the significance of this text in two important essays (MANNWEILER 2021, 2024). Morveau was a part of the same circle at the *Académie des Sciences de Dijon* that had launched the *Collection académique* under the direction of Berryat and then Gueneau de Montbeillard. Morveau, an eminent chemist, is particularly renowned for his contribution to the creation of the first systematic chemical nomenclature. At the time of his essay, he had already been intensively involved for many years in making the most important chemical literature of his time available in French. In this sense, Bret speaks of a veritable circle of translators "pour naturaliser la chimie étrangère" (BRET 2008: 127; BRET 2010). It should also be mentioned in this context that this circle included several chemists de Dijon, like Jacques Champy, as well as Guyton's later wife Claudine Picardet, perhaps the most prolific translator of chemical literature in the entire 18th century.
Guyton de Morveau's essay begins with the same concern that the *Collection académique* aimed to address, namely, the recognition that the abundance of vernacular academies and their publications – particularly those in Northern Europe, given his background in chemistry – poses a significant impediment to scientific communication and progress. If France wishes to retain its status as a core hub of global research and avoid falling behind the northern European nations, most of which use German as a relay language, a major national effort must be made to train translators and to translate these strategic bodies of knowledge. It is evident that the essay largely aims to continue the approach of the *Collection académique*. A certain dominance of French science in the world can only be secured if France pursues an active translation policy. And in Guyton's perspective, this supremacy in the field of chemistry is challenged above all by the Germans.

Pendant que 1e Français néglige de convertir à son propre usage les écrits des Savans étrangers, l'Allemand semble aspirer à l'honneur de les fournir à tout l'univers. Tous les mémoires d'Académies, tous les grands ouvrages de science, de toute nation, sont traduits dans cette langue avec une incroyable rapidité, elle porte au nord ce qu'elle a recueilli au midi, & c'est par elle que nous avons reçu jusqu'ici le peu qui nous est venu en ce genre des pays du nord. (GUYTON 1787: 59)

[While the French neglects to convert the writings of foreign scholars to his own use, the German seems to aspire to the honour of supplying them to the whole

universe. All the memoirs of the Academies, all the great works of science, of every nation, are translated into this language with incredible rapidity; it carries to the north what it has gathered from the south, and it is through this language that we have so far received the little that has come to us of this kind from the countries of the north.]

As we can see, in Guyton de Morveau we find the same discourse of national honour that has pervaded European academia since its beginnings, and which seems to develop a particular virulence in the field of translation. If France fails to take adequate measures, German will replace French as the "language of the savants of all countries" ("la langue des savans de tous les pays"), and French scientists will have to learn German in order to remain scientifically up-to-date. By doing so, French would run the risk of facilitating the triumph of German through sheer negligence, "à porter à une autre nation un honneur qu'il pouvait conserver à sa patrie" (GUYTON 1787: 60). Guyton de Morveau argues that it is a task of national importance to prevent this from happening, and that this can only be organised under the auspices of the state as a scientific translation agency, which could end up giving France a kind of monopoly of distribution in the field of knowledge production.

[…] au lieu de nous rendre tributaires d'une nation pour cette correspondance, ce seront toutes les nations étrangères qui deviendront tributaires de la France ; qu'il n'y entrera désormais de tous les bons livres imprimés au dehors, que le seul exemplaire destiné à se multiplier sous nos presses, pour satisfaire la curiosité de l'Europe savante […]. (GUYTON 1787: 64)

[[...] instead of making us dependent on one nation for this correspondence, it will be all the foreign nations that will become dependent on France; it will enter henceforth of all the good books printed outside, only the one copy destined to multiply under our presses, to satisfy the curiosity of learned Europe [...].]

It can hardly be expressed more clearly than this: Scientific translation during the 18th century was not only a means of facilitating cross-border scientific communication, central to the transnational acquisition of knowledge, but also a way of reinforcing national cultures of knowledge in a world where science and technology increasingly determine not only the competition for symbolic goods but also national power interests.

References

Primary sources

CASSINI, Giovanni Domenico (1693): "De l'origine et du progres de l'astronomie". In: *Recueil d'observations faites en plusieurs voyages par ordre de sa Majesté pour perfectionner L'Astronomie et la Géographie par Messieurs de L'Académie des sciences.* Paris: Imprimerie royale.

DEMOURS, Pierre (1759): "Préface du Traducteur", *Transactions philosophiques de la Société Royale de Londres* 4, Paris: Briasson/Le Breton.

DUPERRON DE CASTERA, Louis Adrian (1738): "Préface du traducteur". In: ALGAROTTI, F.: *Le Newtonianisme pour les dames*. Paris: Montalant, s. p.

DU HAMEL, Jean-Baptiste (1700): *Regiae scientiarum academiae historia*. Leipzig: Fritsch.

GUENEAU DE MONTBEILLARD, Philippe (1755): *Discours préliminaire de la Collection académique.* Dijon: Desventes/Auxerre: Fournier.

GUYTON DE MORVEAU, Louis Bernard (1787): "Mémoire contenant des vues pour conserver à la langue française la prérogative d'être la langue universelle", *Journal littéraire de Nancy* XXI, 38–46; 56–64.

HOOKE, Thomas (1726): "Answer to some Particular Claims of M. Cassini's, in his Original and Progress of Astronomy". In: HOOKE, T.: *Philosophical Experiments and Observations*, ed. by W. Derham. London: Innies, 388–391.

MONTANARI, Geminiano (1667): *Pensieri fisico-matematici sopra alcune esperienze fatte in Bologna* […]. Bologna: Manolesi.

NEWTON, Isaac (1955–1977): *Correspondence of Isaac Newton*, ed. by H. W. Turnbull, for the Royal Society. Cambridge: UP.

OLDENBURG, Henry (1965–1986): *The Correspondence of Henry Oldenburg*, ed. by A. R. Hall & M. B. Hall, 13 vols. London: Taylor & Francis.

PERRAULT, Claude (1688): *Memoir for a Natural History of Animals: Containing the Anatomical Descriptions of Several Creatures Dissected by the Royal Academy of Sciences.* Englished by Alexander Pitfield, Fellow of the Royal Society. To which is Added an Account of the Measure of a Degree of a Great Circle of the Earth, Published by the Same Academy, and Englished by Richard Waller. London: T. Basset, J. Robinson, B. Aylmer, Joh. Southby, and W. Canning.

SPRAT, Thomas (1667): *History of the Royal Society of London for the Improving of Natural Knowledge*. London: Knapton, Walthoe et.al.

WALLER, Richard (1684): "To Sir John Hoskyns Knight and Baronet, President of the Royal Society, &c.". In: MAGALOTTI, L.: *Essayes of Natural Experiments Made in the Academie del Cimento*. London: Alsop.

Secondary sources

BOAS HALL, Marie (2002): *Henry Oldenburg: Shaping the Royal Society*. Oxford: UP.

BOSCHIERO, Luciano (2010): "Translation, Experimentation and the Spring of the Air: Richard Waller's Essayes of Natural Experiments", *Notes & Records of the Royal Society* 64, 67–83.

BRET, Patrice (2008): "Les promenades littéraires de Madame Picardet La traduction comme pratique sociale de la science au xviiie siècle". In: DURIS, P. (ed.): *Traduire la Science. Hier et aujourd'hui.* Pessac: Maison des sciences de l'homme d'Aquitaine, 125–152.

BRET, Patrice (2010): "Le défi linguistique de l'Europe des Lumières : la traduction, creuset des circulations scientifiques internationales (années 1680–années 1780)". In: BEAUREPAIRE, P.-Y. & POURCHASSE, P. (eds.): *Les circulations internationales en Europe.* Rennes: Presses universitaires, 323–336.

BRUNET, Pierre (1926): "Gueneau de Montbeillard", *La Revue de Bourgogne* (September-October), 516–532.

BRUNET, Pierre (1929): "Un centre bourguignon de synthèse scientifique au XVIIIe siècle", *Annales de Bourgogne* (1929), 104–124.

BURKE, Peter (2012): *A Social History of Knowledge*. Vol. 2: *From the Encyclopédie to Wikipedia*. Cambridge: Polity.

DIZDAR, Dilek & GIPPER, Andreas & SCHREIBER, Michael (eds.) (2015): *Nationenbildung und Übersetzung*. Berlin: Frank & Timme.

ELSHERIF, Garda (forthcoming/2025): *Funktionen von Translation im (früh)modernen Wissenschaftssystem. Schwerpunkt: Frankreich (1600–1815).* Stuttgart: Steiner.

GANNE, Valéry & MINON, Marc (1992): "Géographies de la traduction". In: BARRET-DUCROCQ, F. (ed.): *Traduire l'Europe*. Paris: Payot, 55–95.

GIPPER, Andreas (forthcoming/2025a): "Scientific Translations into Latin in the Early Modern Period". In: HEIDEKLANG, J. & WOLKENHAUER, A. (eds.): *The Wrong Direction. Early Modern Translations into Latin*. Stuttgart: Metzler.

GIPPER, Andreas (forthcoming/2025b): "Transkulturalität und nationale Diskurse in den Wissenschaften der frühen Neuzeit". In: DALBECK, C. & MANNWEILER, C. & STEFANELLI, D. (eds.): *Übersetzungsprozesse und Wissensräume – zwischen Transkulturalität und nationalen Diskursen*. Stuttgart: Steiner.

GREENFELD, Liah (1987): "Science and National Greatness in Seventeenth-Century England", *Minerva* 25 (1/2), 107–122.

HALL, Rupert A. (1975): "Newton in France. A New View", *History of Science* 13, 223–250.

HENDERSON, Felicity (2017): "Translation in the Circle of Robert Hooke". In: FRANSEN, S. & HODSON, N. & ENENKEL, K. A. E. (eds.): *Translating Early Modern Science*. Leiden: Brill, 17–40.

HENDERSON, Felicity (2013): "Faithful Interpreters? Translation Theory and Practice at the Early Royal Society", *Notes and Records. The Royal Society Journal of the History of Science* 67, 101–122.

HIRSCHI, Caspar (2005): *Wettkampf der Nationen. Konstruktionen einer deutschen Ehrgemeinschaft an der Wende vom Mittelalter zur Neuzeit*. Göttingen: Wallstein.

HIRSCHI, Caspar (2012): *The Origins of Nationalism: An Alternative History from Ancient Rome to Early Modern Germany*. Cambridge: UP.

MANNWEILER, Caroline (2021): "Ce qui n'est pas traduit n'est pas français. Zur Universalität des Französischen in den Wissenschaften, von Rivarol zu Guyton de Morveau", *Romanische Studien,* Dezember 2021 (Vorabduck). http://blog.romanischestudien.de/mannweiler-zur-universalitaet-des-franzoesischen-in-den-wissenschaften/

MANNWEILER, Caroline (2024): „Übersetzung als Medium nationaler Selbstbehauptung – am Beispiel deutsch-französischer Wissenschaftsübersetzungen im 18. Jahrhundert". In: GIPPER, A. & FLÜCHTER, A. & GREILICH, S. & LÜSEBRINK, H.-J.

(eds.): *Übersetzungspolitiken. Translation Policy and the Politics of Translation.* Stuttgart: Metzler, 79–104.

MERTON, Robert (1973): *The Sociology of Science*. Chicago: UP.

PEIFFER, Jeanne (2020): "«Mettre le Lecteur à portée de comparer le Ciel de Padoue à celui de Paris », ou Traduire les *Philosophical Transactions* en français". In: BRET, P. & PEIFFER, J.(eds.): *La traduction comme dispositif de communication dans l'Europe moderne*. Paris: Hermann, 43–65.

PYM, Anthony & CHRUPAŁA, Grzegorz (2005): "The Quantitative Analysis of Translation Flows in the Age of an International Language". In: BRANCHADALL, A. & WEST, L. M. (eds.): *Less Translated Languages*. Amsterdam: Benjamins, 27–38.

SAKAI, Naoki (1997): *Translation and Subjectivity. On Japan and Cultural Nationalism*. Minnesota: UP.

SAKAI, Naoki (2010): "Translation and the Figure of Border: Toward the Apprehension of Translation as a Social Action", *Profession* 2010, 25–34.

SHANKS, John Bennett (2008): *The Newton Wars and the Beginning of the French Enlightenment*. Chicago: University Press.

SYFRET, R. H. (1948): "The Origins of the Royal Society", *Notes and Records of the Royal Society of London* 5 (2), 75–137.

TURNER, Anthony (2008): "An Interrupted Story: French Translations from *Philosophical Transactions* in the Seventeenth and Eighteenth centuries", *Notes and Records of The Royal Society* 62, 341–354.

VAN DE KAMP, Jan (2017): "Networks and Translation within the Republic of Letters: The Case of Theodore Haak (1605–1690)". In: FRANSEN, S. & HODSON, N. & ENENKEL, K. A. E. (eds.): *Translating Early Modern Science*. Leiden: Brill, 41–65.