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"...who has had the courage and ambition to learn Swedish". The *Handlingar* of the Swedish Academy of Sciences in 18th century European translations, adaptations, and reviews

Ingemar Oscarsson



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1

"...who has had the courage and ambition to learn Swedish". The *Handlingar* of the Swedish Academy of Sciences in 18th century European translations, adaptations, and reviews

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- The history of the *Proceedings* (*Handlingar* in Swedish) of the Royal Swedish Academy of Sciences dates back to 1739. Published as a quarterly journal, they presented original papers in "mathematics, natural sciences, economy, useful arts and manufactures" and combined the qualities of a first-rate scholarly organ with the practical-utilitarian aims of the Academy, which was founded in order to stimulate the economic development of the country by cultivating, as it was expressed in its founding texts, "only those sciences and arts that serve the common good". Thus the journal was to a considerable degree designed to reach an audience beyond the learned circles; contributions from amateurs and aspiring academics were accepted and the issues were energetically marketed, addressing a varied readership such as provincial estate and ironworks owners, well-to-do-farmers, etc. During most of the 18th century, some five hundred copies were printed and—as far as can be judged—also sold out.¹
- This prestigious journal was not the first scholarly periodical in Sweden, not even the first one in the vernacular. But it reached an unprecedented level of distribution and national importance. With justification and pride, one of the learned society's founding fathers called *Handlingar* "the pillars of the Academy and the apples of its eyes". At home, it was a mighty stimulus for scientific and technological interests and activities. Outwardly, it played a major part in making Swedish natural sciences something of an export branch, and the European translations, extracts, reviews etc. were numerous—

somewhat paradoxically, it can be said, given the intentions of the Academy and the domestic discourse of *Handlingar*.³

A German edition with offshoots

- Most notable among the translations was the complete German edition of all the years from the beginnings in 1739 up to 1790, Der Königl. Schwedischen Akademie der Wissenschaften Abhandlungen aus der Naturlehre, Haushaltungskunst und Mechanik. It was published from 1749 by the Leipzig, later Göttingen, mathematician and historian of mathematics Abraham Gotthelf Kästner, seemingly without any support from the Academy in Stockholm, where the prospect of an authorised foreign edition was now and then discussed, but never carried into effect. Instead, it was Kästner who did it, even if it is a bit unclear whether he was the true initiator or not; in his foreword to the first volume, Kästner indicated some distance to the project by saying that he had "been asked" to give an introduction to the translation ("zu deren gegenwärtiger Übersetzung eine Vorrede von mir verlanget wurde").4 In any case, the edition had a good market for many years, greatly appealing to "those engaged in the German economic development and public utility undertakings in the Age of Enlightenment" ("den in der gemeinnützigökonomischen Aufklärung Engagierten in Deutschland").5 Through the decades, Kästner's version became something of an institution of its own, reducing the need a matter for other similar enterprises, notwithstanding the fact that there were scores of single translations, abstracts, and reviews also in other German collections and periodicals. For obvious reasons, they were not least frequent in the publications that were based on "Swedish" soil, i.e. in Swedish Pomerania (with Greifswald and Stralsund), a region that gives a remarkable historic example of cross-cultural competence and activity (including, in this particular context, a slightly ungenerous attitude from some judges towards the non-Pomeranian Kästner).7
- As far as more or less regular translations are concerned, it is also worth mentioning that the first eight years (1739–1746) were translated in their entirety to Danish, mostly—as it seems—after Kästner's edition.8 About two hundred articles from Handlingar in medicine, from the period 1739–1772, appeared in Dutch in a four volume edition, Geneeskundige Verhandelingen aan de sweedsche academie medegedeeld (Leiden, 1775–1778); in this case, Kästner was without doubt the original instigator. A number of Dutch translations could as well be seen in the series Uitgezogte Verhandelungen uit de nieuwste werken van de societeiten der wetenschappen in Europa en van andre geleerde mannen (Amsterdam, 1757–1765).9
- More remarkable in its way was a Latin translation, *Analecta Transalpina*, with two volumes containing a comprehensive but not complete edition of *Handlingar* for the years 1739–1752, about 180 articles, and which was published in 1762 by the Pezzana printing house in Venice. The translator was an exiled Prussian, Joannes Ernest Crüger, and his work—like those mentioned above—seemingly based on the Kästner edition. In any case his *Praefatio*, with its lengthy discussion of the usefulness of natural sciences and of the Swedish efforts in the field, is nothing but a slightly abridged version of Kästner's *Vorrede* from 1749.¹⁰

"The translation, the most convenient way"

- As regards Kästner himself, he started his long-term project assisted by a German with better knowledge of Swedish, a certain C. M. Holzbecher, who was in reality the sole translator of the first two volumes of *Abhandlungen*. Kästner soon took personal responsibility for the rendering, however, and eventually mastered the language well enough to considerably expand and amend the Swedish-German dictionary that was at his disposal. The criticism that he had to endure, at least initially, from Greifswald's quarters is difficult to evaluate; no real analysis of his edition of *Handlingar* and its fundaments has been made. 12
- In his 1749 foreword, Kästner talked pragmatically about the diffusion of scholarly news and useful experiences. Those who wanted to instruct and enlighten their countrymen, he said, had always better done that in the vernacular ("in der ihnen bekannten Sprache"). If other nations wanted to benefit from the same findings, they had two options, of which the most convenient one ("der bequemste Weg") always was to make use of translations, provided that these were produced by skilled and faithful interpreters. And the faithful translator, Kästner implied, did not make any judgment or selection concerning the value or general interest of what he had undertaken to transmit from one language to another.
- Thus, any belief that Swedish experiences could be useful only in their own country would be refuted in this collection, he said. Many of the articles in *Handlingar* were totally independent of their geographical origin, others could—in his opinion—be put into practice abroad with only small changes, and no reader should disapprove even if he met articles that seemed to be completely and narrowly indigenous. In travel literature, Kästner metaphorically argued, we read with interest about the naivety of the savage peoples and the follies of the civilised ones; in the same spirit, we should inform ourselves about Swedish things that might be of no practical use to us, but which give proof of the special knowledge and patriotic thinking of the Swedes.
- If Kästner here, to begin with, simply wanted to notify his audience of the fact that his edition of *Handlingar* would be a complete one (which it indeed was), he also used the opportunity to rather eloquently formulate a notion of the cultural intermediary's role and responsibility—a notion seemingly in conformity with the "ethics of accuracy" that has been said to characterise the epoch's German translation practice.¹⁴

La francophonie: a slower reception

In comparison with the impact of *Handlingar* in the German cultural area, its reception was slow and for a long time only scattered or fragmentary in the francophone sphere, here understood as the period's scholarly literature in French, whether published in France itself or not. The reasons for this cannot be discussed here and are not easily identified, given the fact that there was no lack of contacts or cooperations between French and Swedish scientists. For decades, the largest cohort of foreign members of the Swedish Academy of Sciences was the French one, and the Secretary of the Academy for many years up to 1783, the astronomer Pehr Wargentin, had scores of French acquaintances and correspondents.

- Nor did it, for many years, make any difference that Wargentin commissioned a special agent in Paris, the preacher at the Swedish Embassy, Frédéric-Charles Baër (1715–1793). This Alsatian theologian had excellent contacts, both in the Académie des Sciences and in the circle around *Journal des Savants*, and in the 1750s and 1760s he regularly supplied one of the journal's editors, Alexis-Claude Clairaut, with much general information on Swedish science and with several volumes of *Handlingar*. Clairaut had a Nordic inclination insofar as he had been a member of the Maupertuis grade measurement expedition in the 1730s; he seems to have had at least some knowledge of Swedish. Neither this nor Baër's lobbying had, however, any apparent effect on what was covered in the *Journal des Savants* during the editorship of Clairaut (up to 1765) or in the next following years.
- Much the same can, in reality, be said about la *francophonie* in general and its scholarly publications, into which the contents of *Handlingar* trickled their way only slowly, partially, and—for several years—almost exclusively in the form of reviews or abstracts, not as real translations. The years up to (and including) 1747 were, in 1747–1748, presented by the esteemed *Bibliothèque raisonnée des ouvrages des savans de l'Europe* (Amsterdam, 1728–1753), in short abstracts article by article; these reviews seem to have been the very first ones in French. They also bear some interest as there are reasons for attributing them—which has not been tried before—to a certain author, the outstanding physiologist and botanist Albrecht von Haller, himself a member of the Swedish Academy of Sciences, definitely capable of reading Swedish, a prolific and outspoken critic and also, in these petty summaries, now and then allowing himself a remark of good-natured acidity ("Mr. Polhem has not found it to be under his dignity to inform the public of an invention on how to draw a quantity of wine from the barrel without descending into the cellar"). To
- In the next decades, registers of the articles in *Handlingar*, or more or less detailed accounts of their contents, appeared from time to time in the *Mercure danois* (Copenhagen, 1753–1760), in *Le nouvelliste œconomique et littéraire* (The Hague, 1754–1761), and in *Journal œconomique*, ou *Mémoires*, notes et avis sur l'agriculture, les arts, le commerce [...] &c. (Paris, 1751–1772), where in 1765 a handful of real translations were also published, not to mention a few other scattered examples.¹⁸

A notable introduction: the d'Holbach-Roux Recueil

As we will see, the efforts of Baër eventually came to bear some fruit. Before that, however, appeared what can be called the first really remarkable presentation in French of *Handlingar* and, together with it, of *Acta literaria Sueciae*, the Latin proceedings of the Royal Society of Sciences in Uppsala. This was a collection in two volumes, presented in 1764, edited and translated (although anonymously) by Paul-Henri d'Holbach and Augustin Roux, the *Recueil des Mémoires les plus intéressants de Chymie et d'Histoire naturelle* [...], or the "most interesting" of what had been published by the two academies between 1720 and 1760, a total of forty-nine articles over more than six hundred pages, translated partly from the Latin of the Uppsala publication, partly from German versions (most certainly after Kästner). Still no first-hand translations, as we can see, but, according to the translators, their French versions, were nevertheless "littérale; c'est essentiel dans les Ouvrages [de] cette espèce". There is even, in their foreword, a subtext of remorse, a feeling of being unduly late. German and even English translations already existed, they

remarked; but now there was, at last, a French one as well, hopefully-they said-to the benefit of their countrymen.²⁰

It is noteworthy that the Holbach-Roux *Recueil* appeared at about the same time as Holbach's markedly Sweden-saturated articles on "Minéralogie" and "Minéraux" in the 10th volume of the Diderot-d'Alembert *Encyclopédie* (1765). It bears witness that, during these years, he had his eyes very much fixed on Swedish natural sciences, and its mineralogy in particular. In this, his interest was nothing but symptomatic; Swedish mineralogy had begun to reach a wider audience, and in the next decades a number of European translations and editions were published of works like Johan Gottschalk Wallerius' *Mineralogia* (1747) and Axel Fredrik Cronstedts epoch-making *Försök till mineralogie* (1758; French translation in 1771, *Essai d'une nouvelle minéralogie*).²¹ Also the Holbach-Roux collection is principally devoted to chemistry and mineralogy, with many contributions by leading authors like Wallerius, Cronstedt and Georg Brandt, and with several articles markedly up-to-date.

"I translate almost all these texts freely"

At about the same time, in the first half of the 1760s, we can see another French-Swedish intermediary appear, Louis-Félix Guinement de Kéralio, officer by profession and lecturer at the École militaire, characterized by Jean Sgard as filled with a bienveillance universelle typical for his epoch ("si courante en son temps") but, surprisingly enough for a Frenchman, "steadily fixed at Sweden". 22 Whatever the reasons, Kéralio learned to read and (decently) write Swedish, made acquaintances with academics and publishers and began to call on the Swedish Embassy, although Wargentin's agent Baër saw him as a rival and repeatedly belittled his person and his knowledge of Swedish. In February 1763, Baër sent a new book to Wargentin, Kéralio's Collection de différens morceaux sur l'histoire naturelle & civile des pays du Nord [...], sourly remarking that he did not value it very much, but that the Ambassador, the Count Ulrik Scheffer, had commissioned him to deliver it. A few years later, responding to Wargentin's wish for an opinion on Kéralio's person, Baër remarked that he had got his merits cheaply ("à peu de frais"), adding: "entre nous soit dit, c'est un sujet très mince". 24

His Collection is no compilation of the same kind as the Holbach-Roux Recueil, but a mixture of texts from many different areas of knowledge, evidently published in the hope that it would gain him a footing in distinguished circles in Sweden.²⁵ Addressing Wargentin (February 1763), he talked flatteringly of the Stockholm Academy, stating that the penchant for the useful and the true, which was its distinctive feature, was every day propagating itself also in France ("le goût de l'utile et du vrai qui en fait le caractère, se répand tous les jours en France"²⁶). His collection is clearly composed in order to give French readers an impressive picture of the Nordic countries, and mainly Sweden, its history and culture, and, from this point of view, it is not very astonishing to meet, in his foreword, an interpretation policy in drastic contrast to the attitudes of translators like Kästner, Crüger or Holbach-Roux, and much more in accordance with the French tradition of "beautiful infidelity": "I translate almost all these texts freely: sometimes I add something, often I cut something out. I devote myself uniquely to useful things, and I try to present them in an agreeable manner, without troubling myself too much with that of my authors".²⁷

In 1772, Kéralio re-entered the arena with another collection, Mémoires de l'Académie Royale des Sciences de Stockholm [...], a sturdy volume of 544 pages in the Panckoucke series Collection académique, very comprehensive with about four hundred articles, but edited in a singular fashion, all items being presented only as rather short abstracts or "abrégés" and arranged in a thematical way that makes it difficult (maybe even impossible) to see in what order they were originally published in Handlingar.²⁸ Here, too, Kéralio took the liberty of selecting what he judged applicable or not applicable in a French setting, formulating his principles with supreme abandon and in words that no doubt could have provoked an animated debate with A. G. Kästner, had an opportunity been given—it is easy to see the ideological abyss between the utilitarian rationalist and the unprejudiced cultural explorer (although it should be noted, as well, that Kéralio was fully aware of Kästner's edition and made a reference to it in his Avertissement). Notwithstanding the richness of the articles in Handlingar, Kéralio said, it was impossible to make them interesting and useful in France without shortening them, and all those experiences, descriptions, etc. that were peculiar to Sweden, "et inutiles ailleurs", had been omitted, together with things that were not especially new or contained too many "répétitions, exposés, frases [sic], détails inutiles". All that was new and important for the common benefit had, on the contrary, been carefully accounted for, he stated.²⁹

"I want to promote your views on well-doing and humanity by contributing to spread them in all the rest of Europe. My wish has been to make myself useful [...] with the help of your precious products", Kéralio poured out his compliments when paying his respects to Wargentin. Not much later, the reward came: in early 1774 he was elected corresponding member of the Royal Swedish Academy of Sciences. 1

Journal des Savants: from simple indexes to real extraits

- At this point, it is time to return to the industrious Baër, who from 1769 succeeded in getting some footing in *Journal des Savants*. What the journal, now with his assistance, began to publish was only a rolling index of the article titles and authors in *Handlingar*; it meant, nevertheless, that more light was shed upon the Swedish proceedings than before, and all the years 1766–1774 were duly notified and every item registered. It was also underlined that the editors had wanted, for some time, to give the readers some real *extraits* from *Handlingar*, but, as they were written in a language "almost unknown in all the rest of Europe", it could, so far, be no more than a simple title index—a hint, probably, of the difficulties in finding a competent translator.³²
- In January 1779, however, the journal began to present more ample reviews of *Handlingar*, and these reviews were to continue for the next decade, representing a coverage that, in quantity and regularity, surpassed what was devoted to other comparable publications. At last, the editors had found someone willing to learn Swedish well enough, a certain abbé Vasseur, whose work was bestowed with much open praise from his editors—a very rare paratextual element in the otherwise impersonal and formal *Journal des Savants*. No less than four times in 1779 and 1780 he was explicitly honoured for having had the "courage and intellectual ambition" ("le courage & l'émulation") to learn Swedish and make himself capable of enriching the contents of the journal.³³

Even if this coverage was much more intensive than before, it was at the same time more patchy. It took up many pages in *Journal des Savants* for a decade; nevertheless, only five years of *Handlingar* were reviewed in full, namely 1774–1776 and 1780–1781, in all about one hundred and fifty reviews of the same number of articles. The pioneering Vasseur continued his work until the beginning of 1785, with some help of Baër and the versatile astronomer (among other things) Jérôme de Lalande, who also must have been tolerably capable of reading Swedish. Then charge was taken by none less than Kéralio, who, from this time onwards, seems to have stepped in as one of the editors of *Journal des Savants*, at least as one of its regular writers.

Journal de Physique and the Dijon translators

- It goes without saying that this policy change and the appearance in 1779 of a Swedish-reading reviewer did not come by pure chance. There was a similar tendency also in other parts of French academic circles during the last half of the 1770s and the first years of the 1780s, in particular due to the fact that Swedish chemists had begun to be internationally observed, in line with the already well-known mineralogists; Patrice Bret significantly speaks about "[la] brusque importance de la chimie et de la minéralogie suédoise". ³⁴ Bret underlines the all-European scope of this influence, but here are a few French examples: the first volume of Torbern Bergman's Latin *Opuscula*, which was translated to French and published by Louis-Bernard Guyton de Morveau in 1780, and in the next year Carl Wilhelm Scheele's treatise on "air and fire", in a translation from the German by Philippe-Frédéric de Dietrich, *Traité chimique de l'air et du feu* (1781). ³⁵
- The most important French vehicle for this breakthrough was, however, the influential Journal de Physique (or Observations sur la Physique, sur l'Histoire Naturelle et sur les Arts). Its editor since 1771, the abbé Rozier, seems to have made contact with Wargentin already in 1772 or 1773, and a few translations of Torbern Bergman and others were published in the next years, upon which followed, in the 1780s, the remarkable period of the Dijon group of translators headed by Guyton de Morveau. He had begun a regular correspondence with Bergman and was aware that the abbé Mongez, now the chief editor of Journal de Physique, was looking for a regular Swedish translator.
- The immensely active Guyton group in Dijon eventually included five or six members capable of translating from Swedish, the most active of them all being Claudine Picardet, Guyton's assistant, friend, and later wife. During the 1780s and the first years of the 1790s, this group had some thirty-five Swedish articles published in *Journal de Physique*, most of them taken from *Handlingar* and reflecting the work of more than a dozen authors, starring first and foremost Carl Wilhelm Scheele. One could talk about a certain suecomania or perhaps more precisely *Scheelemania* in Dijon, reaching its peak in 1785, when twenty-one of Scheele's articles were published in a separate collection, *Mémoires de Chymie*, some of which had been published before in *Journal de Physique*, others in Lorenz von Crell's German *Chemische Annalen*, and most of them translated by the outstanding Claudine Picardet.³⁶

The realities of a reviewer

It is clear, then, that there was, from around 1780 and for several consecutive years, a considerable influx of Swedish natural sciences in French scholarly publications, most conspicuously manifested in the Dijon translations and—beside this—the introduction of regular reviews of Handlingar in Journal des Savants.

As to the two reviewers mainly in charge here (Lalande being hors concours), neither Vasseur nor Kéralio can be associated with any special expertise in any branch of natural history, this said with some reservation for the elusive Vasseur, who might have had some knowledge in chemistry.³⁷ His successor, Kéralio, had, as we have seen, engaged himself in diverse branches of authorship, although mostly in compiling and translating. As reviewers in *Journal des Savants*, both of them had to primarily adopt the role of the versatile, generally educated intermediary, capable of writing on many different things in conformity with the universal character of their periodical platform (where there was, during the second half of the 18th century, considerably more room for the natural sciences than before).

We know that the final decades of the 18th century saw an increasing specialization and professionalization in the learned world as a whole, and consequently in the learned public sphere as well. Patrice Bret has analysed what this meant for a traditional publication like *Journal des Savants*, judging it rather critically. This periodical pursued, perhaps too long or in vain, its routine policy of giving *extraits* of scholarly works, often no more than translations of the summaries, and short, anonymous "Nouvelles littéraires". What it could have done, Bret says, is either to have increased its rhythm of publication, thus becoming a weekly and assuming a role as a real news organ for the learned world, or—if continuing as a monthly—to have given room for "un contenu de plus en plus spécialisé dans lequel la médiation du journal respecte le texte original", thus becoming a journal for real translations.³⁸ Its editors did not have, however, either the penchant or the means "de rivaliser avec la réactivité du groupe dijonnais et la spécialisation scientifique du *Journal de physique*".³⁹

As regards this "réactivité", or alertness, one can add that at least some *savants* became slightly annoyed by this rush for fresh experiences. In February 1786, Johan Carl Wilcke, the then Secretary of the Swedish Academy of Sciences, told Scheele that "they [the Dijon translators] would like to get access to the originals before they are printed here, but that won't do; it is too much to expect that, if the author himself does not allow it". To get one's papers printed in *Handlingar*, as the first step, was—according to Wilcke—"the best way of promulgating what you have to say". And Scheele replied, a few months before his death, that Lorenz von Crell, the German chemist and publisher, would also like to have "news in chemistry before they have been printed here—but he will not have them".⁴⁰

On the other hand nothing indicates that the learned community in general should not have been interested in gaining publicity for their findings without unnecessary delay. In that respect, the venerable *Journal des Savants* could not claim to be the most alert of the period's media, and its coverage of *Handlingar* is a symptomatic example. Already from the start in 1779, it was suffering from a considerable lag, resulting in a permanent delay of four years or more between the Swedish originals and the reviews in *Journal des Savants*. Thus, Vasseur several times abstained from reviewing an article because it had already appeared in full in *Journal de physique* (as was the case with some of Scheele's

contributions).⁴¹ And when, in February 1786, Lalande gave a review in *Journal des Savants* of Scheele's *Mémoires de Chymie* and told the reader that it contained twenty-seven articles, he highlighted a collection that gave a fresher impression of Scheele's research than the continuous reviews in his own journal. The 1785 volume of *Mémoires de Chymie* held articles as recent as from 1783, whereas the *Savants* reviews in 1785 and 1786 were still labouring with the years 1780 and 1781 of *Nya Handlingar* (that was the title from 1780).

Kéralio: a more active assessment

- By that time, Kéralio had made his entrance as the regular reviewer, only to furthermore expand the time difference between the original and the *extrait*. Whatever the reason was, he did not manage to review any year of *Handlingar* later than 1781, and it was not until 1789 that his last review of the Swedish publication could be seen in print, with a lag of no less than eight years—something absurd from a journalistic point of view, especially in comparison with the standards that had begun to be set in the distribution of learned texts and news items.
- There might have been external reasons—among other things, the fact that Kéralio was in these years partaking in another project of publishing, as one of the editors of Panckoucke's Encyclopédie méthodique. But it is also possible to see his work in Journal des Savants as—in some respects—an attempt at adjusting to what was going on in the learned public sphere in general, and in Journal de Physique in particular. Looking at how he set about his reviewing, one definitely gets the impression that he tried to make something more of the task than merely saying a few words about each and every item in the original. That each and every item should be mentioned had become the rule, and Kéralio duly covered all the forty or so articles presented in the 1781 issue of Nya Handlingar. One can also see in his work an ambition to assess and review the originals more actively, and to emphasize what he found particularly valuable. Consequently his reviews differ considerably in volume and in proportion to the originals.
- That also means that a number of his reviews became something of their own, something that I would like to call *adaptations* of the originals. To begin with, they bear witness about a diligent and painstaking work, albeit with selected originals; there were several articles that Kéralio could brush away with a few words, but if the author was a Bergman, a Scheele or a Wilcke, or if the subject matter was especially relevant for him, the presentation was executed at length and with much accuracy.
- In such cases, the review became a hybrid or mixture of summarizing, abstracting, and paraphrasing elements, alternating with streaks of pure translation. Concerning their volume, they were often stretched to comprise two thirds or more of the originals. At the same time they preserved certain significant rhetoric or paratextual elements reminding the reader of the fact that "this is, at least formally, a review"; the most conspicuous one being the necessary replacement of all first-person forms with the third-person or one passive form or another.

A practice of adjusting and adapting

I have not examined all of Kéralio's reviews equally carefully, but I have made controls of a dozen or so articles where his adaptation amounts, in number of words, to between sixty and seventy-five per cent of the original, and of two articles that constitute complete translations. In the adaptations, the writer uses a variety of techniques in style and construction of the article, in some cases "simply" shortening the original without fundamentally changing its character. This is always easier done when the original has more or less the structure of a narrative, as in the following example, where Kéralio deftly boils down Samuel Ödmann's description of the black guillemot (*Cepphus grylle*), taking "redundant" elements away (here marked in bold) and typically adjusting the author's grammatical person to his own medium:⁴²

Ödmann (from the Swedish)

The black guillemot is a Northern bird, most numerous at Spitsbergen, Iceland, and Groenland, but it can also be seen in the southern part of the Baltic and on the coasts of Scotland and England. [...] The guillemot lives in colonies; twelve to twenty couples share each mountain cleft. I have never found more than two eggs in their nests; they lay them without any bedding on the rock, preferably in a small crevice that gives some protection. The eggs are the same size as hens' eggs; the female is much smaller than a hen. Their colour is light grey with black spots, similar to ink that has been spilled out. These spots are more coherent at the thicker end of the egg. I have never seen them laying their eggs ashore, as Mr. PONTOPPIDAN indicates as their habit in Norway. [...] In spring, the bird goes ashore, as soon as the ice permits it, but does not haste with the egg-laying. On June 13, this year, most eggs were quite fresh-laid, and I have seen eggs, taken on June 22, on which the mother had brooded no more than six days.

Kéralio

L'Uria est un oiseau du Nord : on le trouve en grand nombre Spitsberg, au Groenland, en Islande, dans la partie méridionale de la Baltique, & sur les côtes d'Ecosse & d'Angleterre. [...] L'Uria va par bandes de quinze à vingt. Il pond ses oeufs sur le rocher nud dans quelque enfoncement qui puisse les mettre en sûreté; on n'en trouve jamais que deux ensemble. Ils sont de couleur grise & ont des grandes taches noires. M. Odman n'en a jamais vu dans le sable comme M. Pontoppidan dit qu'on en trouve en Norwege. [...] Cet oiseau vient à terre le printems, dès que les glaces ne l'empêchent plus, mais il ne commence pas sitôt sa ponte. On en trouve des oeufs tout frais vers le 13 Juin, & on en a vu le 22 du même mois plusieurs nids que les mères avoient à peine couvé six jours.

In other cases, where the original has a more elaborated or complicated structure, and/or can be judged as not easily accessible for non-specialists or a more general audience, Kéralio presents a more resolutely (re)arranged and (re)structured version of the original. This he does by adding a short explanatory introduction of his own, already summarising, in the beginning of the review, the findings that will be presented; then by concentrating, or simply omitting, or, if possible, literally translating various parts of the original, thus creating a hybrid of abstract, review, and translation. Thus in his version of a bulky Wilcke article in the field of thermodynamics, "Essai sur la quantité spécifique du feu [...]", Kéralio initially takes pains to explain the problem put forward, then translates

large parts of the original, with much specific terminology but also with omissions of some tables and numerical data, and finally sums up and simplifies Wilcke's lengthy discussion in the end. 43

I'élasticité & la répartition de la chaleur [...]", where he uses a similar technique of compressing, explaining, taking short-cuts, and partially translating, constantly—as in the previous example—in the role of the impartial recapitulator: "Ces expériences lui ont fait conclure..."; "M. Wilcke examine ensuite les opinions des Physiciens..."; "Il est evident, dit-il...", "M. Wilcke applique ensuite la théorie aux météores qu'on observe dans l'atmosphère terrestre..."; etc.⁴⁴ Objectivating and "foreignizing" phrases like these were, to be sure, typical for the whole genre of abstracts or *extraits* in the learned journals; what makes Kéralio's versions special is how extensive they are, compared to the originals, and the substantial elements of pure translation.⁴⁵

The two texts that Kéralio gave in versions that can be seen as translations in a regular sense were by Scheele and Bergman respectively, namely Scheele's "Des parties constituantes du tungsten" (Journal des Savants, June 1786, with a commentary by Bergman) and Bergman's "Étain de Sibérie métallisé avec le soufre" (July 1789)⁴⁶. In these versions, there are no reconstructions of the texts, short-cuts or similar changes; the originals are given in full and in roughly the same number of words. Even here, however, we meet the rhetoric marks that indicate their place in a reviewing journal. "I have not been able to get hold of more than a small amount of this rare product of the reign of minerals", Bergman wrote-in his original – of the "Siberian tin". Kéralio, in his role as the faithful translator who had, nevertheless, to yield to the mode of his medium, duly announced that "M. Bergman, n'ayant eu qu'une très petite quantité de cette rare production du règne mineral, n'a pu determiner [...]" ("Mr Bergman, having acquired only a very small amount of this rare product of the mineral reign, could not determine [...]").⁴⁷

A little intriguing fact is that both articles that Kéralio thus translated in full had also been translated by Claudine Picardet and made public in *Journal de physique* a few years earlier (February 1783 and May 1783, respectively). The Scheele article, in the Picardet version headlined "Mémoire sur les parties constituantes de la Tungstène, ou Pierre pesante", had also been reprinted in the above-mentioned collection *Mémoires de Chymie* in 1785.⁴⁸ This did not restrain Kéralio from presenting versions of his own, as true to the originals as those given by Picardet and in some respects even more literal, because Kéralio stuck to the same Latin terms for some elements as the Swedish authors, whereas Picardet throughout made use of French equivalences (e.g., in the Scheele article, *acéte barotique* for *terra ponderosa acetata*, *muriate d'étain* for *stannum salitum*, etc.).⁴⁹ This is, one can presuppose, in line with the fact that she was, together with Guyton, actively working for the development and renovation of the chemical vocabulary.⁵⁰

The Kéralio translations came late compared to the Picardet versions, but they nevertheless speak of a certain ambition, maybe also of a desire to take up a little competition with the Dijon group. With his above-mentioned substantial adaptation of Wilcke's "Essai" on the specific quantity of heat in solid bodies, he also managed to get closer in time, as the text in *Journal des Savants* (August 1785) came only a few months after the translation by Grossart de Virly in *Journal de physique*. Kéralio's predecessor, Vasseur, had—as we have seen—deliberately abstained from reviewing some articles that had before been translated in *Journal de Physique*; Kéralio did not do it the same way. Now,

at last, and in contrast to his attitudes in the early, above-mentioned separate collections, it seems to have been a real incentive for him to stand out as one of the "real" translators, in spite of the delays and stylistic adjustments that were imposed upon him by the conditions of his medium.

Some questions of style

- The most conspicuous of these medium-dependent adjustments is, as has already been pointed out, the necessary conversions, in both adaptations and translations, of all first-person forms, which had to be replaced with the third person (including the impersonal "on" used as synonymous with "je" or "nous") or suppressed-person passives. Through this, the text was certainly to some extent "foreignized", but not necessarily transformed as to its structure and overall mode of presentation. Changes of this latter kind were, however, inevitable in what here is called adaptations, the most typical ones being Kéralio's thoroughly re-arranged versions that could, in volume, come close to the originals.
- This becomes particularly noticeable in adaptations of those articles that can, with some reason, be compared to what has been called the "English" scientific style, a style that roughly defined—continued all through the 18th century a tradition that had its roots in Philosophical Transactions and that was characterized-it has been said-by "the persistence of narrative and epistolary conventions, the continued presence of the explicitly personal and social [...], and a continued tolerance for emotional expression".52 In Handlingar there were, and had "always" been, a considerable number of narrative, often broadly descriptive, common sense-tuned articles in much the same tradition, a style that seemingly did not suit Kéralio's preferences very well. A good example is his adaptation of the ornithologist Pehr Gustaf Tengmalm's "Notes on the Red-backed Shrike, a little Bird of Prey" (Journal des Savants, June 1786), a very lively and colourful narrative that often exposes the researcher's physical presence and emotions ("My astonishment was beyond description, when I..."; "Many times I have had the birds in my clothes, when examining their nests", etc.).53 As for Kéralio, he both here and in other similar cases gave a version that was not only inevitably abridged, but also more colourless, neutral in tone, and impersonal, with almost no traces of the original's very palpable author. Kéralio had good practical reasons for being more concise, but it does not seem too far-fetched to talk as well about an inclination towards a more polished or "correct" style and a classicist bienséance.
- of the authors here primarily in question, there was one, namely Scheele, in whose texts the researcher's physical person is often clearly perceptible, although in its own peculiar way. Many of his articles are rather linear narratives of experimental procedures, which was not unusual in contemporary scientific presentations, but Scheele's *persona* as a writer is often a very plain, straight-forward and almost naïve one, distinguished not least by an abundant use of the first person: "I found that I had to check what M. Baume says about silicon..."; "Therefore I took an ounce of..."; "Then I dissolved this substance..."; "Now I began to wonder whether..."; "Therefore I mixed the dried silicon..."; "I repeated this attempt seven times...", etc.⁵⁴
- This predilection had its exceptions, however, and in the above-mentioned article that was translated by both Picardet and Kéralio the experimental procedure is, for a change, almost entirely depicted in the passive ("A little amount of tungsten was grated and

mixed with...", etc.). What mode of presentation did his two French interpreters prefer? The answer is that both opted to replace nearly all of the passive forms with active ones. Kéralio, who had to stick to the third-person, at first introduced the reader to "M. Scheele" and "ce savant chymiste", then consistently used "on" (synonymous with "il"). The tendency is the same in Picardet: more than twenty times she changed Scheele's passives to "je", a few times "on", and sometimes created passages where the first-person forms literally stumbled upon each other, in contrast to the passives of the original: 55

Scheele (from the Swedish)

When the acid of tungsten is burnt in a crucible, it loses the quality of being dissolvable in water. That the acid has a disposition to absorb the phlogiston can be seen from the blue colour, which it displays in a vitreous flux [produced by a blowpipe]. For this reason, the dry acid was mixed with a little linseed oil, and put in a closed crucible in a strong fire. After cooling, the acid was found to be black, but otherwise unchanged. Also one part of dry acid was mixed with two parts sulphur, and distilled; the sediment was again mixed with two parts of sulphur, and [again] distilled; then the acid took a grey colour, but was otherwise unchanged.

Picardet

Quand l'acide de la tungstène est calciné dans un creuset, il perd la propriété de se dissoudre dans l'eau. La couleur bleue qu'il prend avec les flux vitreux prouve qu'il est disposé à attirer le phlogistique. En conséquence, je mêlai l'acide sec avec un peu d'huile de lin, & je l'exposai à un feu violent dans un creuset luté. Après le refroidissement, l'acide se trouva noir, mais du reste n'étoit pas changé. Je mêlai pareillement une partie d'acide sec avec deux parties de soufre, & je distillai. Je mêlai au résidu deux autres parties de soufre, qui fut de même sublimé : l'acide se trouva alors de couleur grise; mais au surplus, il n'avait éprouvé aucun changement.

Bergman, in his article on "Siberian tin" that was also translated by both Kéralio and Picardet, alternates between passive forms (mostly) and the first person, which he uses seven times. Also in his case, both Picardet and Kéralio chose to even more accentuate the researcher's person and actions, both of them *doubling* the number of personal pronouns ("je", "il/on"). The following excerpts are intended to give at least some idea of how the original and the two French renderings, respectively, vary in their use of active and passive forms:⁵⁶

Bergman (from the Swedish)

Among some minerals that I have recently received from Russia, it was found in a little capsule a few small pieces that at first sight so much resembled our artificial aurum mosaicum that I, in the beginning, thought that it was artificially made. Through a closer examination, however, it was made clear that the substance in question sat as a crust around a metallic, white nucleus [...], which, when it was gratted with a knife, was found to be quite porous and gave a black powder. These qualities, together with a white, volatile calcium that appeared when the substance was tried in fire, have no doubt given cause for defining the nucleus as antimony, which was written in a note that was enclosed. [...] The experiments, which will now be presented, prove clearly enough that there does not exist any antimony, but that both the nucleus and its crust contain only tin and sulphur, and a tinge of copper.

Picardet

Dans une collection de minéraux que je reçus dernièrement de Rissland [!], il se trouva dans une boîte quelques petits morceaux, qui, au premier coup-d'oeil, ressembloient à l'or mussif, au point que je crus d'abord qu'ils étoient faits par art : Mais après un examen plus approfondi, je vis que cette matière étoit comme une croûte autour d'un noyau [...], ressemblant à un métal blanc, qui, après avoir été entamé au couteau, étoit une couleur tout-à-fait changeante, et qui donna une poudre noire. Ces circonstances, jointes à une chaux blanche volatile, avoient sans doute fait penser que c'étoit de l'antimoine; et en effet, l'étiquette en portoit le nom. [...] Les expériences que je vais rapporter, démontrent suffisamment qu'il n'y a point ici d'antimoine; mais que le noyau et la croûte qui l'entoure tiennent seulement de l'étain et du soufre, et un peu de cuivre.

Kéralio

Parmi des minéraux qu'il avoit reçus de Russie, il trouva quelques morceaux ressemblans à l'or mosaïque artificiel, et les prit d'abord pour un produit de l'art; mais, en les considérant avec plus d'attention, il trouva que cette substance étoit composé d'une écorce, et d'un noyau ayant l'éclat métallique [...], qui gratté avec un canif étoit friable, et donnoit une poudre noire. Ces circonstances, jointes á celle d'une chaux blanche volatile que l'action du feu faisoit élever, avoient sans doute induit ceux qui envoyoient ces morceaux, à les prendre pour de l'antimoine, et à leur donner ce nom sur l'étiquette. [...] Les épreuves auxquelles il fut soumis aussi-tôt prouvent suffisamment qu'il ne contient point d'antimoine et qu'il n'y a dans l'écorce et le noyau que de l'étain et du soufre avec une légère portion de cuivre.

- The examples given so far cannot be used for any far-reaching conclusions, but as they all show a tendency in Picardet towards favouring the first-person, and with it a more active and perceptible role in the text for the author/scientist, one begins to wonder (to use the words of Scheele) if this might be, in her case, part of a recurrent stylistic pattern. Obviously, it is here impossible to pursue an analysis of all the *one hundred and twenty-one* translations from different languages that she had published in *Journal de Physique* in the years 1782–1787, but we can, for the sake of simplicity, focus on her work with Scheele, definitely one of her main objects, and widen the analysis to all her translations from Scheele's Swedish originals.⁵⁷
- We then find that in this corpus of seventeen articles (about 140 pages in the original prints), the first-person forms have a much more predominant position in Picardet's translations than in Scheele's originals. As already remarked, the latter often chose to write in the first-person, but his French interpreter quite regularly reinforces this stylistic streak, thereby strongly accentuating the researcher's personal presence and physical activity in the procedures described. Of the seventeen articles, there are thirteen in which Picardet's first-person forms outnumber Scheele's, in some cases hugely, and only one where the situation is the reverse. As regards the overall proportions, Picardet does not quite double the number of Scheele's first-person forms, but the ratio is high (about 5:3), and there are many individual passages that can be added to the previous examples, likewise giving proof of a consistent stylistic tendency:⁵⁹

Scheele (from the Swedish)

Now the procedure was reversed: I mixed a little iron sulphate with the lye of blood, which then became yellow, and poured some of the mixture in a flask that was filled with acid air [carbonic acid]. The next day, it was poured into a solution of iron sulphate, then the lye saturated with acid superabundance, and then I got a considerable amount of Prussian blue. Into the same lye, in which I had dissoluted a little iron sulphate, some more of other acids was poured than what was needed for saturation, upon which a solution of sulphate was added, and then I instantly got Prussian blue.

Picardet

Je répétai ces experiences d'une autre manière : je mêlai un peu de vitriol de fer à la lessive de sang, qui alors devint jaune, et je versai une portion du mêlange dans un ballon que j'avois précédemment rempli d'acide méphitique. Le lendemain je versai cette liqueur dans une dissolution de vitriol de fer ; j'y ajoutai de l'acide par surabondance, et j'obtins de cette manière une grande quantité de Bleu de Prusse. Dans la même lessive de sang, dans laquelle j'avois dissous un peu de vitriol de fer, je mêlai d'autres acides en plus grande quantité qu'il n'étoit nécessaire pour la saturation, et ayant ajouté de la dissolution de vitriol, il se forma sur-le-champ du Bleu de Prusse.

A contextual conclusion

- The examples that have been brought forward here and subjected to a very simple analysis are few, but even so the material seems to convey some not-too-insignificant information on late 18th century scientific writing and of how it could vary in practice. Also, in general, the comparative analysis of texts contributing to cultural transfers through translations, adaptations, and the like, is of interest as it not only brings into focus the complicated question of conveying "meaning", but also throws light upon stylistic norms that may differ from one social and cultural context to another.
- Thus, the micro-analysis carried out here seems to uncover a certain stylistic disposition that is more characteristic for the translations than for the originals, namely Picardet's (in particular) ambition to more strongly mark the author/scientist's personal presence in his experimental reports. The material is limited, but so far the figures are unequivocal, and perhaps we can also give them a place in a larger context, namely by throwing some light upon them with the help of a relevant historical survey, Communicating Science: The Scientific Article from the 17th Century to the Present (2002), by Alan G. Gross, Joseph E. Harmon, and Michael Reidy. In this broad study, the authors have examined the major trends in 18th century scientific prose, finding among other things clearly observable "[shifts] from the scientist to his science, and from subjective to objective prose", supported "by the rise in suppressed-person passives and the decrease in personal pronouns and names, subject pronouns and names".60 These changes, they pursue, were more pronounced in the French scientific culture than in the English or German ones, because of a higher degree in France of specialization and professionalization.61
- On the other hand—as has already been mentioned—there was, all through the century, what Gross, Harmon, and Reidy describe as a "persistence of epistolary and narrative forms, and [a] continued intrusion of the personal"; and even if this is more valid for the

English material than for the French, it can with some reason be applied also upon the latter one.⁶² It is not difficult, one can add, to find texts in *Journal de Physique* by authors and translators other than Picardet that can be compared to hers as regards an active, first-person-tuned way of communicating science, even texts that—a little more surprisingly—indicate what the researchers in question call the "continued tolerance for emotional expression", manifested for example in an open-hearted letter (1785) from an enthusiastic entomologist: "I love the larvae of the quince butterflies [...]; they are delightful to look upon, and they have given me many curious observations".⁶³

- Nevertheless, the bulk of data collected and presented in detailed tables by Gross, Harmon, and Reidy undisputably show that both the emotional nuances and the stylistic features that we are here in particular looking for, or "Personal pronouns/names", were on the whole considerably less conspicuous in the French texts than in the English and German ones, and also that, correspondingly, the French texts had the largest amount of "suppressed-person passives" 64.
- With this larger context in mind, it is even more interesting to reflect upon the work of Claudine Picardet and her predilection for a more personal and active narrative mode than what was-often enough-found in the originals. In this, at least, we see an interpreter with something of a profile of her own, perceptible straight through many highly qualified tasks. It is true, though, that the limited material here taken into consideration does not allow us to stretch this judgment into calling her atypical or deeply original; nor do we know what it meant for her as an individual contributor that the Dijon "bureau de traduction" was always, to a degree, a collective enterprise, where the translations were, as Patrice Bret puts it, "examined and validated under Morveau's expert supervision". Judging solely from the manifest results of her work, it seems nevertheless possible to regard her as an unconventional and purposeful representative of her metier, the craft of scientific translation as it was practised in the cultural environment to which she belonged.

NOTES

- 1. Sten LINDROTH, Kungl. Svenska Vetenskapsakademiens historia 1739-1818, I:1, Stockholm-Uppsala, 1967, p. 127-128; Ingemar OSCARSSON, "Hyperborean Transactions: A Survey of Swedish Learned Periodicals in the 18th Century", in Archives internationales d'histoire des sciences, vol. 63/2013, Turnhout, Brepols, 2013, p. 110-114.
- 2. LINDROTH, op. cit., p. 112 (quoting Mårten TRIEWALD).
- **3.** The quotation in the article title: in *Journal des Savants* (May 1779, p. 300), one of its translators from Swedish, the abbé Vasseur, is praised for his "courage & emulation d'apprendre le suédois".
- **4.** A. G. KÄSTNER, "Vorrede zur deutschen Uebersetzung" (unpag.), in *Der Königl. Schwedischen Akademie der Wissenschaften Abhandlungen aus der Naturlehre, Haushaltungskunst und Mechanik, I, Hamburg-Leipzig, G. C. Grund & A. H. Holle, 1749.*

- 5. Holger BÖNING and Emmy MOEPPS, Hamburg. Kommentierte Bibliographie der Zeitungen, Zeitschriften, Intelligenzblätter, Kalender und Almanache sowie biographische Hinweise zu Herausgebern, Verlegern under Druckern periodischer Schriften. Von den Anfängen bis 1765, in Holger BÖNING, Deutsche Presse. Biobibliographische Handbucher zur Geschichte der deutschsprachigen periodischen Presse von den Anfängen bis 1815, I:1, Stuttgart-Bad Cannstatt, Frommann-Holzboog, 1996, column 559.
- **6.** A general account of the translations, foreign reviews, etc. of *Handlingar* and other publications of the Academy during the 18th century is given by Arne HOLMBERG in *Kungl. Vetenskapsakademiens äldre skrifter i utländska översättningar och referat*, Uppsala–Stockholm, 1939, p. 1–74. It should be observed that I am talking only about *Handlingar*. As to other branches of Swedish scientific literature in the same epoch, there would be much more to account for; a few examples are given in the article.
- 7. Andreas ÖNNERFORS, "Translating discourses of the Enlightenment: transcultural language skills and cross-references in Swedish and German eighteenth-century learned journals", in Stefanie Stockhorst (ed.), Cultural Transfer through Translation: The Circulation of Enlightened Thought in Europe by Means of Translation, Amsterdam-New York, Rodopi, 2010, p. 209–229; HOLMBERG, op. cit., p. 7.
- **8.** HOLMBERG, op. cit., p. 20–21. This translation was published by J. F. Pelt in Copenhagen from 1757 to 1765, in eight volumes under the title *Det kongelige svenske Videnskabers Academies oeconomiske, physiske og mechaniske Afhandlinger.* The translator was a physician, Johan Pauli or Paulli.
- **9.** HOLMBERG, op. cit., p. 29–31 The extensive Leiden translation was made by Jan Bernard Sandifort, Doctor of Medicine in The Hague.
- **10.** Crüger's name appears only in a rare variant edition of the *Analecta*, preserved in the Biblioteca Nazionale Centrale di Firenze (HOLMBERG, *op. cit.*, p. 32, footnote).
- **11.** HOLMBERG, *op. cit.*, p. 6–7. Kästner even at first mistook Holzbecher for being a Swede (also a hint, perhaps, that the project was not originally his).
- **12.** HOLMBERG, op. cit., p. 7, 42–43. It is significant, in its own way, that the German Wikipedia article on Kästner does not mention his version of *Handlingar*: http://de.wikipedia.org/wiki/Abraham_Gotthelf_K%C3%A4stner
- 13. "Lehren, die wir unter unsern Landesleuten ausbreiten wollen, werden am besten in der ihnen bekannten Sprache vorgetragen. Glauben andere Völker, daraus Vortheil zu schöpfen, so sind ihnen die beyden Arten bekannt, wie sie solches theilhaftig werden können. Die Uebersetzung, der bequemste Weg, erfordert nur, dass man sich auf die Geschicklichkeit und Treue ihres Verfertigers verlassen darf" ("Vorrede zur deutschen Uebersetzung", Abhandlungen etc., Hamburg–Leipzig 1749, unpag.).
- **14.** Stefanie STOCKHORST, "Introduction. Cultural transfer through translation: a current perspective in Enlightenment studies", in Stockhorst (ed.), *op. cit.*, p. 11 (where the reasoning, it is true, primarily concerns the *belles-lettres*).
- 15. Baër's work as a commissioner for the Academy is reflected in detail in his letters to Wargentin, in Collection Wargentin, E I:11, The Royal Swedish Academy of Sciences (KVA), Stockholm. About Clairaut's understanding of Swedish: BAËR to Wargentin, 16 May 1760 (Coll. Wargentin, KVA).
- **16.** Bibliothèque raisonnée etc. t. 38:1, 38:2, 39:1, 41:1; HOLMBERG, op. cit., p. 23.
- 17. "Mr. Polheim n'a pas dédaigné de donner part au Public d'une invention pour tirer du tonneau une quantité de vin sans descendre dans la cave" (Bibl. raisonnée etc., 38 :2 [April-June 1747], p. 65). On Haller as a contributor to the Bibliothèque raisonnée, see Dictionnaire des journaux 1600-1789, revised version at http://dictionnaire-journaux.gazettes18e.fr/

- journal/0169-bibliotheque-raisonnee (2017-10-04). There are also textual details that point to Haller as the reviewer, e.g. personal recollections of the Clausthal mines, close to Göttingen where Haller resided.
- **18.** HOLMBERG, op. cit., p. 23–25. The 1765 translations in *Journal œconomique* (of articles as old as from 1751): p. 133–140, 173–178, 223–229, 279, 423–424. HOLMBERG, op. cit., p. 24, erratically names them as mere reviews.
- 19. [Paul-Henri D'HOLBACH and Augustin ROUX], Recueil des mémoires les plus intéressans de chymie et d'histoire naturelle contenus dans les Actes de l'Académie d'Upsal et dans les Mémoires de l'Académie de Stockolm [sic], publiés depuis 1720 jusqu'en 1760. Traduits du Latin & de l'Allemand, I-II, Paris, Didot Le Jeune, 1764. No examination has been made of what German texts d'Holbach-Roux might have used; given what complete German versions there existed up to 1764, it is beyond doubt that Kästner was the "original".
- 20. [HOLBACH-ROUX], Recueil etc., I, "Avertissement du traducteur" [sic], p. VII.
- **21.** A. F. CRONSTEDT, Essai d'une nouvelle minéralogie, traduit du suédois et de l'allemand de M. Wiedman [Gregers Wiedmann], Paris, Didot Le Jeune, 1771. In Hjalmar Fors, Mutual Favours: The Social and Scientific Practice of Eighteenth-Century Swedish Chemistry, Uppsala 2003, p. 72, it is remarked that Wallerius had been considered by some as "old-fashioned", but that he was nevertheless translated by the radical d'Holbach.
- **22.** Jean SGARD, "Louis Félix Guynement de Kéralio: traducteur, académicien, journaliste, intermédiaire", *Dix-huitième siècle*, 1/2008 (no. 40), p. 43.
- 23. BAËR to Wargentin 18 February 1763 (Coll. Wargentin, KVA).
- **24.** BAËR to Wargentin, undated (Coll. Wargentin, KVA). According to a later note on the letter, it may have been written in 1778 but is most likely considerably older than that.
- 25. [L.-F. GUINEMENT DE KÉRALIO], Collection de différens morceaux sur l'histoire naturelle & civile des pays du Nord, sur l'histoire naturelle en general, sur d'autres sciences, sur différens arts; traduits de l'allemand, du suédois, du latin, avec des notes du traducteur, par M. de Kéralio [...], I, Paris, R. Davidts, undated [1762 or 1763] (the second volume never appeared). Also available at http://gallica.bnf.fr/ark:/12148/bpt6k1041609c
- 26. KÉRALIO to Wargentin, 10 February 1763 (Coll. Wargentin, KVA).
- 27. "Je traduis avec liberté presque tous ces écrits. J'ajoute quelquefois, je retranche souvent. Je m'attache uniquement aux choses utiles, & je tâche de les présenter d'une manière qui soit agréable, sans me trop embarrasser de celle de mes auteurs." -On the belles infidèles and contemporary translation theory in general: STOCKHORST, op. cit., p. 10-11.
- **28.** Mémoires de l'Académie royale des sciences de Stockholm, concernant l'Histoire Naturelle, la Physique, la Médecine, l'Anatomie, la Chymie, l'Œconomie, les Arts, &c., traduit par M. de Kéralio etc., Paris, Panckoucke, 1772.
- 29. "[...] quelque riches qu'ils soient, on ne pouvoit les rendre intéressants & utiles en France qu'en les abrégeant. [...] Ainsi, dans cet abrégé, dont l'unique objet est le progrès des arts & des sciences, les expériences, les réflexions, les descriptions d'histoire naturelle & de topographie, propres à la Suède & inutiles ailleurs [...] ont été suprimés. [...] Les expériences & observations nouvelles & importantes sur les connoissances d'utilité générale [...] ont été conservées avec soin."
- **30.** "J'ai voulu seconder vos vues ultérieures de bienfaisance et d'humanité en contribuant à les répandre dans la reste de l'Europe. J'ai désiré de me rendre utile [...] avec vos précieuses productions"; KÉRALIO to Wargentin, 18 November 1772 (Coll. Wargentin, KVA).
- 31. KÉRALIO to Wargentin, 15 March 1774 (Coll. Wargentin, KVA).

- **32.** "Nous aurions désiré de donner au Public un Extrait détaillé de ces Mémoires dont plusieurs sont fort intéressans, mais comme ils sont écrits dans une Langue presque inconnue à tout le reste de l'Europe, nous sommes bornés malgré nous à un simple énoncé des matières [...]"; *Journal des Savants*, December 1769, p. 872.
- **33.** *Journal des Savants*, January 1779, p. 24; May 1779, p. 300; November 1779, p. 743; May 1780, p. 273. There is no information concerning the abbé Vasseur in the sources that have been accessible to me.
- **34.** Patrice BRET, "'Enrichir le magasin où l'on prend journellement'. La presse savante et la traduction à la fin du XVIII^e siècle", in *Archives internationales d'histoire des sciences*, vol. 63/2013, Turnhout, Brepols, 2013, p. 362–363.
- **35.** It has been stated (by James R. Partington) that Claudine Picardet in reality translated the greater part of the Guyton edition of Torbern BERGMAN'S *Opuscula*. (Patrice BRET, "Les promenades littéraires de Madame Picardet: la traduction comme pratique sociale de la science au XVIII^e siècle", in P. Duris (ed.), *Traduire la science: hier et aujourd-hui*, Pessac, Maison des sciences de l'homme d'Aquitaine, 2008, p. 134).
- **36.** Ample information on the Dijon circle in BRET, *op. cit.* 2008, p. 125–152, as well as in BRET, *op. cit.* 2013, P. 360–381, as well as in Patrice BRET, "The letter, the dictionary and the laboratory: translating chemistry and mineralogy in eighteenth-century France", in *Annals of Science*, 2016 (vol. 73:2), p. 122–142.
- **37.** "Note de M. Maquer [Pierre Macquer]" with reply from Vasseur (*Journal des Savants*, May 1779, p. 308–309, and November 1779, p. 754, respectively), concerning Vasseur's use (in the January 1779 issue) of the term *magnésie* for magnesium instead of *manganese*. Macquer meant that *magnésie* should be used for magnesium sulfate (Epsom salt); Vasseur's reply indicates at least some expertise.
- **38.** BRET, op. cit. 2013, p. 373 (..."a gradually more specialized content in which the journal, as the intermediary, respected the original text").
- **39.** *Ibid.* (..."to compete with the responsiveness of the Dijon group and the scientific specialisation of the *Journal de physique*").
- **40.** WILCKE to Scheele 27 February 1786, and SCHEELE to Wilcke, 12 March 1786, quoted from Carl Wilhelm OSEEN, *Johan Carl Wilcke. Experimental-fysiker*, Uppsala, 1939, p. 339–340. It can be seen in their correspondence that Scheele several times, in the 1780s, received an issue of *Journal de Physique* from Wilcke, probably as a loan of the copy of the journal that was kept by the Royal Academy of Sciences. Scheele also once said that he would start subscribing to the journal himself, but he never did. The growing rush for rapid translation is underlined also by BRET, *op. cit.* 2016, p. 131, p. 137.
- **41.** For example in the January 1784 issue, p. 36: "Observations sur le spath fusible, par M. Scheele. La traduction de ce mémoire se trouve dans le cahier du Journal de Physique du mois d'Avril 1783", without further comment.
- **42.** "L'Uria grille", *Journal des Savants*, December 1787, p. 871–872, after Samuel ÖDMANN, "Uria Grylle, Grissla", in Nya Handlingar, July-Sept., 1781, p. 231–232.
- Original Swedish text (ÖDMANN): "Grisslan är en Nordisk Fogel, och träffas ymnigast vid Spitsbärgen, Is- och Grönland. Den ses dock i södra delen af Östersjön; samt på Skottska och Engelska kusterna. [...] Grisslan lefver hos oss i samhälle. 12 til 20 par bo i en bärgs-skrefva. Jag har aldrig funnit flera än 2 ägg i deras bon; dem de lägga utan bädd på bara klippan, dock hälst i någon spricka, som gifver skygd. Äggen äro stora som höns-ägg, modren är mycket mindre än en höna. De äro til färgen ljusgrå med stora svarta fläckar, liknande utslaget bläck. Desse fläckar blifva emot äggets större ända sammanflytande. [...] Jag har aldrig sett dem värpa i sand, som Hr.

PONTOPPIDAN säger ske i Norrige. [...] Grisslan går om Våren i land, men skyndar ej med värpningen. I år d. 13 Junii voro flera Grisslors ägg aldeles friska, och jag har sett ägg, tagne d. 22 Junii, på hvilka modren knapt legat 6 dygn".

- **43.** "Essai sur la quantité spécifique du feu contenu dans des corps solides, & sur sa mesure", *Journal des Savants*, August 1785, p. 531–539, after Johan Carl WILCKE, "Rön, om Eldens specifica myckenhet uti fasta kroppar, och des afmätande", in *Nya Handlingar*, January–March, 1781, p. 49–78.
- **44.** "Expériences sur l'élasticité & la répartition de la chaleur, considérées relativement à l'ascension & au refroidissement des vapeurs dans l'air raréfié", *Journal des Savants*, July 1786, p. 462–468 (after Johan Carl WILCKE, "Rön om Varmens spänstighet och fördelning, i anledning af ångors upstigande och kyla, uti förtunnad luft", in *Nya Handlingar*, AprilJune, 1781, p. 143–163).
- **45.** "Foreignizing" (as a term for translations "reminding the reader that the text comes from elsewhere") after Peter Burke, "The Circulation of Historical and Political Knowledge between Britain and the Netherlands, 1600–1800: The Place of Translations", in Harold J. COOK and Sven DUPRÉ, Translating Knowledge in is the Early Modern Low Countries, Zürich, LIT Verl., 2012, p. 41–42.
- **46.** "Des parties constituantes du tungsten, *Journal des Savants*, June 1786, p. 420-425 (after SCHEELE, "Tungstens bestånds-delar", in *Nya Handlingar*, April-June 1781, p. 89-98, including BERGMAN's addition), and "Étain de Sibérie métallisé avec le soufre", *Journal des Savants*, July 1789, p. 459-462 (after BERGMAN, "Försvafladt Tenn från Siberien", in *Nya Handlingar*, October-December 1781, p. 328-332).
- **47.** BERGMAN, *op. cit.*, p. 331 and in "Étain de Sibérie métallisé avec le soufre", *Journal des Savants*, July 1789, p. 461, respectively.
- **48.** The SCHEELE article in *Journal de Physique*, February 1783, p. 124–130 (including the BERGMAN addition), and in Carl Wilhelm SCHEELE, *Mémoires de chymie*: *Tirés des Mémoires de l'Académie Royale de Sciences de Stockholm* etc., I, p. 81–93; the BERGMAN article, "Description de l'Étain sulfureux de Sibérie", in *Journal de Physique*, May 1783, p. 367–370. The Swedish data are given in footnote 46 above.
- 49. Both examples in SCHEELE, op. cit. [Journal de Physique, Febr. 1783], p. 127.
- **50.** BRET, op. cit. 2008, p. 140, and BRET, op. cit. 2016, p. 140-141.
- **51.** The Dijon version, "Observations sur la quantité de chaleur spécifique des corps solides, et sur la manière de la mesurer", was published in *Journal de Physique*, April and May 1785 issues, p. 256–268 and p. 381–389, respectively.
- **52.** Alan G. GROSS, Joseph E. HARMON and Michael REIDY, *Communicating Science: The Scientific Article from the 17th Century to the Present*, Oxford-New York, Oxford Univ. Press, 2002, p. 69.
- **53.** Pehr Gustaf. TENGMALM, "Anmärkningar vid Lanius Collurio, en liten Rof-Fogel", in Nya Handlingar, April-June 1781, p. 98-105.
- **54.** SCHEELE, "Rön och Anmärkningar om Kisel, Lera och Alun" ["Observations and Remarks on Silicon, Clay, and Alum"], in *Handlingar*, January–March 1776, p. 30–35. This article was only briefly reviewed, by Lalande, in *Journal des Savants*, May 1780, p. 27.
- **55.** SCHEELE, "Tungstens bestånds-delar", in *Nya Handlingar*, April-June 1781, p. 93–94, and "Mémoire sur les parties constituantes de la Tungstène", in *Journal de Physique*, February 1783, p. 127.

Original Swedish text (SCHEELE): "När Tungstens-syra brännes i digel, mister hon egenskapen at sedan uplösas i vatten. At syran är benägen at attrahera phlogiston, ses af blå färgen, som hon visar uti glas-flussar. I anledning häraf, blandades torra syran med litet Linolja, och sattes uti luterad digel i stark eld. Efter afsvalning, fans syran svart, men eljest oförändrad. Likaledes blandades en del torr syra med 2 delar svafvel, och destillerades derifrån: Residuum blandades

åter med 2 delar svafvel, som också drefs derifrån; syran blef då grå til färgen, men för öfrigt oförändrad".

Picardet, in another part of her translation (p. 125), uses a similar concentration of the third person "on", synonymous with "je".

56. The excerpts from BERGMAN, 1781, p. 329; [KÈRALIO], "Étain de Sibérie minéralisé avec le soufre", in *Journal des Savants*, July 1789, p. 459–460; [PICARDET], "Déscription de l'Étain sulfureux de Sibérie" etc., in *Journal de Physique*, May 1783, p. 368.

Original Swedish text (BERGMAN): "Ibland en hop mineralier från Ryssland, som jag nyligen bekommit, träffades i en liten capsel några små bitar, som vid första åskådandet så liknade vårt artificiela aurum mosaicum, at jag i början äfven trodde det samma igenom konst vara tilverkadt. Men genom närmare granskning befans, at detta ämne satt såsom en skorpa omkring en [...] metallisk, hvitglänsande kärna, hvilken med knif skrapad fans helt lös och gaf svart pulfver. Desse omständigheter, tillika med en hvit flyktig kalk, som vid undersökning i eld visar sig, hafva utan tvifvel gifvit anledning, at hålla kärnan för Antimonium, hvilket uti medfölljande påskrift honom tillägges. [...] De försök, som strax skola anföras, bevisa tilräckeligen, at här intet Antimonium är närvarande, utan både i kärna och omgifvande skorpa allenast tenn och svafvel, samt en ringa smitta af koppar".

- 57. On the total number of Picardet's translations in Journal de Physique: BRET, op. cit. 2013, p. 368.
- **58.** The SCHEELE volume *Mémoires de Chymie* (I–II, Dijon-Paris, 1785) contains sixteen Picardet translations from Swedish originals. The seventeenth article here in question is "Sur le sel essentiel de la noix de Galle", in *Journal de Physique*, January 1787, p. 57–59, after "Om Sal essentiale gallarum", in *Nya Handlingar*, January-March 1786, p. 30–32.
- **59.** SCHEELE, "Försök, beträffande det färgande ämnet uti Berlinerblå" ["Experiments concerning the colouring substance in Prussian blue"], *Nya Handingar*, October–December 1782, p. 264–275; Picardet's translation, "Essai sur la matière colorante du Bleu de Prusse", here quoted from *Mémoires de Chymie*, II, Dijon–Paris, 1785, p. 145–146.

Original Swedish text (SCHEELE): "Nu omvändes de anförde försöken; jag blandade nemligen litet Järn-vitriol til Blodluten, som då blef gul, och slog något af blanningen uti en kolf, som var upfyld med luftsyra. Dagen derpå, slogs denna lut til en solution af Järn-vitriol, sedan mättades luten med öfverflödig syra, och då fick jag en ansenlig mängd Berlinerblått. Til samma blodlut, hvaruti jag hade uplöst litet Järn-victril, slogs af andra syror något mera, än som til mättning behöfdes, och sedan tilblandades Vitriol-solutionen, då jag strax bekom Berlinerblått".

- 60. GROSS, HARMON and REIDY, op. cit., p. 81.
- 61. GROSS, HARMON and REIDY, op. cit., p. 77-78, p. 91.
- 62. GROSS, HARMON and REIDY, op. cit., p. 71.
- **63.** "J'aime les chenilles du coignassier [...]; leur robe est agréable á voir, et elles m'ont fourni des observations curieuses"; M. HETTLINGER, "Seconde lettre [...] sur une phalène hermaphrodite", *Journal de Physique*, April 1785, p. 268.
- **64.** GROSS, HARMON and REIDY, op. cit., p. 78 (table 4.1.).
- **65.** BRET, op. cit. 2016, p. 130.

ABSTRACTS

The article gives a survey of European translations and reviews, during the 18th century, of the *Proceedings* (in Swedish *Handlingar*) of the Royal Swedish Academy of Sciences, which was founded in 1739 and in the same year began to publish its proceedings as a quarterly journal. In this publication, strictly scholarly aims were combined with practical–utilitarian qualities that made it an instrument for the economic development of the country, but also bestowed it a somewhat paradoxical penetration abroad. This latter impact was to begin with mainly seen in the German-speaking area, and a complete German version of all the years up to 1790 was continuously published. There also appeared a considerable number of partial translations to Danish, Dutch and even Latin. In France, the knowledge of *Handlingar* grew with the rising reputation of, in particular, Swedish chemistry and mineralogy, to the fame of which the journal also largely contributed. A great number of its articles were, in the 1770s and 1780s, translated for the renowned *Journal de Physique*, primarily by Claudine Picardet, and by means of reviews and adaptations highlighted in *Journal des Savants*, primarily by Louis-Félix Guinement de Kéralio. The article finally discusses some of the stylistic features of the translations and reviews produced by these prolific Swedish–French cultural intermediaries.

Cet article étudiera les traductions et comptes-rendus de lecture, réalisés au cours du XVIIIe siècle, des Actes (en suédois, Handlingar) de l'Académie royale suédoise des sciences, qui a été fondée en 1739 et, la même année, a commencé à publier ses actes dans une revue trimestrielle. Dans cette publication, les objectifs purement académiques étaient associés à des qualités pratiques et utilitaires, en faisant un instrument pour le développement économique du pays, mais lui donnant également, de façon assez paradoxale, une portée internationale. Ce second effet devait d'abord se manifester dans l'espace germanophone et une version allemande complète est parue en continu pour toutes les années jusqu'à 1790. Un nombre considérable de traductions partielles a aussi été produit en danois, néerlandais et même latin. En France, la connaissance des Handlingar s'est étendue en même temps qu'augmentait la réputation des sciences suédoises, en particulier de la chimie et de la minéralogie, à la gloire desquelles la revue a d'ailleurs largement contribué. Un grand nombre de ses articles, des décennies 1770 et 1780, a été traduit pour le réputé Journal de Physique, principalement par Claudine Picardet, et mis en valeur, par le biais de comptes-rendus de lecture et d'adaptation, dans le Journal des Savants, surtout grâce à Louis-Félix Guinement de Kéralio. Cet article abordera enfin certaines des caractéristiques stylistiques des traductions et des comptes-rendus produits par ces prolifiques intermédiaires culturels entre la France et la Suède.

INDEX

Mots-clés: Académie royale des sciences de Suède, Actes, Périodiques savants, Traductions, comptes-rendus, Journal de Physique, Journal des Savants, Claudine Picardet, Louis-Félix Guinement de Kéralio

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AUTHOR

INGEMAR OSCARSSON

Centre of languages and literature Lund University