Grimaldi, Claudio (2017) : ***Discours et terminologie dans la presse scientifique française (1699–1740). La construction des lexiques de la botanique et de la chimie.*** Oxford et al. : Lang. ISBN 978-1-78707-923-6, 234 pages.

The end of the seventeenth century and the beginning of the eighteenth was certainly a period of radical change in the area of scientific thought. This new book by Claudio Grimaldi adds another element to our understanding of this fascinating and intriguing period. The work is presumably based on his thesis on the same subject, and occasionally bares traces of its origins, but is none the worse for that. Grimaldi studies terminological innovation in French in the first 40 years of the eighteenth century, in the fields of botany and chemistry. The choice of dates is judicious. The first periodic of a scientific nature was the *Journal des Savants*, founded in 1665. The *Académie Royale des Sciences* was created the following year, but initially published its *Mémoires* only in luxurious editions which were considered the property of the King, and not distributed publicly. It was only in 1699 that the *Académie* took the decision to publish on a regular basis, and its first publication appeared in 1702. The beginning of the eighteenth century thus has special significance for scientific discourse. Grimaldi considers the terminologies of botany and chemistry. Both of these were in a state of flux at the time: the Linnaean system was still in the future; Linnaeus was to start publishing his system of classification in 1735; and it was only in the 1780s that Lavoisier would revolutionize the terminology of chemistry.

For his study, Grimaldi has taken 41 issues each of the *Journal des Savants* and the *Histoire et Memoires de l'Académie des Sciences*, one for each year from 1699 to 1740. This gives him a total of 123 items relating to botany and chemistry from the former, and 185 from the latter publication. From these he has isolated the terms which are not listed in lexicographical sources of the time, mainly Furetière's *Dictionnaire Universel* (1690) and the *Dictionnaire de l'Académie Française* (1694). This gives him a list of terms which are subjected to detailed analysis in the final section of the book. Grimaldi describes his method as "dynamic synchrony", which I take to mean historical but not strictly speaking diachronic.

The first part of the book is given over to discussion of the historical background, particularly as it relates to science in general, and more particularly to the way science is written. The historical survey is extensive, and provides an interesting and useful picture of the historical situation within which the scientific terminological innovations, which are Grimaldi's focus, take place. Language can never be understood in isolation; its context is in many ways part of its meaning, and has a role in the creation of discourse. So this background is essential in understanding the pertinence of the terminological study which follows. As he says, studying historical scientific text means that it is necessary to immerse oneself in the history of science. However, Grimaldi's point of view is, quite naturally, coloured by his terminological stance. This occasionally leads him to say things which, while understandable in purely lexicographical terms, might seem odd when other aspects of language are taken into account. He claims for example that one of the characteristic features of the new science was its wish to reconnect with classical Greek and Roman heritage and culture. In so far as these writers had received a classical education, and were thus steeped in the writing of Greece and Rome, it was natural for them to turn to those languages in creating the new terms they needed. At the same time they were opposed to the way the Ancients were treated in the universities, and were striking out in new directions. They refused to accept the Ancients as having reached the pinnacle of human intellectual achievement. As Grimaldi points out later, it was in the new academies, particularly in Italy, France and England, rather than the universities, that the new scientists

were active. I also find it curious that in evoking the question of a perfect language he mentions Condillac and Condorcet, but not Wilkins, whose *Essay towards a Real character and a Philosophical Language* must surely be a cornerstone in the matter. However, these are very minor blips in an otherwise excellent overview.

Chapter 4, the final chapter, is the core of the book. In this chapter Grimaldi gives a detailed account of each of the terms he has isolated as neologisms in his corpus. The domains that Grimaldi has chosen provide an interesting contrast. Of the two disciplines he has selected, botany had in some senses existed since ancient times, although its study was often linked to the medical uses of the plants concerned, and it was only in this period that the link with medicine was broken and plants were studied purely for their own sake. In contrast, chemistry was a new field. Grimaldi points to its roots in alchemy, but although we tend to think in terms of rupture and revolution, in fact, old ideas die slowly. It should be remembered that even as great a scientist as Newton continued to practice alchemy until the end of his life. It can also be pointed out that in this period what went under the name of chemistry was frequently closer to what we would now call pharmacy. His discussion of new botanical terms takes in the classification of plants, their names and typology, and their external and internal parts. The way these terms are introduced, often in competition with other possibilities, is highly complex, but Grimaldi negotiates these complexities with aplomb. He shows, for example, how the term *mimosa* was used in two different senses, both for *herbe sensitive*, and at the same time for *acacia*, thus creating an ambiguity, which would not be resolved before the introduction of the Linnaean classification. The discussion of chemical terms covers the characteristics of chemical products, the properties of chemical substances, and chemical processes. The term *molécule*, for example, derived from Latin, and used in disciplines other than chemistry, originally meant a tiny part of a body. Its meaning would then be gradually modified in the domain of chemistry. He shows how the term *laminage*, which already existed with the meaning of decorate with small sheets of metal, here takes on the technical meaning of roll out a piece of metal into the form of a sheet. Throughout, the text is amply illustrated with extensive examples from the corpus, which enable the reader to see how the terms were actually used in context.

Over and above the purely terminological study which Grimaldi has produced, and which was presumably his primary purpose, it is possible to see through his detailed discussion a facet of the fascinating history of the construction of knowledge during this period when the new sciences were still in the complex process of establishing their bases. Through the terminological histories, it is possible to see the circuitous routes, the false starts, the parallel paths, and the solutions which ultimately fell by the wayside, in the establishment of botany and chemistry as distinct disciplines within the new science. It is this contribution to our understanding of the construction of knowledge which makes this book more than a study in historical terminology, and hence of interest beyond the community of terminologists and lexicographers.

It will be noted that the book is written in French. However, even for those for whom this is not their native language, the extra effort in reading in this language will pay dividends.

It should also be pointed out that in addition to the print version, the book is available in a number of electronic options.

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