How is it possible to define a discipline that does not exist? Obviously one cannot describe it directly, but there are nonetheless indirect tactics that can be used to put boundaries on the problem; it is sometimes possible to create a context in which a field of study may have figurative meaning. There are many useful rhetorical strategies that may be applied to such a project and Pierre Joseph Macquer, in the preface to his well-known *Dictionnaire de chymie*, used several in order to create the illusion that the field of chemistry was already a unified coherent discipline. His argument had to rely on indirect persuasive technique and not on a direct exposition of a theory of chemistry precisely because Macquer did not see chemistry as a positivist discipline in the sense of the modern natural sciences, but as a natural philosophy in which several theories could exist at once and in which the comportment of the *savant* as a writer and his ability to invent new systems was paramount. The perspective we would like to suggest derives therefore from a rhetorical and semantic analysis of the preface and not from a discussion of the subject matter of chemistry. Through such a perspective one can understand not only the structure of the preface itself, but also its functioning with respect to the rest of the work as one step in the Enlightenment’s construction of a new scientific ideal.

It may be helpful first to enumerate briefly some of the rhetorical maneuvers used in order to provide us with a framework for our discussion. One can, for example, provide an historical derivation: one can attempt to define the forces that are creating a given discipline. One may be able to extrapolate from the past interactions of these forces in order to get an idea as to the future direction and the limits within which the field may develop. One may draw analogies from the structures of parallel disciplines, or from that of a generalized discipline into which the field of study may fit. As the opposite of something may exist even if it itself does not, attempting a negative definition may help to mark out the boundaries inside of which the field will be possible. Macquer uses all of these strategies in his prefatory history of chemistry and one other one, a crucial one, in the body of the dictionary: as a last resort, one can try to describe the existing parts in the hope that the whole will be, at least in the reader’s imagination, greater than the sum.
Pierre Joseph Macquer, a French chemist of the mid-eighteenth century, was a highly respected and influential member of the academic scientific community of Paris. He held important posts as the director of the porcelain factory at Sèvres and as the chief lecturer in chemistry at the Jardin du Roi. His contributions to the field of chemistry are suggested by these two posts: he made important technical discoveries for use in industry, and is probably best known for his educational writings. He wrote chemical textbooks following the theories of Stahl, and the first to be aimed at the novice chemist: the *Elémens de Chymie-Théorique* (1749) and the *Elémens de Chymie-Pratique* (1751), but his best-known and most widely-consulted work is without a doubt his *Dictionnaire de chymie*, the first edition of which was published in 1766, and the second edition, greatly expanded, in 1778. It was an ambitious attempt at a radical reorganization of the structure of the chemical textbook in order to bring it into harmony with the epistemological state of the field and with the general philosophies of language and of natural history of the time.

Now, there are two ways that one could approach this book. The most obvious way would be to discuss the body of articles in the *Dictionnaire* itself, as it was not merely a reference work, but a pedagogical system analogous to that of the *Encyclopédie* of D'Alembert and Diderot. For Macquer, the alphabetic ordering, combined with the cross-references, could provide not only the most complete and tightly-linked description of the chemical field, but it also provided the perfect format through which each student could derive his own theory of chemistry by choosing the articles and the cross-references which best fit his experimental interests.

However, while it proved very useful as a reference-work, the *Dictionnaire de chymie* was a pedagogical failure, and to suggest why, it will be useful to approach the work through a discussion of the lengthy “Préface de l'auteur.”

Macquer prefaces his dictionary with a history of chemistry. This history is not intended to be a factual description, and one does not finish reading it having gained any understanding of the technical subject matter of chemical research. As do many of the other histories of chemistry of the time (those of Scheele, Rouelle and especially Torbern Bergman's), he uses the traditional clichés: in prehistoric times there existed many figures whose names come down through the legends, but nothing substantive is known of their work. Certain practical chemical arts were invented by craftsmen and artisans, but there was no philosopher to weld the knowledge of the artisans into a science. The medieval alchemists, who were ostensibly “philosophical,” rather than practical, did not fulfill this role: on the contrary, it was only with the passing of alchemy that Chemistry could become the great science that Macquer perceives it to be.

Macquer's “histoire de la chymie” is presented as a long, slow development headed towards a utopian future in which chemistry will be a science, recognized and socially accepted, because it will combine technical