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978-0-521-40049-7 - The French Paracelsians: The Chemical Challenge to Medical and Scientific Tradition in Early Modern France

Allen G. Debus

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The scientific revolution of the sixteenth and seventeenth centuries is usually characterized in terms of astronomy and the physics of motion. In *The French Paracelsians* Allen Debus narrates an important episode whose contribution to the scientific revolution has been largely ignored: the long-standing contention between Paracelsians and Galenists.

Shortly after the medical authority of Galen had been reestablished during the Renaissance, Paracelsus, a Swiss-German firebrand, proposed a new approach to natural philosophy and medicine – through chemistry. The resulting debate between Paracelsians and Galenists lasted more than a century, embroiling medical establishments across Europe. In France the debate was particularly bitter, with the Medical Faculty of Paris determined to block the introduction of chemistry to medicine in any field. Debus elucidates this important polemic, not only in regard to Paracelsian pharmaceutical chemistry and clinical cosmology, but also in regard to the development of chemical physiology and its struggle with seventeenth-century medicine dominated by mechanical philosophy. Debus shows how the purported triumph of the mechanists in the scientific academies was partial at best, recounting the osmotic acceptance of chemistry by the academies. This persistent influence of medical chemistry, which was significant for the chemical revolution as well as being one of the driving forces behind the scientific revolution, deserves greater recognition by historians.

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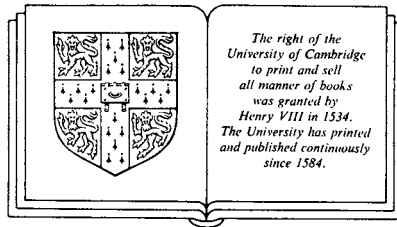
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THE FRENCH PARACELSIANS

*The Chemical Challenge to Medical and
Scientific Tradition in Early Modern France*

ALLEN G. DEBUS



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This book is dedicated to
John J. Murray
and to the late
A. Haire Forster,
both true educators, without
whose advice and encouragement
many years ago this book would
never have been written.

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Preface

The present book has resulted from a long-time interest in the relationship of chemistry and medicine during the early modern period that began when I was a graduate student at Indiana University more than forty years ago. It continued through the years I worked as a research chemist at Abbott Laboratories and finally resulted in my decision to leave my position there to enter the then small graduate program in the History of Science at Harvard University in 1956. There, in the Tudor and Stuart seminars of Professor W. K. Jordan I prepared papers on the English followers of the Swiss-German reformer, Paracelsus. In the year 1959–60, with the aid of a Fulbright Award and a Fellowship from the Social Sciences Research Council, I was able to spend a year devoted to research in England where I became acquainted with Walter Pagel, surely this century's greatest authority on the Paracelsians. I will always be indebted to him and to his wife, Magda, for the interest they took in my work.

My doctoral dissertation on the English Paracelsians was completed in 1961 under the direction of Professor I. B. Cohen and published with few changes four years later. This early work resulted in a series of related studies, but my interests were never centered on English science and medicine alone. Rather, my primary concern has always been to broaden our understanding of the scientific revolution of the sixteenth and seventeenth centuries. Thirty years ago this term referred almost exclusively to the progression from Copernicus to Galileo to Newton and, with the exception of the Harveyan circulation, was confined to problems of astronomy and the physics of motion. My own background and interests led me to another area, to the relationship of chemistry and medicine in the period of the scientific revolution.

Following my work on the English Paracelsians I turned to a more general study of the followers of Paracelsus, which was completed in the early 1970s but not published until 1977 as *The Chemical Philosophy: Paracelsian Science and Medicine in the Sixteenth and Seventeenth Centuries*. The following year my book *Man and Nature in the Renaissance* was published by Cambridge University Press. In this I attempted to show the impor-

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tance of the Paracelsian chemical debates and their relation to better known developments of the science of the sixteenth and early seventeenth centuries. Over the next few years I published papers on Spanish and Portuguese Paracelsism, and even the introduction of Paracelsian thought in the Ottoman Empire. Separate studies such as these led to an interest in comparing the reception of Paracelsian thought in the different countries of Europe. A paper devoted to this topic titled "The Chemical Philosophy and the Scientific Revolution" was presented at the meeting on "Revolutions in Science" sponsored by the University of Coimbra and the International Union of the History and Philosophy of Science (1988).

However, throughout these years I have always had a special interest in the work of the French Paracelsists. I had first become aware of the importance of Joseph Duchesne and Theodore Turquet de Mayerne during my years as a student at Harvard. I expanded the work in my dissertation when writing *The Chemical Philosophy* and decided then that I would eventually prepare a book on the challenge that chemistry posed to the French medical establishment in the early modern period. My first essay specifically on the French scene was written for the *Festschrift* in honor of Professor I. B. Cohen, but due to long delays in the completion of that volume the essay appeared first in *Ambix* in 1981 as "The Paracelsians in Eighteenth Century France: A Renaissance Tradition in the Age of the Enlightenment." This research led me to take a special interest in the Paracelsian influence in France throughout the eighteenth century. With the aid of a Fellowship at the Institute for Research in the Humanities at the University of Wisconsin I was able to continue my research using the rich resources of the Duveen Collection at the Memorial Library in Madison during the year 1981–2. At that time I also prepared a paper on the opening decades of the century, "Alchemy in the Age of Reason: The Chemical Philosophers in Early Eighteenth Century France," for an international meeting on Hermeticism held at the Folger Shakespeare Library in March 1982. It was eventually to appear in the proceedings of that conference, *Hermeticism and the Renaissance: Intellectual History and the Occult in Early Modern Europe*, edited by Professor Ingrid Merkel and myself. Although this paper was intended to be the second chapter of a book on eighteenth-century French Paracelsism, it was actually to form the basis of the fifth chapter of the present work.

A fellowship from The Folger Shakespeare Library made it possible for me to spend the first six months of 1987 in Washington where I had access to the Folger collections as well as the more specialized holdings of the National Library of Medicine in Bethesda. Because I was able to spend much of my time writing, it was then that this book took its present organization. My first thought was to write a book largely confined to the eighteenth century with an introductory chapter on the

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period before 1700. However, I soon found that there was so much untouched material from the sixteenth and seventeenth centuries that the manuscript took a new form, beginning with the Galenic world of the early sixteenth century and then going on to the debates resulting from the introduction of chemistry to medicine over the next two centuries.

The picture that emerges from this study is of a Galenic medical establishment challenged by a group of chemical physicians who saw their new preparations as the basis for a sweeping program of chemical reform. Many, if not all, of these Paracelsians added to this a world system founded on the supposed interrelation between the microcosm of man and the great world of the macrocosm. The story of this conflict between tradition and reform took place at the same time as the more familiar debate over the new and the old astronomy and the resultant search for a new physics of motion. Both should form integral parts of any discussion of the scientific revolution. And surely, the significance of medical history for the understanding of the period is nowhere more evident.

The reader should be advised from the start that this work is not meant to be exhaustive. It should be looked upon rather as a preliminary study of a very complex period. I have tried to explain in the prefatory comments to the bibliography that the identification of the works was not always an easy task, and there was often little or no biographical information to rely on. As in my earlier work I found here as well that the authors writing on chemical medicine most frequently presented their work in the vernacular. There are notable exceptions to this rule, but it would seem that the chemists throughout Europe tried to appeal to a larger audience by writing in their native languages. Although Latin was more common among the members of the Medical Faculty of Paris, even they frequently used French in their polemical attacks on the chemists.

I should add that this book does not pretend to be a sociological study. My primary aim has been to identify the major issues dividing the Galenists and the chemists on the basis of the printed sources. To be sure, religious issues are evident, and in the case of Théophraste Renaudot the debate involves politics at a high level; but I have been interested primarily in the intellectual history of this debate. I gladly leave the sociological aspects to others.

As mentioned earlier, this work has evolved from earlier studies. I have used this earlier work here, but generally I have added much new material. The end product shows a far more complex, and far more bitter, confrontation in France than that which existed in the other European countries I have studied. This was surely due in large measure to the importance of and the conservative nature of the Parisian Medical Faculty. Although this debate did not result in a key figure of the stature

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of Newton, this could not have been foreseeable to scholars of the late sixteenth century. They would only have seen a debate being argued as fiercely as any aspect of the new astronomy. I am convinced that any comprehensive study of the scientific revolution, viewed in historical context, must include the medicochemical debates of the period as a major component.

As always I am indebted to the Morris Fishbein Center for the Study of the History of Science and Medicine and the University of Chicago for support and for a willingness to let me pursue my research elsewhere on occasion. I am also grateful to the National Science Foundation for a research grant during the year 1980–1 which was helpful during the early stages of this research. A year spent at the Institute for Research in the Humanities (1981–2) made it possible to become thoroughly acquainted with the rich holdings of the Duveen and Cole Collections of the Memorial Library at the University of Wisconsin. My work there was made much easier by the aid and interest of John Neu whose knowledge of these collections, and of the bibliography of the history of science, is second to no one's. His friendship and that of the late William Coleman and his wife, Louise, made our year in Madison truly memorable. The fellowship at the Institute at the University of Wisconsin as well as that at the Folger Shakespeare Library in Washington during the first half of 1987 was funded by the National Endowment for the Humanities. Without this support the manuscript would not now be finished.

In addition to the Folger Shakespeare Library and the Memorial Library at the University of Wisconsin my research has been carried out largely at the National Library of Medicine in Bethesda, the Wellcome Historical Medical Library and the British Library in London, and the University of Chicago Library.

I wish to thank Dr. Elsa González and Mr. Michael Kugler, the former for finding numerous articles and references pertinent to my work and the latter for working with me during the final stages of proofreading and indexing.

Finally, at the Morris Fishbein Center, I must give a special note of thanks to Mrs. Elizabeth Bitoy for typing the manuscript not only in its final form, but several times over in earlier forms and in derivative papers. At home, my wife, Bruni, has never ceased to encourage me to complete my work even if it meant that she had to pack and leave home with me for long periods in the pursuance of my research.

Deerfield, Illinois
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