INTRODUCTION

This first volume of *Studies in European Judaism* presents the results of an international and interdisciplinary conference held at the Wittenberg LEUCOREA Foundation in December 1998, home of the Leopold Zunz Centre for the Study of European Judaism. The Centre was founded in 1998 with the explicit goal of researching the interdependence of religious, social, political and cultural aspects in Jewish history and the importance of Jews and Judaism in the making of Europe. The conference was generously supported by the Ministry of Culture of Sachsen-Anhalt, the Martin Luther University Halle–Wittenberg and the LEUCOREA Foundation.

Scholars from Israel, Italy, Great Britain, the U.S.A. and Germany discussed how religious confessions and the development of natural sciences and medicine in the sixteenth century influenced each other. Contrary to the still widespread opinion that the relations between religion and sciences at the beginning of the ‘scientific revolution’ can only be described as intense fights on several battlefields (which the sciences finally won by breaking off their ties with religious dogmas), the contributions to this book give a more refined picture. It is true, there was no lack of conflicts in the process leading from the traditional view of *philosophia ancilla fidei* to autonomous sciences, and it is also true that traditions and dogmas held by religious leaders occasionally gave grounds for suppressing scientific facts and persecuting their authors. But overemphasizing these conflicts may result in the misleading idea that religion and sciences were located on the opposite extremes of the spectrum of sixteenth-century thought. Instead, the papers in this volume show that scientists in the sixteenth century were pious men well aware of religious traditions and teachings. And not one of them, no matter whether Jewish, Catholic or Protestant, abjured his faith to attain supposed intellectual freedom.

Taking for granted that scientists in the sixteenth century adhered to a certain religious confession, the conference asked two main questions: (1) To what extent was scientific thought influenced by religious traditions and beliefs, and (2) did the achievements of sixteenth-century natural sciences and medicine have an effect on religious ideas? Considering these questions, the contributions to the present volume deal – some of them in great detail – with Jewish, Protestant and Catholic scientists and their specific ways of pursuing their studies on nature and medicine.

The first section (*Christian Confessions and the Sciences*) aims at painting a picture of Protestant, Catholic and Calvinist views of the sciences and their influence and importance in academic life. *Günter Frank* (Bretten) and
Paul Richard Blum (Budapest) draw attention to both Protestant and Catholic views of the sciences. Frank’s contribution deals with Philipp Melanchthon, whose influential synthesis of religion and science was made possible by the Lutheran distinction between Gospel and Law. According to Frank, Melanchthon’s theological philosophy, including also his natural philosophy, was not purely Aristotelian, but obviously influenced by Neoplatonic thought, made possible by the Greek edition of Plato’s writing by Simon Grynaeus.

Blum’s paper presents Jesuit scientists, for whom the opposition of science and faith – carefully avoided by Melanchthon – was inevitable. The Jesuit strategy implied that secular philosophy and the sciences were pursued not for intrinsic values, but exclusively for the sake of supporting theology and evangelization. As a consequence, Jesuit scientists were in more than one quandary when scientific discovery and religious dogma contradicted each other. Under these circumstances it is hardly astonishing that only infrequently could Jesuits gain importance in the recent ‘progressist’ history of the sciences.

Michael G. Müller (Halle–Wittenberg) deals with the impact of Protestantism: and especially of Calvinism on Royal Prussia around 1600. Müller argues that the confessional re-orientation at the beginning of the seventeenth century and the decline of Protestant sciences were coinciding processes. While academic life benefited from ‘Calvinist hegemony’ in the Prussian Protestant Church, the Lutheran reconquista cut the confessional links between Prussia and most of Protestant Central Europe, and it brought about an anti-academic turn in urban culture.

An important and peculiar part of the evaluation of science in the sixteenth century is the ‘confessional’ attitude to medical science (the present volume deals mainly with anatomy). Andrew Cunningham (Cambridge) argues that there were three ways in which anatomy became ‘Protestant’ in the first half of the sixteenth century. The first dimension was that Melanchthon and his book De anima made anatomy fundamental to philosophical study in Protestant universities. The second aspect concerns Andreas Vesal’s approach to anatomizing, which was Protestant in its structure: just like Martin Luther, who rejected all authorities other than the word of the Bible, Vesal rejected all ancient authors and based his anatomy on the sole authority of the body. The third dimension of ‘Protestant anatomy’ was Paracelsus’s total rejection of the tradition of anatomizing a dead body in favour of a spiritual and intuitive anatomy of inner revelation.

Some of Cunningham’s assertions induced Jürgen Helm (Halle–Wittenberg) to compare anatomical education at Wittenberg and Ingolstadt universities. His paper comes to the conclusion that in substance there was – at least in the second half of the sixteenth century – no difference between
anatomy at the Protestant University of Wittenberg and the Catholic University of Ingolstadt. But, nevertheless, anatomical education played different roles in the curricula of these universities. While at Ingolstadt anatomy was regarded as belonging only to medical education, it was taught at the Wittenberg Arts Faculty and was therefore part of the basic training of future Protestant theologians, lawyers and scientists.

The papers of the second section (Ways of Transmission) deal with the transmission of Jewish texts to Christianity and within Judaism itself. The article by Mauro Zonta (Rome) on the influence of Hasdai Crescas’s philosophy is a link to the first section. Much has been written on the Jewish transmission of sciences and philosophy in the Middle Ages. However, very little is known about the direct or indirect knowledge of medieval Hebrew philosophical (non-cabbalistic) texts by Latin Renaissance authors. Zonta gives examples of the influence of Crescas’s physical theories on Giordano Bruno, mediated probably by Leone Ebreo.

The importance of Iberian Jews in the transmission of the medical tradition in the Ottoman Empire is the main topic of Eleazar Gutwirth’s (Tel Aviv) contribution. He discusses medical texts and manuscripts, almost all of which come from the so-called Cairo Genizah (a famous storeroom for discarded Hebrew manuscripts going back more than 1000 years) and reconstructs the historical context for the reading culture of Iberian Jews.

The third section (Judaism Between Tradition and Scientific Discoveries) is devoted to the Jewish approach to science. Gianfranco Miletto (Halle-Wittenberg) outlines the attitudes of Jewish intellectuals to the sciences against their religious and historical background. Studying works by Abraham Portaleone and Azariah Figo, Miletto shows the oscillation between acceptance and rejection of science (often seen as ‘gentile wisdom’) and concludes that what these Jewish authors object to is not the study of the sciences as such, but the study of the sciences without the enlightenment of the Torah.

Two specific Jewish positions to the sciences are presented by Samuel S. Kottek (Jerusalem) and Giuseppe Veltri (Halle-Wittenberg). Kottek paints a portrait of the Jewish physician Abraham Portaleone, who in his Shiltei ha-gibborim, an ‘encyclopaedia of science’, combines descriptions of sacred and profane sciences. This work, written in Hebrew and addressed to an educated Jewish readership, blends knowledge about contemporary science and technology (e.g., zoology, botany, mineralogy, warfare, chemistry, music) with detailed scholarship in Jewish antiquities. For Portaleone, there was no doubt that ‘modern’ natural sciences could be freely used in explaining religious truth.

According to Veltri’s contribution, Rabbi Judah Loew of Prague is a typical example of how the achievements of the sciences were accepted and
at same time relativized by Jewish authors. For Judah Loew the sciences – as *ancillae theologiae* – were dangerous because of the autonomy they claim. He was aware that scientific discoveries cannot be questioned, and thus tried to interpret them in such a way that they could be integrated into traditional Jewish thought without denying rabbinical hermeneutics.

Medieval as well as humanist scholars followed the same path in their interpretation of geographical data. The contribution of Johann Maier (Weilheim) gives a detailed picture of different approaches to geography in Jewish scholarship. Although in certain Jewish circles of the late sixteenth and beginning seventeenth centuries new attitudes to secular learning were beginning to emerge, these did not determine the worldviews and historical outlooks of the majority of contemporary Jews. New discoveries were interpreted according to old schemata. And when information about the (re-)discovery of America spread among Jews, many of them assumed that the so-called “Indians” might be descendants of some of the mythical “ten lost tribes”.

In summing up the results of the conference, it is evident that the questions posed above still yield no definitive answers. What has become clear, however, is that no serious study of the history of sixteenth-century sciences and medicine can ignore the role of contemporary religion or simply presume its general oppositional stance to the sciences. The convenors of the conference, members of the Leopold Zunz Centre for the Study of European Judaism (Wittenberg), the Department of Jewish Studies (Halle) and the Institute for the History of Medicine (Halle), express their hope that the papers presented will stimulate future research on this complicated aspect of the history of sciences and medicine.

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