

The Marginalization of Astrology: Introduction

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Astrology was an integral part of university teaching in the Middle Ages. The discipline of *astronomia* comprehended not only the calculation of planetary orbits, but also the casting of horoscopes, the calculation of houses and aspects, the character of the various planets, and the like. Although the astronomical and astrological parts were separate and had their own textbooks, both domains were taught in the same body of education. However, starting in the seventeenth-century, universities gradually no longer considered the teaching of astrological techniques as their task. Astronomy developed further without any link to astrological pursuits.

Something similar happened in the field of medicine. Medieval medicine and surgery had strong astrological ties, as is evident in the famous theory of 'critical days' of health and illness. The origin of a disease was often attributed, among other things, to the celestial constellation, and many cures had an astrological component as well. Most notably, bloodletting was performed in consideration of the astrological calendar. In the eighteenth century, however, leading physicians and surgeons generally no longer appealed to celestial causality. Their theories and practices barely referred to the power of the stars.

What is true of medicine is so of many other fields as well. According to the traditional Aristotelian theory, generation and decay in the terrestrial world were caused by the influence of the heavens. Many physical and chemical

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processes were thus explained with reference to celestial causality. In particular, weather prognostications were intimately connected to the casting of horoscopes. The new physics of the seventeenth century, however, abandoned such explanations.

These intellectual developments went hand in hand with those in the social sphere. At the same time that professors, physicians and philosophers lost interest in astrology, it lost credit outside academia as well. In the sixteenth century, princes had 'astronomers' at their courts with the express task of giving astrological advice. In the next century, courts were still swarming with all kinds of practitioners, but astrologers were gradually disappearing. The scientific societies, founded in the seventeenth and eighteenth centuries, were generally critical of astrology. Individual members might still be interested, but the societies as a whole preferred not to be associated with it. Although the impact of astrology remained considerable in many layers of society, public authorities, either the academic institutions and their members or the political powers, preferred to take a distance from it.

We propose to call this move the 'marginalization of astrology.' By this term, we address the weakening position of astrology as part of officially recognized science and as a tool of public governance, rather than a single set of ideas or practices which were declining, disappearing or transforming into other forms. Astrology, in whatever shape or form, was relegated to the margins, that is, to the realm of private opinion and popular culture. Moreover, the term 'marginalization' does not imply a mechanism, neither an active pushing to the margins by elites or others, nor some kind of autonomous process. It points out the shift while leaving open how it came about. It does not state a theory but poses a question.

Whatever its cause, the marginalization of astrology came down to an important reordering of established knowledge, and must be regarded as a crucial step in the history of science. However, the topic has drawn only cursory attention from historians. Many textbooks in the history of science hardly even mention the marginalization of astrology, let alone discuss it in its own right. Although the history of astrology has become a blossoming field of research in recent decades, its researchers still have to fight against the prejudice that their subject is a mere superstition or chimaera and, therefore, unworthy of serious consideration. Indeed, until recently, the *Isis Current Bibliography* continued to classify astrology among the 'pseudo-sciences.' It is therefore understandable that historians of astrology have been preoccupied more with rehabilitating their field than with considering how it came to be classified a 'pseudo-science.'

The older, positivist historiography often assumed that the rise of early modern science was the decisive factor in the downfall of 'superstition.' They took it as self-evident that the new methods and theories of nature made a field like astrology obsolete. However, it has long been acknowledged that the marginalization of astrology did not really follow from any specific discovery. There were debates on the veracity of the art, but the basic arguments against astrology had been known since antiquity. The rise of the new sciences in the early modern period contributed little in this respect.

Somewhat more plausible is the hypothesis that it was the emergence of a new world view that discredited astrology: once natural philosophers embraced the mechanical vision of the world, the idea that everything was caused by celestial influences became untenable; as a consequence, the casting of horoscopes lost its legitimation and had to be abandoned. A closer look at the material, however, makes this explanation problematic as well. In some cases at least, the casting of horoscopes fell into disrespect before the theory of celestial influences was abandoned in university education, or even among philosophical reformers. This makes it untenable that the downfall of the traditional Aristotelian world view was the sole factor behind the marginalization of astrology. It may be more fruitful to regard the issue as a constitutive element of the new world view, rather than a mere consequence.

Of course, the marginalization of astrology is not a unique phenomenon. Many practices, widely performed during the Middle Ages, or even regarded as respectable intellectual endeavors, were gradually disqualified as 'superstitious' by seventeenth- and eighteenth-century intellectuals, among them alchemy, magic, physiognomy, the interpretation of portents and omens, etc. It is possible to consider that they shared some common ground, even though each of them experienced a distinct sequence and dynamics of marginalization.

These complex factors lead us to believe that the marginalization of astrology cannot be summarized in some general, sweeping statements. Before asking why astrology was abandoned, we first of all have to analyze how this happened – when, where, in what fields, and among whom (scholars, intellectuals or other groups). Such facts are still largely wanting. To get a better picture of the real historical phenomenon, it is also necessary to determine what was exactly meant by 'astrology,' and what were the different fields in which astrological concepts were or were not practiced. This special issue of *Early Science and Medicine* aims to be a starting-point for further research on this intriguing episode in history.

The papers presented here were originally delivered at the international conference "The Marginalization of Astrology in Early Modern Science and

Culture,” held at Utrecht University in March 2015. To our knowledge, this was the first time that a scholarly meeting explicitly addressed the theme. The conference was generously supported by the Descartes Center of Utrecht University, the Center for the History of Philosophy and Science at Radboud University Nijmegen, and the Louise Thijssen-Schoute Foundation. We also had the support of the Dutch Society for Scientific Research into Astrology. The event saw a considerable success, which demonstrated that the time is ripe to put the question of marginalization on the historical agenda. Some of the participants followed up later in the same year with a special panel on the theme at the annual meeting of the History of Science Society in San Francisco.

Not all of the speakers at our conference were able to contribute a paper to this special issue. Since research on the question is still in its early stages, a comprehensive survey would be premature in any case. Nonetheless, the issue offers some detailed information, both on various national contexts and on specific topics. The discussion of various regional contexts demonstrates that the marginalization was a complex process. Factors that earlier authors have adduced to explain the marginalization of astrology, like changing world views and prohibitions by the Church, do turn up, but often in unexpected ways.

In a contribution that will only be published in *ESM* vol. 23 (2018), Darrel Rutkin emphasizes that we cannot fully grasp the changes within astrological practice and theory if we do not have a clear idea of its place and function in medieval learning. This helps us to identify important innovations, like those by Ficino, and also to recognize continuity where there seems to be a break, e.g. in some ideas of Pico, Copernicus, or Kepler. The process of marginalization becomes especially apparent in the development of disciplinary patterns, university curricula, and the content of textbooks.

For Portugal, Luís Miguel Carolino notices in his contribution to this fascicle that, whereas astrology was increasingly looked upon with suspicion in society at large in the later seventeenth century, it was still taught at the elite Jesuit college of San Antão in the early eighteenth century, in spite of the official denunciations by the Church and leading Jesuits elsewhere. The growing skepticism can be connected to the emergence of a new political order wherein prognostications could play no role, whereas Carolino sees the persistent teaching of astrology by the Jesuits as a result of their deliberate commitment to the Aristotelian world view.

Tayra Lanuza discusses the university of Valencia. Astrology was taught at Valencia throughout the seventeenth century, including forms which, strictly speaking, would be subject to prohibition from the Church. The abandonment of astrological teachings in the eighteenth century has often been attributed to the so-called *novatores*, who wanted to bring university training more up-to-

date by introducing new scientific theories. Chronologically, this seems to work, but on a personal level, as Lanuza points out, these *novatores* were not really hostile to astrology or actively opposing it. Generally speaking, they did not attach great value to the discipline.

At the Scottish universities, too, which are discussed by Jane Ridder-Patrick, astrology fell from grace rather suddenly at the end of the seventeenth century. Unlike in Valencia, however, in Scotland this appears to have been the result of an active campaign, waged by leading scholars like David Gregory and Herbert Kennedy. Their hostility towards astrology resulted first of all from their new natural philosophical insights, and was then enhanced by their desire to distance themselves from the growing army of 'common prognosticators.'

A different approach is taken by Robert Hatch for the case of three prominent seventeenth-century French astronomers: Jean-Baptist Morin, author of the massive *Astrologia Gallica*, who rejected the Copernican system exactly because of his commitment to astrology; Ismael Boulliau, who defended heliocentricity as well as being an active astrologer; and Pierre Gassendi, a Copernican and a critic of astrology. Initially these three men were friends, but eventually Gassendi and Boulliau turned against Morin. In a detailed analysis of their letters, Hatch shows how the debates on astrology and those on the system of the world became intertwined, with the effect of completely discrediting astrology.

These articles represent only the first steps of our ongoing project. We hope that they inspire other scholars to delve deeper into the questions.