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ABSTRACT

Charles Burnett; *On Judging and Doing in Arabic and Latin Texts on Astrology and Divination* (pp. 3-11)

Words for judging and doing are very common in titles of Arabic and Latin texts on astrology. In fact, the usual term for astrology in both languages is «the science of judgements». But is it the astrologer who is judging and doing, or the stars? This article explores the nuances of the two terms and their cognates.

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Danielle Jacquart; *A few introductory words: the mixed flow of Greek and Arabic sources in the Latin medieval world* (pp. 13-24)

The fact that Greek science and philosophy have been, in many fields, the starting-point of Arabic achievements has led some historians to try isolating the “genuine” Greek and the “genuine” Arabic in medieval Latin works. In most cases, the purpose of such a vain endeavour is more ideological than scientific. Unlike their humanist successors during the Renaissance, medieval authors, as well as translators, never took this distinction seriously into account. When Gerard of Cremona translated from Arabic both Greek and Arabic works, he was looking for a wide body of knowledge of an universal value. Hybridization was at work in medieval scholarly background. For instance, some Greek works circulated together with an Arabic commentary, both being regarded as “authorities”. It is nevertheless true that the translating process was more continuous from Greek than from Arabic. In this respect, it is difficult to evaluate the respective parts of geopolitical reasons, i.e. an uneasy access to Arabic manuscripts, and of a decrease in curiosity due to a lack of information coming from the East. Both have probably played their part.

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Joël Chandelier; *The concept of chronic illness, from the Greeks to the East, and from the East to the West* (pp. 25-42)

Although the distinction between acute and chronic diseases goes back to Ancient times, it has not always been as important as one can imagine. For both Galen and Hippocrates, illness was a state of changes and passing, whereas health was a state of rest. Therefore, the concept of chronicity was considered useless by Galen. Yet, the few references he and Hippocrates make to it in their works allowed Arab physicians to create a new theory of chronic illnesses, highlighting their coldness and the unique types of crises they generated; most importantly, they gave a clear limitation of what a chronic disease is – namely, a disease whose duration exceeds 40 days. These ideas were accepted by Latin authors who used the concept extensively, often without even knowing that it was not truly Galenic. As a result, in the Latin world, the duration of a chronic disease was increasingly taken into account as part of the prognosis, while the threshold of 40 days is likely at the root of the duration of the quarantine in Mediterranean cities starting in the late fourteenth century.

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Michael Rogers McVaugh; *Why Rhazes?* (pp. 43-71)

At the beginning of the fourteenth century, the new curriculum of the Montpellier medical faculty (1309) placed the writings of Rhazes on a par with those of Avicenna as objects for their students' study; but what did Rhazes have to offer that could compare with the systematic introduction to Galenic medicine that Avicenna's *Canon* provided? By examining in detail the works of three members of the Montpellier faculty, all formed by this curriculum and writing in the period down to the 1360s – Gérard de Solo, Guy de Chauliac, and Jean de Tournemire – we can recognize that Rhazes was valued not only for the careful detail with which he described the treatments he recommended (far fuller and richer than that provided by the *Canon*) but more generally as a role model for medical practice, a physician who taught his Latin readers how to walk the line between conservative and aggressive treatment as they confronted the contingency and individuality of medical therapeutics.

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ABSTRACTS

Michela Pereira; *Projecting Perfection. Remarks on the origin of the «alchemy of the elixir»* (pp. 73-94)

Since its introduction in the Latin West, alchemy vehiculated an idea of Arab-Islamic origin, i.e. that transmutation encompassed a higher secret than the mere contents of laboratory practice, metallurgical knowledge, and even theoretical reflection over doctrines rooted in manual operation – quite a challenge to Aristotelian epistemology. Such higher secret, announced in the aphorisms of the *Tabula smaragdina*, was called elixir in several Arab-Islamic texts, that developed the idea of a deep and mysterious involvement of the alchemical transformations with the secrets of cosmos and life. Precisely this notion of elixir was the focus of the pseudo-Avicennan *De anima in arte alchemiae* in which, as also in the jabirian *Liber misericordiae*, medicinal properties began to be associated to the elixir itself. Both texts were widely read by Western scholars, and they were sources for Roger Bacon's claim that alchemy, medicine and natural philosophy concern one and the same field of nature's dynamics. Thus the elixir became the very goal of alchemical research in a development of it (the so-called «alchemy of the elixir»), which reached its climax in the early Fourteenth century: the *Testamentum* attributed to Raimond Lull and the *Rosarius philosophorum* attributed to Arnald of Villanova were its main vehicles in later alchemy until Paracelsus. A third author, associated to pseudo-Lull and pseudo-Arnald by alchemical tradition, was the English alchemist John Dastin, on whom recent research calls attention, showing that his works – where his debt to Arabic sources is outspoken – might be the very first testimony to the transition towards the «alchemy of the elixir» (or «medical alchemy»).

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Ahmed Djebbar; *Circulation of Arabic algebra in Europe and its impact* (pp. 95-120)

In the present state of our knowledge, only a small part of the Arab mathematical writings entirely or partly devoted to algebra, have circulated in the Latin area. And the translated writings did not have the same impact on the emerging European algebraic tradition. This study aims to review what is known today on this circulation and how the translated algebraic materials have contributed to the birth and the development of new activities in this area, primarily in the north shore of the Mediterranean Sea and in other regions of Europe.

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Mohammed Abattouy; *The Corpus of Mechanics of Al-Isfizārī: its Structure and Signification in the Context of Arabic Mechanics* (pp. 121-72)

In 2001, the journal *Science in Context* published a double special issue (vol. 14, n° 1-2, co-edited by Mohammed Abattouy, Jürgen Renn and Paul Weinig) devoted to the «intercultural transmission of scientific knowledge in the Middle Ages: Graeco-Arabic-Latin». In a long article published in this special issue, I had my first encounter with the works of Al-Isfizārī in mechanics. Twelve years later, I published two large books comprising the first and complete critical edition of Al-Isfizārī's corpus of mechanics in the sciences of weights and ingenious devices, with complete English translation and historical and analytic commentaries. In the following article, I will present a general overview of Al-Isfizārī's corpus of mechanics in the context of the tradition of Arabic mechanics as I reconstructed it from unpublished manuscripts and analysed it as a transformation of mechanics, in which emerged the science of weights (*'ilm al-athqāl*) as an independent branch covering theoretical mechanics, separated from the science of machines or *'ilm al-ḥiyal*. Based on this academic background, the article will describe the corpus of mechanics authored by Al-Isfizārī and analyse its different aspects as a unique attempt to reconstruct the available corpus of theoretical and applied mechanics available to Al-Isfizārī around 500 H/1100 CE.

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David Juste; *The Impact of Arabic Sources on European Astrology: Some facts and Numbers* (pp. 173-94)

This article offers an assessment of the impact of Arabic sources on European astrology based on a ranking of the 50 most popular astrological works available in Latin up to 1500 A.D. These 50 works are classified according to origin (Arabic, Greek, Hebrew, Latin) and their popularity measured by the number of extant manuscripts. Further statistics by author, date and topic are also provided.

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ABSTRACTS

Jean-Patrice Boudet; *The comets in the Centiloquium and in the De cometis of Pseudo-Ptolemaeus* (pp. 195–226)

The *De Cometis* is a text falsely ascribed to Ptolemy that appears in Latin manuscripts in two main forms. First, as an appendix to the *Centiloquium*, a famous collection of one hundred pseudo-Ptolemaic astrological sentences, translated from Arabic (from the *Kitāb al-Ṭamara*, «The Book of Fruit», commentated by the tenth century Egyptian scholar Aḥmad ibn Yusūf) in Latin at least five times in the twelfth century, especially in the two most common translations: Plato of Tivoli's version, dated 1136 and kept in more than a hundred manuscripts, and the *Mundanorum* version, kept in more than 40 *codices*. More precisely, it is an appendix of the last two *verba* of the *Centiloquium* relating to comets and shooting stars. Secondly, the *De Cometis* circulated separately, at least from the thirteenth century, with the incipit «Dixit Ptholomeus quod sunt stelle comate novem [...]».

As far as we know, no Arabic manuscript of this short treatise on comets has been yet discovered, either separately or together with Aḥmad ibn Yusūf's version of the *Kitāb al-Ṭamara*, while this version served as a model for the most common Arabic-Latin translations. This raises the problem of the sources of *De Cometis*: The *Centiloquium*? Other sources, Greek, Arabic or Latin? We will see then quickly what was the considerable influence of this text to the Renaissance.

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Nicolas Weill-Parot; *The Metamorphoses of the Hermetic Arabic Magic in the Latin World: the «Cultural» Meaning of its Use (12th-15th century)* (pp. 227–68)

This article intends to uncover the real meaning of the reception in Western Christianity of astral hermetic magic texts, from oriental origin, translated from Arabic into Latin (12th–13th cent.). These texts gave rise to widely various interpretations among theologians, philosophers, and magicians. Here I reassess the different kinds of magical «images» described by the author of the *Speculum astronomiae* (mid–13th cent.) («abominable», «detestable», «purely astrological») and I try to decipher, through a scrutiny of his own words, the reason why «abominable» (i.e. «hermetic»?) texts were more harshly banned than «detestable» (i.e., «Solomonic»?) texts. Further, the examination of some texts of astral magic of the so-called hermetic tradition brings evidences of potentially evil spirits that could live in the superlunary world – a picture that contravenes the Christian worldview which holds that only good angels are allowed to stay in the superlunary world. Medieval Latin authors generally did not repeat the distinction made in the *Speculum astronomiae* between «abominable» and

«detestable» magic; but, by the end of the fourteenth century and in the fifteenth century, magicians (Antonio da Montolmo and Giorgio Anselmi) and a physician (Jerome Torrella) redefined his threefold typology, distinguishing between a purely ritual magic, a purely astrological magic, and a magic mixing ritual and astrological operations. This new classification shows an autonomous way to understand magic within the Latin Christian framework. Even such daring supporters of magic as Cecco d'Ascoli and Antonio da Montolmo are careful that the evil spirits at stake are kept outside the superlunary world – an essential requirement for an adequate match with their own Christian worldview. The article concludes with a discussion of the rational understanding of foreign magical sources and of what seems to be the real «cultural» meaning of the reception and practice of the astral magic from Arabic origin: the texts were «acculturated» – not their users.

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Godefroid de Callatay; *Who were the Readers of the Rasā'il Ikhwān al-Ṣafā'?* (pp. 269-302)

There is ample evidence today to affirm the massive influence exerted during the Middle Ages by the encyclopaedic corpus known as *Rasā'il Ikhwān al-Ṣafā'*, both in the East and the West of the *Dār al-Islām*, in Muslim as well as in Jewish and Christian communities. The purpose of this paper is to analyse the reception of the *Rasā'il* from a thematic perspective. This is done by trying to identify categories of people and cultural milieus as well as by seeking to understand what may have prompted a medieval scholar to read this highly unorthodox corpus in the first place, and then what may have brought him to mention it, to quote from it, or to subtly allude to it by using a more cryptic form of expression. We organize our material according to the five following headings: «Ismā'ilism»; «Neoplatonism»; «Esotericism»; «Allegorism»; and «Encyclopaedism», corresponding respectively to the political-religious, the philosophical, the magic-mystical, the literary and the scientific dimensions of the Ikhwānian corpus.

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ABSTRACTS

Mohammad Bagheri; *Kūshyār ibn Labbān's Mathematical Approach in His Astronomical Handbook* (pp. 303–10)

Kūshyār ibn Labbān composed his famous astronomical work *al-Zīj al-Jāmi'* from 1020 to 1025 AD. This work was prepared in the theoretical tradition of Ptolemy and based on the observations of al-Baṭṭānī. Kūshyār composed his treatise in four books: I) Elementary calculations; II) Tables; III) Cosmology; and IV) Proofs. In Book I, consisting of 85 chapters, he presents different calculation methods for astronomical purposes. He provides the proofs of validity of these calculation methods in Book IV. These two books are of highly mathematical nature and Kūshyār applies a firm mathematical basis in them and widely uses spherical trigonometry. In this paper, I will discuss his mathematical approach and I will show that his deviations from Ptolemy reflect his mathematical ability that led to innovations. Kūshyār reports his observation of a conjunction of Mars and Saturn in July 993. He also wrote a treatise on Hindu reckoning which is one of the earliest existing Arabic texts on this subject. From his other astronomical work *al-Zīj al-Bāligh*, only a short chapter has remained. Kūshyār's treatises on astrology and astrolabe are also studied and published.

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Yunli Shi – Haohao Zhu; *Calculating the Fate of Chinese Dynasties with the Islamic Method: The Chinese Study and Application of Arabic Astrology in the 17th Century* (pp. 331–38)

In 1383, Kūshyār Ibn Labbān's *al-Madkhal fī Sināḩat Ahkām al-Nujūm* (*Introduction to Astrology*) was translated into Chinese under the title *Tianwen shu* (*Books on Celestial Patterns*), which became the first and only source of Arabic astrology to Chinese readers. Previous studies have indicated that the real Chinese interest in the book was aroused by the arrival of European astronomy and astrology in China during the 17th century, and that such an interest was limited to history-tracing knowledge-comparison, rather than in practical use. Through an analysis of the works by Xue Fengzuo, the key Chinese figure in the introduction of European astrology in the 17th century, we find that such a depiction is quite inaccurate. Long before his translation of European astrology, Xue Fengzuo had already begun to study the *Tianwen shu*, but he was hindered by some key knowledge gaps contained in the book, which eventually turned him to the Jesuit. Having found the solutions from his Jesuit mentor, he used

the book as important supplements to European astrology, and even tried to develop some methods introduced in the book and applied them to the calculation of the fate of Chinese dynasties. In such ways, he re-activated Arabic astrology with new knowledge from Europe and turned it into a practical art not only for himself, but also for other Chinese scholars in the Qing dynasty.

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Iolanda Ventura; *Medieval Pharmacy and the Arabic Heritage: The Salernitan Collection «Circa instans»* (pp. 339-402)

The article summarizes the work done while attempting an identification of the sources of the Salernitan pharmaceutical collection attributed to Matthaëus Platearius and known through its incipit as *Circa instans*. More specifically, the article moves from the aim of linking the search for the sources used by the compiler of the *Circa instans* with a more general attempt at defining the library of Ancient and Arabic-Latin pharmaceutical works available in Salerno during the 12th century, and the way in which it was used by Salernitan medical authors. With that in mind, the article approaches the subject from two different perspectives: In the first section, it provides a general overview of the available sources, and then focuses on the search for evidence of reception and assimilation of the *Dioscorides alphabeticus* and the pharmaceutical texts included in the *corpus Constantinianum* (viz., the *Liber de gradibus*, and the second book of the *Practica Pantegni*). Subsequently, the second section of the article deals with four entries included in the *Circa instans* and dealing, respectively, with two medical remedies widely described and used during the Antiquity and the Middle Ages (absinth and *muscus*), and with two others whose assimilation into the Western medical tradition is linked to the reception of Arabic medicine and pharmacy (camphor and cubeb pepper), with the aim of describing the role played by Ancient and medieval (Arabic, Latin, Salernitan) medical traditions on the definition of their medical properties.

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ABSTRACTS

Véronique Boudon-Millot; *Arabic Translators' Judgement on Authenticity of the Galenic Treatises* (pp. 403-24)

This paper focuses on the role and the influence of the Arabic translators in the debate on the authentic or apocryphal character of some Galenic treatises. Among them, in particular, the Nestorian physician and translator Ḥunayn ibn Ishāq has a prominent place and plays a leading role in this debate. The aim of this paper, in a first part, is to explore which criteria uses Ḥunayn in his *Risāla* (855/856) to discuss the attribution to Galen of some treatises whose authenticity was in debate since Antiquity. In a second part, we will explore the validity of these criteria confronted with those of the current criticism and Ḥunayn's skill to reach solid solutions.

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Jean-Marc Mandosio; *The Use of al-Kindī's Treatise On Rays in Peter of Zealand's Elucidation of Marvelous Things (end of the 15th Century)* (pp. 425-56)

Peter of Zealand, born around 1430, was a physician in connection with the court of Burgundy. He went into retirement at the Brielle monastery, in the Lowlands, where he composed the *Lucidarius de rebus mirabilibus* from 1491 to 1494. In this comprehensive work he aimed, through the explanation of the physiological and occult principles underlying magic, to help the reader resist the spells of magicians and sorcerers. After its completion he continued working on occult matters until his death, around the year 1500. His writings on magic were copied soon after, in a manuscript preserved at the Royal Library of Belgium in Brussels, and they never circulated.

In the *Lucidarius*, a key role is played by al-Kindī's *De radiis*. Peter adopted its theory of universal radiation, according to which every creature in the sublunar world absorbs the power of astral rays and radiates in turn. He inserted the whole treatise in his *Lucidarius* under the title *Compendium de radiis*, with several glosses containing references to the Bible and the Church Father Jerome, aimed at showing that the occult physics of al-Kindī is not incompatible with Christian faith. This was a daring move, since the *De radiis* had been condemned by 13th-century theologians and was seldom considered approvingly. Another interesting feature is that Peter links the *De radiis* with another famous Arabic treatise, *Picatrix*, which, he explains, is dangerous because it discloses the more practical aspects of magic, while the *De radiis*, which only lays its theoretical foundations, can be read safely.

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