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The Chemical Choir: a History of Alchemy

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Maxwell-Stuart's *The Chemical Choir* is a potentially useful book about the history of alchemy from its roots in ancient China and Egypt in the 4th century AD until the 20th century. It has several merits. Firstly, it breaks down a complex subject ? the study of nature through experiments with chemicals ? into ten easy-to-read chapters. From ancient China and India to Roman Egypt (chapters one to three) proceeding to the Islamic world in the middle ages whence medieval Europe acquired much of what Western alchemy came to be (chapters four and five), Maxwell-Stuart takes the reader on a fascinating journey. He then dedicates three chapters to the early modern period. This was both Western alchemy's heyday as well as the beginning of its decline following the rise of modern chemistry. The last two chapters are about alchemy since the scientific revolution. The book ends with the 20th-century fascination with the occult as well as with the description of chemical experiments that were succcessfully carried out in the 1960s, and which made gold out of base matter. The reader who has always wondered about alchemy and has not yet read a history of the subject will find *The Chemical Choir* an entertaining starting point. Maxwell-Stuart's style is assertive and light, typical of popular science books rather than academic works. Indeed, he himself deprecates some academics' habit of denigrating scientific divulgation ('The spirit of academic condenscension, it seems, was alive and eager to patronize' (p. 159)). He does it so often that the reader will be tempted to forget that Maxwell-Stuart is a don himself.

The second, important merit of his book is that it reminds us of the ongoing interest in alchemy virtually throughout human history since the 4th century AD. As Maxwell-Stuart puts it, ?we are observing a living, not a dead science? (p. ix). Many histories of alchemy tend to focus on Western alchemy only, leaving out the history of alchemy in China and India. Maxwell-Stuart, instead, brilliantly shows the striking similarities of these Asian practices with the Western intellectual tradition. His point that alchemy is an essential part of the history of man's quest for knowledge regardless of Western/Eastern divisions needs to be appreciated. In this sense, *The Chemical Choir* is well suited for a global market.

The Chemical Choir is very much market-oriented though, at times excessively. Maxwell-Stuart makes some fashionable statements that verge on the sensationalistic and which detract credibility from his work. A striking example is his statement that alchemy originated in China whence it reached the West through the Islamic world.

> There seems little doubt that 'alchemy' is a mongrel term originating in Chinese *kim* or *chim* meaning aurification ... [which] trickled into the Mediterranean world where kim was translitterated into the Greek of Egypt as *khemeia*, to which later still, perhaps under the influence of Syria, was added the Arabic definite article *al*, and that thus was produced the form *alchimia* adopted by Latin and Western vernaculars (p. 1).

As fascinating and fashionable as this may be, it is simply inaccurate. There is little doubt that no evidence has ever been found about Maxwell-Stuart's posited Chinese etymology of the word alchemy. There is not a single Hellenistic Greek word of Chinese origin, let alone any trace whatsoever of Chinese words relating to metallurgy. Besides, Maxwell-Stuart himself does not give any evidence for his made-in-China alchemy. Western alchemy grew out of Hellenistic Greece, whereas Chinese alchemy developed in China, more or less at the same time, in a completely independent manner.

Another fashionable expression today is 'climate change'. We find it, therefore, in *The Chemical Choir*. Maxwell-Stuart argues that the late 16th- and mid 17th-century peaks in alchemical publications were due to colder weather which, together with wars, created a widespread need for easy money: 'rulers and landowners, made nervous (and in some cases penurious) by this combination of circumstances, looked for ways to increase their threatened incomes, and others less fortunately placed in the social scale turned to anyone who might be able to provide them with gold and silver' (p. 83). It is true that climatologists have identified in the period in point a so-called 'little ice age'. Yet, it seems questionable to suggest that the early modern climax in alchemical practices and printed works owed more to colder winters than to the rise of the printing press and to the early modern tendency to push out Latin while supporting the vernacular in the transmission of knowledge.

A third example of a fashionable subject which finds its way into *The Chemical Choir* is the importance of women. Though it cannot be described as as a feminist book, *The Chemical Choir* certainly overemphasises the role of women alchemists. For instance, on page 27, while discussing alchemy in Burma, Maxwell-Stuart states: ?Two points are worth mentioning. First, a *zawgyi* [the Burmese word for alchemist] is a man, not a woman ? most unusual since females, as we have seen, play a crucial role in alchemical operations elsewhere?. In the chapter about Hellenistic alchemy, the importance of Maria the Jewess and Kleopatra is also overstated (pp. 36?9). In fact, a look at any biographical dictionary of alchemical practitioners will confirm just the contrary. Maxwell-Stuart is right, we do have a few names of women alchemists. Likewise, I would add, we know of a number of women printers in 17th-century London. Yet they are too few to allow us to speak of the active participation of women in either alchemy or in the publishing business.

Sensationalism is but a venial sin. The argument that alchemy has always had mainly spiritual connotations is rather more problematic. Maxwell-Stuart claims: ?Alchemy, then, far from being a defunct preliminary to the ?rational? investigations of modern chemistry, is as vigorous as ever it was ? But if the spiritualizing side

of the science continues to exert its influence ? and this aspect of alchemy has remained more or less constant in its appeal throughout the centuries? (p. 165). The author?s main point is that alchemy has never stopped attracting new adepts since its rise in China because of its spiritual dimension. Emblematic of this argument is the American Civil-War military man and adviser to Abraham Lincoln, Ethan Hitchcock (1798?1870) [who] ?betrays his nineteenth-century origins, because during the book he draws attention to parallels between the Indian school of Vedanta and the alchemy he is describing, and thus reminds us of the westward flow of Eastern esotericism which was increasingly influential during the middle years and second half of the century in the West?s construction of syncretistic philosophies?. (p. 145) This spiritual, occult allure would explain alchemy?s century-long success despite Western denigration since the scientific revoluton. 'The truth is that at this present time alchemy has never been more vigorous or more widely practised, especially in the homelands of science and rationality' (p. ix-x).

The problem with *The Chemical Choir* seems to be one of definition: what were alchemy?s nature and aims? Historians broadly agree today that alchemy had three main goals. First, to turn base metals into gold; secondly, to find a panacea which would prolong man's life; and, thirdly, to produce various substances which could improve vegetation. Some historians also add a spiritual dimension by reading alchemical texts metaphorically as a way to reach illumination and direct contact with God. The latter aim is not easy to demonstrate. When Maxwell-Stuart talks of Chinese spiritual alchemy, for example, he quotes from a series of poems (pp. 8?9) which can be regarded as belonging to the genre of 'metaphysical poetry' ? the kind of poems that John Donne wrote, for instance. He misleadingly calls them alchemical because they mention alchemical practices. In fact, they cannot be considered as such, because alchemical poems are recipes written in lyrical form ? one can think of some of Elias Ashmole's poems in his Theatrum Chemicum Britannicum (London, 1652). Turning metaphysical poems into evidence of alchemy's spiritual dimension is not convincing. Besides, Maxwell-Stuart's secondary sources do not include many rigorous historians of science, such as Brian Vickers and Bill Newman. Instead, the author makes ample use of works whose scientific credibility is very little. *The Chemical Choir* is an entirely derivative work. This is understandable, to a certain degree, given its divulgative nature. Yet, Maxwell-Stuart's bold assertion about the spiritual dimension of alchemy is bound to be controversial among academics and popular among *Da Vinci Code* fans.

Another argument which historians of science will find it difficult to swallow is the one which Maxwell-Stuart repeats from page one onwards, namely, ?Chinese alchemy differs from its Western counterpart in at least one fundamental respect. For while the manufacture of gold was certainly one aim of its practitioners, a more important one concerned the effort to produce an elixir or pill of immortality [?] Such a goal was never the principal aim in the medieval or early modern West, although it is possible to see its modern counterpart in Western hopes that medical techniques such as genetic manipulation may lengthen human life considerably?. That is to say, the author argues that medieval and early modern Western alchemy was not mainly concerned with the manufacturing of chemical drugs which, under the name of elixir, or red stone, or philosopher?s stone, were above all meant to prolong human life by curing disease. This is hugely disputable. More and more evidence has been coming out which shows exactly the latter point. One only needs to read the huge literature about Paracelsianism and the struggle to reform the English medical regime in the 17th century ? or simply look at the always useful Keith Thomas?s *Religion and the Decline of Magic*. (1) As far as the Continent is concerned, similar conclusions have been reached with regards to chemical drugs in 16th-century France and Italy. Even the Hapsburg Empire, so far a favourite place of ?alchemy equal to gold-making? is now under serious scrutiny and evidence is emerging of a more medically-oriented alchemy, at least in early modern Vienna. Alchemy in the medieval and the early modern West was above all concerned with pharmacological concotions. Some alchemists also looked for ways to transform base matter into gold. A minority of them believed that dirtying their hands in the laboratory would gain them salvation. Virtually all alchemists, though, did attach some religious significance to their work, because it involved dealing with nature, that is, with God?s creation. *The Chemical Choir*, instead, turns this hierarchy of aims upside down, thus misleading readers who are unfamiliar with the topic into believing that alchemy has always been primarily an occult subject. If this was an acceptable view 50 years ago, it is no longer one now. *The Chemical Choir*, therefore, is anachronistic from a historiographical point of view. At the same

time, though, it is very suited to contemporary publishing (and cinematographic) trends, which make the revival of almost anything occult sure winners.

Maxwell-Stuart plays down the medical aspect of medieval and early modern Werstern alchemy, for two purposes. First, as we have just seen, to claim that alchemy has always and everywhere been above all about spiritual regeneration. Secondly, because in this way he can devote the last three chapters of the book to alchemy since its transformation into chemistry as we understand it today. ?While chemistry sailed into a nineteenth century more and more fascinated by the expanding capabilities of technological invention, alchemy found itself (along with the other occult sciences) on the one hand marginalized in the public academic consciousness, but on the other wedded to unorthodox aspects of the century?s chosen spiritualisms and obliged thereby to give birth to unexpected offspring? (p. 143). The argument is that changing approaches to and definitions of what constitutes useful knowledge pushed alchemy more and more into the minority group of occult sciences. Minorities are another fashionable topic and Maxwell-Stuart does not resist the temptation of an allusion to the *Da Vinci Code* by devoting space to the 18th-century ?spiritual? alchemy of the Illuminati, a sect which dabbled in anything occult but which did not have a strikingly important influence on the intellectual panorama of the time. (p. 139)

What really seems at stake in the last three chapters of The Chemical Choir is the issue of amateurism in science. Maxwell-Stuart describes several people?s attempts at making gold out of chemical experiments on private premises, for instance he devotes a section to the alchemical experiments of Arthur Strindberg. Funnily, the author treats them in the same manner as those of Ernest Rutherford and comments: ?? in 1919 Ernest Rutherford had announced a successful transmutation of one element into another ? nitrogen into oxygen ? so the possibilities of going further were not entirely without foundation, and we find that the pages of such journals as *Nature* and *Scientific American* frequently report on gold-making attempts in non-alchemical laboratories. In general their comments vary between sceptical and dismissive? (p. 159). The author?s point is that whenever the alchemical goal of transmutation was carried out, because it was considered to be the goal of a dead science, something chiefly unscientific, the academic community has snobbily ignored it. Here *The Chemical Choir* misses the opportunity of tackling a broader issue, namely that of the role of amateurial scientific practices in the advancement and progress of science.

Despite the sensationalistic allure of occult practices, Maxwell-Stuart does not refrain from warning his readers that there are always people who are willing to believe nonsense (p. 165). This could be seen as ironic, given some of the arguments of the book. Nevertheless, the author does make some important claims which deserve attention, such as when he reminds us of changing attitudes to symbolic speech (pp. 156-7). Overall, *The Chemical Choir* is yet another popular book about the history of alchemy. It is easy to read ? except for the author's annoying habit of inserting too many foreign words (such as 'aperçu' (p. 36) while he could have just written 'aphorism', and 'ben trovato' (p. 85) which is taken out of a 16th-century Italian work that very few people might know today) and some which he does not use appropriately ('en croûte' does not mean 'ground' (p. 32), rather, ?wrapped in pastry and baked?; 'Orden' has, contrary to the author's claim, several meanings in German, for instance a chivalric order is called 'Ritterorden', (p. 107). *The Chemical Choir* makes some important points about man's everlasting fascination with the study of nature through chemicals. It is not, however, a milestone in the historiography of alchemy.

Notes

1. Keith Thomas, *Religion and the Decline of Magic: Studies in Popular Beliefs in Sixteenth- and Seventeenth-Century England* (London, 1971).Back to (1)

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