Introduction

Alchemy and the Mendicant Orders of Late Medieval and Early Modern

Europe

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Over the last thirty years, alchemy's reputation has been transformed. This has been driven by many scholars, but in particular by the research of William R. Newman and Lawrence M. Principe. In an important series of works, Newman and Principe have shown that although alchemy was once derided as a pseudoscience – bound up with occult mysticism and lacking any genuine conceptual or practical basis for its claims – it can now be regarded as a respectable, if not essential, part of the history of science. Newman and Principe have termed their revisionist project the "New Historiography" of alchemy. It has helped to stimulate a range of new research into the theory and practice of this art in the medieval and early modern periods, in particular a 2013 *Ambix* special issue specifically concerned with alchemy and religion. Explaining the rationale for the issue, Tara Nummedal, the guest

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¹ For a discussion of the state of the field, see the essays by Bruce T. Moran, William R. Newman, Ku-ming (Kevin) Chang, and Tara Nummedal collected in the Focus section "Alchemy and the History of Science," *Isis* 102 (2011): 300–37; Marcos Martinón-Torres, "Some Recent Developments in the Historiography of Alchemy," *Ambix* 58 (2011): 215–37.

² Such as the twenty-two contributions to Lawrence M. Principe, ed., *Chymists and Chymistry: Studies in the History of Alchemy and Early Modern Chemistry* (Sagamore Beach, Mass.: Science History Publications/USA, 2007).

³ See, for example, William R. Newman, "From Alchemy to 'Chymistry'," in *The Cambridge History of Science. Volume 3: Early Modern Science*, ed. Katherine Park and Lorraine Daston (Cambridge University Press, 2006), 497–517.

⁴ William R. Newman and Lawrence M. Principe, "Alchemy vs. Chemistry: The Etymological Origins of a Historiographic Mistake," *Early Science and Medicine* 3 (1998): 32–65. On the context and the impact of this article respectively, see Bruce T. Moran, "Introduction," *Isis* 102 (2011): 300–04; and Martinón-Torres, "Some Recent Developments," 220–23.

editor, noted: "In the process of detaching alchemy from the 'occult' [...] many of us have minimised or neglected alchemy's religious dimension." Building upon the ideas developed within the New Historiography, the essays contained in that volume explored in detail the multiple ways in which religion and alchemy permeated one another.

As Nummedal rightly observed, however, earlier historians had never entirely neglected alchemy's religious dimension. Scholars such as Barbara Obrist, Chiara Crisciani, and Michela Pereira have produced a substantial body of literature discussing various aspects of alchemy's relationship with Christianity. Furthermore, many of these works contain insights that have not been entirely superseded by the advent of the New Historiography of alchemy. In the context of this special issue, it is important to note that a number of these works have specifically addressed the practice of alchemy within religious orders. The field

⁵ Tara Nummedal, "Introduction: Alchemy and Religion in Christian Europe," *Ambix* 60 (2013): 311–22, on 314

⁶ Zachary A. Matus, "Resurrected Bodies and Roger Bacon's Elixir": 323–40; Georgiana D. Hedesan, "Reproducing the Tree of Life: Radical Prolongation of Life and Biblical Interpretation in Seventeenth-Century Medical Alchemy": 341–60; Peter J. Forshaw, "Cabala Chymica or Chemia Cabalistica – Early Modern Alchemists and Cabala": 361–89; Donna Bilak, "Alchemy and the End Times: Revelations from the Laboratory and Library of John Allin, Puritan Alchemist (1623–1683)": 390–414.

⁷ For a review of the literature regarding the medieval period, see Zachary A. Matus, "Alchemy and Christianity in the Middle Ages," *History Compass* 10 (2012): 934–45, which Nummedal cited in "Introduction," 312, n. 2.
⁸ This would appear to be borne out by Martinón-Torres's discovery that, in his word cloud for "alchemy" in JSTOR 1990–2010, "religion" appears less prominently than in previous decades. The term "religious order" does not even feature at all. See Martinón-Torres, "Some Recent Developments," 219–20.

⁹ On alchemy in religious orders, see Martha Baldwin, "Alchemy and the Society of Jesus in the Seventeenth Century: Strange Bedfellows?," Ambix 40 (1993): 41-64; Wilfrid Theisen, "The Attraction of Alchemy for Monks and Friars in the 13th-14th Centuries," American Benedictine Review 46 (1995): 239-53; Carlos Ziller Camenietzki, "Jesuits and Alchemy in the Early Seventeenth Century: Father Johannes Roberti and the Weapon-Salve Controversy," Ambix 48 (2001): 83-101; Chiara Crisciani, "Alchimia e potere: presenze francescane (secoli XIII-XIV)," in I Francescani e la politica: atti del convegno internazionale di studio, Palermo 3-7 dicembre 2002, ed. Alessandro Musco (Biblioteca Francescana – Officina di Studi Medievali: Palermo, 2007), 223-35; Michela Pereira, "I francescani e l'alchimia," in Convivium Assisiense 10 (2008): 117-57; and Pereira, "Paolo di Taranto al crocevia dell'achimia medievale," in I francescani e le scienze: atti del XXXIX convegno internazionale, Assisi, 6-8 ottobre 2011 (Spoleto: Fondazione Centro Italiano di Studi sull'Alto Medioevo, 2012), 141-85. There is a substantial literature concerned with the alchemical interests of Roger Bacon and Albertus Magnus, two central figures in the historiography of medieval science. On Bacon, see Dorothy Waley Singer, "Alchemical Writings Attributed to Roger Bacon," *Speculum* 7 (1932): 80–86; Edmund Brehm, "Francis Bacon's Place in the History of Alchemy," *Ambix* 23 (1976): 53–58; William R. Newman, "The Philosopher's Egg: Theory and Practice in the Alchemy of Roger Bacon," Micrologus 3 (1995): 75-101; Newman, "An Overview of Roger Bacon's Alchemy," in Roger Bacon and the Sciences, ed. Jeremiah Hackett (Leiden: Brill, 1997), 317–36; Agostino Paravicini Bagliani, "Ruggero Bacone e l'alchimia di lunga vita. Riflessioni sui testi," in Alchimia e medicina nel Medioevo, ed. Chiara Crisciani and Agostino Paravicini Bagliani (Florence: SISMEL - Edizioni del Galluzzo, 2003), 33-54; Zachary A. Matus, "Reconsidering Roger Bacon's Apocalypticism in Light of his Alchemical and Scientific Thought," Harvard Theological Review 105 (2012): 189-222. On Albertus, see J. R. Partington, "Albertus Magnus on Alchemy," Ambix 1 (1937), 3-20; Pearl Kibre, "Alchemical

has also moved on since the publication of Nummedal's special issue in 2013. Several scholars have published important works concerned with alchemy and religious orders, most recently Zachary A. Matus's study of Franciscans and the elixir of life.¹⁰

This growing body of work on alchemy and religion has clearly demonstrated that they were interconnected in various ways, and that in late medieval and early modern Europe alchemy and religion were not necessarily considered antithetical to one another. There remains, however, a perception that the cultivation of alchemical knowledge was a surprising pursuit for a member of the regular clergy. We are not the first to make this observation. In the title of her 1993 article Martha Baldwin addressed it directly by asking whether the Jesuits and alchemy made strange bedfellows. She demonstrated that not only did some Jesuits practise alchemy, but that there was, in fact, a legitimate space in which they could do so. There is perhaps a broader question still that we should be posing: why is it considered a fact worthy of remark that members of a religious order should choose to engage in such practices? Such questions recognise, and seek to address, the implicit assumption that in the medieval and early modern periods the institutional Church and the majority of Christians believed that alchemy was innately heterodox, or, at the very least, that its practice had the potential to pose serious risks to the spiritual health of both individual Christians and Christendom. The corollary of such a position is the further assumption that contemporaries

Writings Attributed to Albertus Magnus," *Speculum* 17 (1942): 499–518; and Kibre, "Albertus Magnus on Alchemy," in *Albertus Magnus and the Sciences: Commemorative Essays*, ed. James A. Weisheipl (Toronto: Pontifical Institute of Mediaeval Studies, 1980), 187–202. On John of Rupescissa, see Robert P. Multhauf, "John of Rupescissa and the Origin of Medical Chemistry," *Isis* 45 (1954): 359–67; Robert Halleux, "Les ouvrages alchimiques de Jean de Roquetaillade," *Histoire littéraire de la France* 41 (1981): 241–84; Chiara Crisciani, "Giovanni di Rupescissa: sapere, alchimia e profezia," in *I francescani e le scienze*, 239–79; Leah DeVun, *Prophecy, Alchemy and the End of Time: John Of Rupescissa in the Late Middle Ages* (New York: Columbia University Press: 2009). Finally, Maria Tausiet has examined the alchemical practices of members of religious orders in early modern Spain in a number of studies, such as Maria Tausiet, "Fool's Silver: Alchemy and Fraud in Sixteenth-Century Spain," in *Chymia: Science and Nature in Medieval and Early Modern Europe*, ed. Miguel López Pérez, Didier Kahn, and Mar Rey Bueno (Newcastle: Cambridge Scholars Publishing, 2010), 157–74.

¹⁰ Zachary A. Matus, *Franciscans and the Elixir of Life: Religion and Science in the Later Middle Ages* (Philadelphia: University of Pennsylvania Press, 2017).

^{11.} Baldwin, "Alchemy and the Society of Jesus."

regarded alchemy as an illicit activity to be pursued privately, if not furtively, especially if the practitioner happened to be a member of the regular clergy.

By pursuing these questions, we aim to contribute to the process of revision inaugurated by the New Historiography. Newman and Principe's research has laid the groundwork for the rehabilitation of alchemy or - in their terms - the premodern art of chymistry. A key element of their project has been to consider the reasons why alchemy came to be considered a pseudoscience, with no relationship to the modern pursuit of chemistry. According to Newman and Principe, before the mid-eighteenth century it was impossible to distinguish between these two activities, so anything that came before belonged to one undifferentiated field of "chymistry." By ca. 1730, however, these terms had begun to be used to describe two distinct activities: "alchemy" was "applied almost exclusively to metallic transmutation, whereas 'chemistry' was increasingly being defined as the art of analysis and synthesis."12 In other words, alchemy came to be used to signify a part of the earlier field of chymistry that no longer appeared to have a valid conceptual – that is to say scientific – basis, but which nonetheless retained an unfortunate association with fraudulent behaviour and even magic. This association with the "occult" was reinforced in the nineteenth century by a "spiritualist" interpretation. This was further compounded by the analysis of alchemy developed in the writings of the psychoanalyst Carl Jung, and later historians such as Mircea Eliade, which wrongly associated alchemy with the practices of the spiritual adept. These associations with the occult led numerous historians to suppose that alchemy was more often practised with the aim of achieving the spiritual purification of its practitioner, rather than any practical benefits. Newman and Principe, on the other hand, have shown in their empirical studies the practical skill and knowledge that went into the art. In this manner, they – and the scholars who have followed in their wake – have rescued alchemy

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¹² Newman and Principe, "Alchemy vs. Chemistry," 39.

from the realms of pseudoscience, thus enabling it to be included within mainstream history of science. 13

While Newman and Principe's work has been principally concerned with restoring alchemy's "scientific" credibility, they have also suggested ways to rethink questions of its religious orthodoxy. In *Promethean Ambitions*, Newman noted that: "The hackneyed view that automatically equates alchemy with witchcraft, necromancy, and a potpourri of other practices and theories loosely labelled 'the occult' has little historical validity before the nineteenth century." Developing Newman's point, one can suggest that the lingering assumption that there is something innately heterodox about the practice of alchemy can also be attributed to the historiographical tendency to associate it with other putatively "occult" or magical arts. Newman and Principe, and others, have questioned not only the existence of an interrelated field of "occult" arts but also whether contemporaries necessarily associated alchemy with superstitious practices. As Newman has argued, many scholastics, including Albertus Magnus, did not equate alchemy with magic, but rather conceived it as an essentially natural activity. Indeed, Newman maintained, for Albertus: "Alchemy is the benchmark against which other arts – even the arts possessed by demons – must be measured." 15

Newman and Principe's critique of the "occult" interpretation of alchemy has been almost universally accepted. Yet for Brian Vickers, one critic of the New Historiography, Newman and Principe's revisionism amounted to an attempt to "airbrush" history. They were, he claimed, deliberately downplaying alchemy's connections to magic and "the occult"

¹³ Lawrence Principe and William R. Newman, "Some Problems with the Historiography of Alchemy," in *Secrets of Nature: Astrology and Alchemy in Early Modern Europe*, ed. William R. Newman and Anthony Grafton (Cambridge, Mass: MIT Press, 2001), 385–434.

¹⁴ William R. Newman, *Promethean Ambitions: Alchemy and the Quest to Perfect Nature* (The University of Chicago Press: Chicago, 2004), 54.

¹⁵ Newman, *Promethean Ambitions*, 44; for a discussion of the relationship between alchemy and astrology, see William R. Newman and Anthony Grafton, "Introduction: The Problematic Status of Astrology and Alchemy in Premodern Europe," in *Secrets of Nature*, ed. Newman and Grafton, 1–37, on 14–27.

in order to make it seem more like modern chemistry. ¹⁶ Even historians who are more sympathetic to the insights of the New Historiography continue to entertain doubts about alchemy's orthodoxy on the basis of its presumed connections to the "occult." To take one recent example, in his *Franciscans and the Elixir of Life*, Matus convincingly showed that Franciscans such as Francis Bacon and John of Rupescissa not only engaged with alchemy but also found ways to reconcile the practice of this art with their personal faith. He nevertheless stressed that they were pursuing an activity which, according to the regulations of their order, was heterodox. Pointing to a series of Franciscan statutes promulgated between 1260 and 1337, Matus noted that alchemy was prohibited repeatedly. He continued that the statutes offered "various elaborations" of alchemy, before adding that: "The definitions between 1295 and 1318, however, do have some common elements, particularly a linking of alchemy with occult or sorcerous practices." Matus therefore suggested that, despite Bacon and Rupescissa's best efforts, in the eyes of the Franciscan hierarchy alchemy remained inextricably linked to illicit magic and was consequently heterodox.

In this special issue we seek to contribute to the debate by tracing the perceptions of alchemy within the religious orders of medieval and early modern Europe. While broadly accepting Newman's thesis – that alchemy should not be automatically associated with magic – we will not only outline the manner in which members of the mendicant orders made use of an essentially natural art, but also consider the reasons why some friars came to believe that certain aspects of its practice needed to be closely circumscribed. We hope that this issue, with its focus on both the theoretical and the practical aspects of alchemy, as viewed by the Church and religious orders in late medieval and early modern Europe, will stimulate a

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¹⁶ Brian Vickers, "Essay Review: The 'New Historiography' and the Limits of Alchemy," *Annals of Science* 65 (2008), 127–56, on 130. See also William R. Newman, "Brian Vickers on Alchemy and the Occult: A Response," *Perspectives on Science* 17 (2009): 482–506.

¹⁷ Matus, Franciscans and the Elixir of Life, 101.

reappraisal of historical accounts of alchemy's orthodoxy within both the orders and Christian society as a whole.

Yet why devote a special issue to the mendicants, rather than any other type of clergy, whether regular or secular? The friar had a distinctive socio-professional identity. 18 The mendicant orders, and especially the Dominicans and Franciscans, were traditionally highly learned, and played key roles within the Church. On the one hand, they were deeply involved in the development and diffusion of knowledge-making practices. ¹⁹ On the other, they were central to the process of drawing up and policing the legitimate boundaries of knowledge within Christian or, in the post-Reformation period, Catholic society.²⁰ Unlike monks, friars were not confined to their cloister; indeed, their very purpose was to engage with wider Christian society. This meant that, in some respects, they had greater freedom than other regular clergy. They had opportunities to travel between convents, taking knowledge, texts, and, in certain cases, alchemical equipment with them. Friars could inhabit multiple social worlds, moving through them with relative ease. Since friars were often chosen as confessors to high-ranking members of society, some even enjoyed unusual political advantages. They had opportunities to forge patronage connections, allowing them to develop and sometimes exploit their position. Within their orders, individual friars played recognised social roles, which they could harness for their own personal advancement and that of the order. The position of frater medicus – a friar with healing skill – was widely recognised.²¹ They not

¹⁸ On the Friars see Rosalind B. Brooke, *The Coming of the Friars* (London: Allen and Unwin, 1975); William A. Hinnebusch, *The History of the Dominican Order*, 2 vols. (New York: Alba House, 1965 and 1973); Michael Robson, *The Franciscans in the Middle Ages* (Woodbridge: Boydell Press, 2006); Frances Andrews, *The Other Friars: The Carmelite, Augustinian, Sack and Pied Friars in the Middle Ages* (Woodbridge: Boydell Press, 2006).

¹⁹ See Roger French and Andrew Cunningham, *Before Science: The Invention of the Friars' Natural Philosophy* (Aldershot: Ashgate Press, 1996).

²⁰ See Francesco Beretta, "Orthodoxie philosophique et Inquisition romaine au 16e–17e siècles. Un essai d'interprétation," *Historia philosophica* 3 (2005): 67–96; Neil Tarrant, "Giambattista Della Porta and the Roman Inquisition: Censorship and the Definition of Nature's Limits in Late Sixteenth-Century Italy," *British Journal for the History of Science* 46 (2013): 601–25.

²¹ Angela Montford, *Health, Sickness, Medicine and the Friars in the Thirteenth and Fourteenth Centuries* (Aldershot: Ashgate, 2004).

only operated within their own orders, but also dispensed forms of charitable care in the community.

By focusing on the mendicant orders and their members, the essays in this special issue examine both long-term trends in medieval and early modern Catholic thought and specific alchemical ideas and practices. In his contribution, Neil Tarrant analyses the heterogeneous position of the Church towards alchemy from early Christianity to the early modern period, demonstrating that, before the sixteenth century, alchemy did not feature prominently in the Church's debate on heresy. Indeed, Tarrant argues, prior to the Directorium inquisitorum by Nicholas Eymerich (1316–1399) few – if any – Christians believed that alchemy should be considered a superstitious, let alone a heretical, art. This was in marked contrast to arts such as astrology, which many Christian authorities condemned on the grounds that it required the invocation of demons in order to achieve its practitioner's desired outcome. Although the Roman Inquisition did not consider alchemy worthy of outright prohibition, Tarrant delineates a conceptual shift within the Roman Church that resulted in the condemnation of alchemy as a heretical practice. By reconstructing the reception of Eymerich's stance on magic contained in the *Directorium*, his essay identifies the pivotal role played by Francisco Peña's 1578 edition of, and commentary on, Eymerich's work in reshaping the position of the Church towards alchemy during the later sixteenth century.

The essays concerned with specific case studies underline the Church's contradictory stance on alchemy. Peter Murray Jones reassesses the hitherto marginal status of Franciscans in the development of alchemical medicine in pre-Reformation England. His comparative analysis of four surviving manuscript versions of the *Tabula medicine*, an encyclopedic collection of medical remedies which also contains the names of a number of friar-practitioners active at the time, highlights English Franciscan friars' engagement with

alchemical procedures such as distillation and sublimation. The use of substances such as spices, simples and minerals also shows that the English friars applied their knowledge of alchemical medicine when producing remedies such as quintessence, artificial balsams and distilled waters. Moreover, by highlighting references in the *Tabula medicine* to the works of John of Rupescissa and Arnau de Vilanova, to name but two, this study sheds light on networking practices, manuscript circulation and the receptiveness of English regular clergy to European alchemical literature.

Alchemical medicine in early modern religious orders is also the central theme of the two essays that conclude this special issue. Lorenza Gianfrancesco offers an overview of a number of conventual medical facilities in Naples while shedding light on the milieu within which members of religious orders operated. Her central case study is the life and work of Donato d'Eremita, a Dominican friar who engaged with alchemical research and set up a laboratory for the production of the elixir of life. Gianfrancesco also looks at the research centres that proliferated in early modern Neapolitan convents as open institutions. Rather than acting in secrecy and isolation, friars opened the doors of their convents to lay scholars, conducted experiments, and disseminated their ideas. By placing d'Eremita's activities alongside examples of Neapolitan members of other religious orders who practised alchemy with fraudulent aims, Gianfrancesco illustrates that friars often rose to notoriety and became affiliated with the major academies of science that flourished in early modern Italy. She concludes her contribution by moving beyond the printed text to consider visual representations of laboratories and friar-practitioners, which are crucial to reconstructing the physical space within which d'Eremita and others operated.

Justin Rivest's contribution traces the success and decline of two seventeenth-century French Capuchin friars: Henri Rousseau de Montbazon and Nicolas Aignan. Rising to prominence under the patronage of Louis XIV, the two friars set up a laboratory in the Louvre for the production of chymical remedies that ranged from the *baume tranquille* to the *laudanum de Rousseau*, and the *eau de la Reine d'Hongrie*. The friars' medicines were greatly influenced by the Paracelsian and Helmontian traditions, Rivest argues, with the latter inspiring their ethical commitment to the cure of the poor.

Despite the support they received from the King of France, Rousseau and Aignan became controversial public figures. In 1678 the French periodical the *Mercure Galant* described them as benevolent chymical physicians, yet they were soon declared impostors by the Parisian medical establishment. Rivest's reconstruction of the friars' lives also foregrounds attitudes towards alchemical medicine in late seventeenth-century France. It shows that the public attack on the inefficacy of the two Capuchins' remedies did not result from the friars' engagement with Paracelsian and Helmontian medical principles. Rather, and perhaps as a result of a dispute that intertwined economic interests and nodes of power, their medicines were considered unsuitable to cure humble patients whose bodies, unlike those of rich citizens, were exposed to the torments of hardship.

The essays in this issue display a sense of continuity indicative of the generally non-hostile position of the Church towards alchemical practices. Tarrant's detailed centralised study enables Murray Jones, Gianfrancesco, and Rivest to pose questions about the transnational dimension of alchemy in religious orders. Despite their geographical distance, a group of Franciscans in England, a Dominican in Naples and two Capuchins in France considered their medical research as one aspect of a wider charitable mission that was in line with the ethical foundation of mendicant orders. The friars' engagement with alchemical practices in producing medical remedies for the public represented, therefore, the fulfilment of a religious duty which ultimately justified their position within the community of Christ. Yet this is just one aspect of the complex relationship between mendicant orders and alchemy. Much remains to be explored and said about the role all religious orders played in

the history of alchemy.²² We hope that the essays in this special issue will provide a point of departure for further such studies.

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²² This is especially true regarding the nexus of alchemy, Catholicism, and Protestantism. On this topic see Urszula Skulakowska, *The Alchemical Virgin Mary in the Religious and Political Context of the Renaissance* (Newcastle: Cambridge Scholars Publishing, 2017).

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