**Between Aquinas and Eymerich: The Roman Inquisition’s Use of Dominican Thought in the Censorship of Alchemy[[1]](#footnote-1)**

**Abstract**

In the latter half of the sixteenth century the Roman Inquisition developed criteria to prosecute a series of operative arts, including various forms of divination and magic. Its officials had little interest in alchemy. During that period the Roman Inquisition tried few people for practising alchemy, and it was rarely discussed in official documents. Justifications for prosecuting alchemists did exist, however. In his influential handbook, *Directorium inquisitorum*, the fourteenth-century inquisitor Nicholas Eymerich had developed a clear rationale for the investigation and prosecution of alchemists as heretics. His position was endorsed in the 1570s by Francisco Peña in his commentary on Eymerich’s handbook. In this article I explore the reasons why alchemy held this ambiguous status. I argue that members of the Dominican Order developed two traditions of thinking about alchemy from Aquinas’s thought. The first, and closest to Aquinas’s own belief, held that alchemy was a natural art that posed no danger to the Christian faith. The second, developed by Eymerich from a selective reading of Aquinas’s writings, indicated specific circumstances in which alchemists could be investigated. The Roman Inquisition’s response to alchemy vacillated between the positions advocated by Aquinas and Eymerich.

**Introduction**

Studies of the early modern Catholic Church’s apparatus of censorship – the Roman Inquisition and Index of Forbidden Books – were transformed in 1998 by the opening of the Archives of the Congregation of the Doctrine of Faith (ACDF). Ugo Baldini and Leen Spruit have made major contributions to the study of these institutions’ attitudes towards science, primarily by locating and publishing relevant documents from these archives.[[2]](#footnote-2) They have also provided valuable introductory essays describing the Roman Inquisition’s approach to various operative arts. When discussing alchemy, they observed that there had been few trials connected to this art. They also noted that alchemy’s status was rarely discussed in official documents, and that understanding of the Inquisition’s changing attitude towards this art was made more complicated by its ambiguous status in theological thought. They, nevertheless, drew the general conclusion that alchemy was not necessarily heterodox. When individuals were prosecuted for practising alchemy, it was because they had in some way introduced magic into their activities.[[3]](#footnote-3) The complex connection between heterodox forms of alchemy and magic has also been noted by historians of alchemy. In a recent review article considering the theme of alchemy and religion in the Middle Ages, Zacharay A. Matus observed that: “There seems to have been no consensus on the part of churchmen as to whether alchemy was, or should have been, associated with magic or necromancy.”[[4]](#footnote-4) In short, there was no consensus about whether or not it was legitimate for Christians to practise alchemy.

Scholars have, nonetheless, reconstructed individual clerics’ attitudes towards alchemy. In 1993, Martha Baldwin discussed the manner in which alchemy was practised within the Society of Jesus. She noted that, in his *Disquisitionum magicarum*, Martin del Rio (1551–1608) recognised that alchemy often functioned by natural means, and so the possibility of the transmutation of gold should not be dismissed out of hand. Del Rio nevertheless cautioned that when alchemists failed to achieve their desired ends, they might turn to necromancy. Yet Baldwin did not discuss the origins of Del Rio’s thought, or the breadth of support for his opinion.[[5]](#footnote-5) In 2002, Chiara Crisciani made a similar point. She noted that papal documents, which played a pivotal role in defining heretical magic – most notably *Super illius specula* (1326/7) – did not specifically condemn alchemy. She did, however, observe that Nicholas Eymerich, a Dominican Friar, and former Inquisitor General of Aragon, explicitly stated in his *Contra alchimistas* that when alchemists failed to create gold by natural means they turned to demons for assistance. Consequently, the alchemist could be accused of offering *latria* or *dulia* – that is, the reverence due respectively to God or the saints – to demons, an offence defined in the fourteenth century as a heresy.[[6]](#footnote-6) In an important series of publications exploring medieval conceptions of the relationship between art and nature, William R. Newman has argued that although many influential theologians such as Albertus Magnus and Thomas Aquinas discussed alchemy, they were not specifically concerned with determining the orthodoxy of alchemy. Instead, they viewed it as a natural art which could be used to determine the limits of demonic power.[[7]](#footnote-7)

In this article I place these insights into a broader narrative that traces the origins of the Roman Inquisition’s approach to alchemy. By these means I hope to explain the source of some of the ambiguities surrounding the inquisition of alchemy in early modern Italy. As I have argued elsewhere, Thomas Aquinas’s thought provided the basis for the Roman Inquisition’s prosecution of learned magic.[[8]](#footnote-8) This institution possessed no clear criteria for censoring alchemy in the second half of the sixteenth century, however. I suggest here that the confusion surrounding alchemy stems from the multiple ways that the various ideas expressed in Aquinas’s corpus could be interpreted and deployed. Aquinas left an extensive body of thought concerned with the acceptable limits of operative arts such as astrology. He never directly addressed the question of alchemy’s legitimacy, however. Indeed, he mentioned it only infrequently, and when he did so he used it to discuss issues such as the limits of demonic power or the punishment of fraud. In his *Directorium inquisitorum*, Eymerich selectively drew upon Aquinas’s corpus to construct an idiosyncratic justification for the inquisition of various operative arts, including alchemy.Later thinkers engaged with the work of both Aquinas and Eymerich in an equally selective manner. A number of Dominican friars who wrote important works on magic during the fifteenth century, such Johannes Nider, Henricus Institoris, and Jacobus Sprenger appeared, like Aquinas, to have been relatively unconcerned by the practice of alchemy. By contrast the jurist Francisco Peña, editor of the *Directorium* and, from 1583, consultor to the Congregation of the Index, endorsed Eymerich’s view that the activities of alchemists were potentially heretical and often warranted further investigation.[[9]](#footnote-9) I propose that throughout the first half century of its existence, the Roman Inquisition’s approach to alchemy vacillated between the two contrasting models provided by Aquinas and Eymerich.

**The reception of alchemy in medieval Europe**

Alchemy was one of a number of operative arts that came to the attention of Christian intellectuals during the course of the twelfth century. At this time there was no agreed set of criteria for assessing their legitimacy. Medieval Christians expended considerable energy trying to establish which, if any, were acceptable according to the faith, and determining the correct basis for making such a judgement. Throughout this period alchemy tended to be treated differently from other operative arts. Unlike astrology, for example, alchemy was rarely, if ever, conceived as a potentially superstitious art, that is, one that may have required the operator to make illicit contact with demons in order to work his or her desired effects. This was probably because, unlike arts such as astrology or theurgy, alchemy had never been the subject of a developed tradition of Christian polemic.[[10]](#footnote-10) Christians were, however, concerned about alchemy’s practical implications. In 1123 the Fathers of the First Lateran Council passed a canon that would shape the Church’s response to this art over the course of the following two centuries. It warned that: “Whoever knowingly makes or intentionally spends false money is to be separated from the community of the faithful, as the cursed oppressor of poor men, and also as a disturber of the *civitas*.”[[11]](#footnote-11) Although the canon did not specifically mention alchemy or transmutation, it authorised the use of ecclesiastical sanctions to punish those who produced or used fake coin.

Discussion of alchemy became more detailed and specific over the course of the thirteenth century. By the 1260s, Christian authors had begun to debate one important aspect of alchemical practice: whether *chrysopoeia* – the art of transmuting metals – was naturally possible. As William Newman has observed, at this time alchemy was rarely, if ever, considered a heterodox activity. Instead, contemporaries regarded it as “a perfectly reasonable and sober offshoot of Aristotle’s matter theory.”[[12]](#footnote-12) Discussion therefore focussed on the question of whether activities such as *chrysopoeia* were physically possible rather than whether they were orthodox. Debate tended to centre on a series of arguments developed in the *Kitāb-al Shifāʼ* (*Book of the Remedy*) by the Persian philosopher ibn-Sīnā (980–1037), often referred to as Avicenna in the Latin West. By 1200 an English translator, Alfred of Sarashel, had translated into Latin a section of this text concerning meteorology. It came to be known as *De congelatione et conglutinatione lapidum*. Later Christian scholars erroneously attributed it to Aristotle. In one section of this text Avicenna developed a clear dictum, rendered in Latin as: “Sciant artifices alchimiae, species transformari non posse.” (Alchemical authors should know that species cannot be transformed.) Avicenna’s point was that since humans could not know the specific underlying differences that constituted the species of a particular metal, they could not change them.[[13]](#footnote-13)

Christian theologians began to use *Sciant artifices* in unexpected ways. In the late 1240s the Dominican friar Albertus Magnus (*ca.* 1200–1280) completed his commentary on *The Sentences* of Peter Lombard. Displaying mastery of this text was one of the stages in the training of a theologian. In book 2 distinction 7, Albertus discussed the question of whether demons can induce a substantial form in transmuted bodies. Following established scholastic methods, he produced a number of arguments against and for the proposition. In a novel departure, Albertus presented the *Sciant artifices* – which he attributed to Aristotle – as an argument against the proposition. “Aristotle says in *Meteorology IV* that ‘the artificers of alchemy should know that species cannot be transmuted’; therefore demons cannot [transmute them], because they work only by means of art.” This was an early example of alchemy being used to consider the limits of demonic power. Albertus did not use it because he considered alchemy to be necessarily connected with demons. On the contrary, as Newman has observed, this argument derived its heuristic power from the fact that he and many of his contemporaries considered it to be a human art. In this particular commentary, Albertus agreed that *chrysopoeia* was indeed impossible.[[14]](#footnote-14)

Albertus’s thought on alchemy changed over the course of his lifetime. These changes coincided with the development of his understanding of pagan philosophical writings, especially the works of Aristotle. In later writings, Albertus advocated the practice of alchemy and defended *chrysopoeia*.[[15]](#footnote-15) In *De mineralia* Albertus correctly attributed *Sciant artifices* to Avicenna, and rejected the argument in order to provide a justification for the transmutation of metals. As Newman has argued, by identifying the Latin term *species* with the Aristotelian concept of “specific forms,” Albertus could “draw on a well-defined Scholastic theory concerning the physical corruption of a preexistent form followed by the induction of a subsequent form.” Hence, he could argue that transmutation of specific forms – or *species* – of metal was possible. It is important to note the terms of Albertus’s discussion. He contested the principle of whether or not it was physically possible to transmute metals, but remained unconcerned by the question of whether or not it was acceptable for Christians to practise this art.[[16]](#footnote-16)

**Alchemy in the thought of Thomas Aquinas**

Thomas Aquinas (1225–1274) was one of Albertus’s students. Unlike his master, he did not produce any texts concerned with alchemy. Indeed, he rarely commented on this art. When he did so he did not discuss it directly, but used it as a means to consider other questions. At the beginning of the 1250s Aquinas completed his own commentary on *The Sentences*, the *Scriptum super sententiis*. Like Albertus, in his discussion of book 2, distinction 7, he introduced a version of Avicenna’s argument, which he rendered as: *Sciant auctores, species transformari non posse*. Aquinas explained that this statement implied that it was impossible genuinely to transmute base metals into precious ones. From this conclusion, he developed the further argument that demons were unable to change the substantial form of any given thing. In this instance, Aquinas was not directly discussing the legitimacy of alchemy, but instead – like Albertus – he was using it as a device to determine the power of demons.[[17]](#footnote-17)

In the body of his discussion, Aquinas offered his own opinion on the limits of demonic power, stating that: “Demons can by their own power press no forms, whether accidental or substantial, into material.”[[18]](#footnote-18) With these words Aquinas placed clear limits on the innate power of demons. He nevertheless went on to concede that it was possible for them to effect changes by the manipulation of natural agents, that is, by art. Since demons relied upon the manipulation of natural agents to achieve their ends, they were unable to achieve anything that was naturally impossible. Consequently, they could not perform a genuine miracle, such as reviving the dead. Addressing the argument relating to alchemy, Aquinas stated that it was in fact impossible to change a substantial form by means of art. For this reason alchemists, and by extension demons, could not genuinely transmute metals, but merely produce a similar material. This conclusion did not represent a condemnation of the practice of alchemy, but rather a rejection of the claim that it was naturally possible to effect a genuine change in substantial forms. There is no evidence in this passage to suggest that Aquinas considered alchemists’ futile attempts to transmute metals to be superstitious.[[19]](#footnote-19)

Aquinas’s views developed substantially over the course of his lifetime. In the 1270s he completed his masterpiece, the *Summa theologica*. In the *secunda secundae*, he distinguished between heresy and superstition. For Aquinas heresy was one of two species of unbelief. The first was maintained by those who wilfully refused to assent to Christ, for example the pagans or the Jews. The second species of unbelief was specific to heretics. It was the preserve of those who wished to assent to Christ, but who nonetheless chose to maintain false beliefs about the faith. Aquinas further refined this idea by suggesting that heresy amounted to the voluntary decision to believe in an opinion that explicitly or implicitly contradicted an article of the faith.[[20]](#footnote-20) Heresy, therefore, concerned belief. By contrast Aquinas defined superstition as an act that served to corrupt true religion. He understood religion as a moral virtue, that is, something which made either its possessor, or his or her actions, good. Since every virtue observes a mean, he continued, one could deviate from virtue, either through deficiency or excess.[[21]](#footnote-21) Aquinas concluded that: “Superstition is thus a vice opposed to religion by excess, not because it offers more to divine worship than true religion, but because it offers divine worship either to someone to whom it should not be offered, or it is offered in a manner in which it should not.”[[22]](#footnote-22)

Superstitious acts, Aquinas continued, could be classified under one of three separate categories: idolatry, divination, and observances. Each represented a corruption of elements of true worship. The first end of religion was to give reverence to God; idolatry involved the direct worship of a creature. The second end of religion was to enable humans to learn from God; divination was the act of making an explicit or tacit pact with a demon in order to consult them for purposes of gaining knowledge. The final purpose of religion was to guide human behaviour so that it accorded with divine precepts; observances encouraged the misdirection of human acts.[[23]](#footnote-23) The question remained, however: which human actions, and especially which operative arts, were to be considered superstitious? Aquinas’s understanding of the legitimacy of the operative arts was informed by his reading of the Church Fathers, most notably Augustine. Following their lead, he believed that many – but by no means all – of the operative arts discussed, or practised by his contemporaries, fell into one or other of these categories of superstition. For Aquinas it was necessary to reject any operative art that involved the explicit invocation of demons. He was also suspicious of a number of arts that made no direct appeal to demons, and regarded the use of predictive techniques such as geomancy or chiromancy as forms of divination, and the art of constructing astrological talismans to promote health as a form of observance.[[24]](#footnote-24)

Aquinas was deeply sceptical about the orthodoxy of a wide array of contemporary operative arts, but he was prepared to accept that some might be both legitimate and useful. To determine which arts were orthodox and which were not, Aquinas developed a sophisticated set of criteria rooted in theology and philosophy. The guiding principle of his criteria was informed by Augustine’s insight that there existed many natural wonders that simply surpassed humans’ ordinary understanding. It was, Augustine maintained, entirely legitimate for humans to make use of such naturally occurring wonders, and to exploit the hidden properties of natural things. From these observations Aquinas constructed a general theory of natural causation, which he used to analyse the legitimacy of a range of arts including astrology, astral magic, and the use of herbs and gems for the purposes of healing. The key principle he established was that it was acceptable for humans to make use of any properties if they could demonstrate that they had natural causes. Exploiting natural things in order to induce artificially natural effects was, for Aquinas, entirely legitimate. He cautioned that there were also arts – for example, those used to produce astrological talismans – that were erroneously believed to be natural. Such arts, he maintained, had no natural efficacy. Consequently, any effects they produced were in fact created by demons, with whom the operator had made a tacit pact. Whilst the operator may not have intended to invoke a demon in order to create their desired effect, their action should nevertheless be considered superstitious.[[25]](#footnote-25)

Aquinas provided a detailed discussion of a range of magical arts in this section of the *Summa theologica*, but he made no reference to alchemy. This was a surprising omission, for by the time Aquinas completed this text, his views on the possibility of transmutation, and hence also of *chrysopoeia*, had changed. Aquinas’s change of heart was first suggested in a section of the *pars prima* in which he sought to establish whether demons could lead humans astray by genuine miracles. In the course of his discussion he argued that although angels and demons did not possess the innate power to transmute matter, “they can use certain seeds which are found in the elements of the world, for the purpose of completing effects of this kind, as Augustine said in *De trinitate* Book III.”[[26]](#footnote-26) Here Aquinas was invoking Augustine’s argument that the corporeal elements of the world contained certain “seeds.” Augustine had maintained that, although these seeds were invisible, humans could come to know of them through the exercise of reason. Demons, who could find these seeds more easily due to their superior abilities, used them to produce various wonders beyond ordinary human comprehension. According to Augustine, demons’ ability to manipulate these seeds made it possible to explain the events recorded in *Exodus* 7-8. With the assistance of demons, Pharaoh’s magicians could ape the miracles that God had worked through Aaron, transforming a staff into a snake and sending forth a plague of frogs.[[27]](#footnote-27)

Aquinas accepted Augustine’s argument, noting: “For that reason it must be said that all transformations of bodily things, which can be made by means of certain natural virtues, which include the aforementioned seeds, can be made by the operations of demons, having employed seeds of this sort; just as when certain things were transformed into serpents or snakes, which were produced by putrefaction.”[[28]](#footnote-28) Qualifying this statement, Aquinas reiterated his earlier opinion that demons were unable to produce any transformations that exceeded the power of nature, that is, perform a miracle. If a demon appeared to have effected such a transformation, for instance apparently changing a human body into that of an animal or restoring the dead to life, it was to be considered nothing more than an illusion.[[29]](#footnote-29)

This argument informed Aquinas’s understanding of alchemy in the *Summa theologica*. Although he did not discuss directly whether it was legitimate to practise this art, he used it as an example when he was considering the implications of the fraudulent sale of goods. He argued that if somebody attempted to sell as genuine gold or silver a metal created by an alchemical process, it would amount to fraud. This was because such metals did not possess the“true species of gold and silver.”[[30]](#footnote-30) For Aquinas, it was essential that the buyer received genuine metals, not only because of their material value but because they also possessed certain natural healing qualities. Aquinas then made an intriguing concession. He noted that: “If, however, real gold were made by alchemy, it would not be illicit to sell it as true gold, because nothing prohibits art from using any natural causes for the purpose of producing natural and true effects; as Augustine says in *De trinitate* book III, of those things which by the art of demons are made.” Invoking Augustine’s reasoning, Aquinas suggested that, although unlikely, it might indeed be possible for demons to transmute base metals into gold by means of art.[[31]](#footnote-31) This concession opened a tantalising possibility. If the seeds necessary for demons to transform metals existed, then perhaps humans too could find and manipulate them. Humans might be able to perform *chrysopoeia* without recourse to demonic assistance. Aquinas’s revised stance on *chrysopoeia* implied the need for a more complex means to assess of the work of alchemists who claimed successfully to have transmuted metals. Whilst they were almost certainly frauds, it remained possible they may have succeeded in transmuting metals. Yet success raised further questions, namely, did the alchemist effect the transmutation by his own skill, or did he or she require demonic assistance, be it explicit or tacit?

By the time of his death in 1274, Aquinas had developed a sophisticated understanding of magic and the operative arts. His account was not comprehensive, but he had established a set of tools that could be applied to assess the legitimacy of any operative art. Despite the utility of Aquinas’s arguments, and his growing, albeit contested, authority within his order, it was far from inevitable that his ideas would be adopted as the standard criteria for assessing the legitimacy of magic. This was true within not only the Dominican Order but also the institutional structures of the central Church, including the Inquisition. It is therefore necessary to trace the process that led some inquisitors to incorporate Aquinas’s thought into their practice, and the manner in which they made use of his complex and occasionally contradictory intellectual legacy.

**Medieval inquisitors and the prosecution of alchemy**

The papacy began to appoint inquisitors of heretical depravity in the early thirteenth century, appointing them for fixed terms to investigate charges of heresy in specified regions. Initially, their activities focussed on the prosecution of – in the eyes of Church authorities at least – organised groups of heretics such as the Cathars and Waldensians.[[32]](#footnote-32) Much of the work of inquisition was conducted by members of the recently established mendicant orders, especially the Dominicans.[[33]](#footnote-33) Although there was no formal institution that we can identify as “The Medieval Inquisition,” a growing body of practices and legislation gave the work of inquisition a degree of cohesion.[[34]](#footnote-34) By the mid-thirteenth century inquisitors had begun to produce handbooks summarising aspects of this information. These handbooks also described the types of offences that inquisitors might expect to encounter. Magic appears not to have attracted the interest of their authors. Two early handbooks, both produced in the late 1240s, the *Ordo processus narbonensis*, and the *Summa de Catharis et Pauperibus de Lugduno*, contained no guidance on the prosecution of magic, whether popular or learned. Notably, neither made specific reference to alchemy.[[35]](#footnote-35) This situation may be explained partly by the fact that inquisitors’ attentions were largely focussed on the threat – or at the least perceived threat –posed by the Cathars and Waldensians. Inquisitors’ reluctance to prosecute magic in the early thirteenth century may also have been influenced by doubts about their jurisdiction. It was by no means certain that the inquisitor, by virtue of his authority to investigate heresy, was invested with the power to examine cases of alleged magic.

In 1258 a group of inquisitors referred the question of their authority to prosecute magic to Pope Alexander IV. The pontiff replied that inquisitors should not investigate cases of magic or divination “unless they savour of manifest heresy.”[[36]](#footnote-36) At face value, Alexander’s response was straightforward. It appeared to limit inquisitors’ ability to investigate magic and the operative arts, restricting them to investigating only heretical forms of magic. This was, however, an important innovation, which laid the groundwork for a fundamental transformation of the legal status of magical arts. It established in canon law the principle that at least some magical offences could indeed be considered “heresies” and not superstitions, and that they were, therefore, within the inquisitor’s purview. The pope’s response nevertheless left key questions unresolved. It neither defined “manifest heresy,” nor provided criteria by which manifestly heretical arts could be identified, nor indicated any specific practices that should be considered heretical.

Alexander VI’s definition of inquisitorial powers was more precisely defined in Boniface VIII’s addition to the body of canon law, the *Liber sextus*, completed in 1298. In this volume, Alexander’s bull was accompanied by a gloss, which defined “manifestly savouring” as “for example, to utter prayers near abominable altars of idols, to offer sacrifices, to consult demons, to receive their responses. Or they either associate themselves with heretics [in order to] cast lots, or they make predictions with the body and blood of Christ, or [when] casting lots, in order that they might have a response, they re-baptise boys or something similar.”[[37]](#footnote-37) The gloss’s wording diverged from Aquinas’s thought in two key respects. First, it clearly associated manifest heresy with the act of invoking demons. Whilst Aquinas had condemned invocation, he considered it to be a superstition rather than a heresy. Second, the gloss’s criteria for distinguishing between heretical and non-heretical magic, and, by extension, for the investigation of the operative arts, centred on the identification of specific ritual practices designed to enlist the assistance of demons. In essence, it instructed inquisitors to make judgements about the actions of the practitioner whilst he or she was performing the art, rather than about the legitimacy of the art itself. This implied that an inquisitor could not prosecute an individual simply for practising an operative art; they could take action only if they discovered evidence that the accused had also explicitly engaged in rituals that may have been intended to invoke demons. The adoption of this principle meant that the status of arts that had no necessary ritual element – for instance, astrological prediction or the construction of astrological talismans – was unclear. Although Aquinas had argued that such arts should be considered superstitious, the gloss suggested that as long as anyone practising them refrained from explicitly invoking demons, there was no justification for an inquisitor to investigate. This principle applied also to the practice of alchemy.

Although alchemy was not directly mentioned in either Alexander’s bull or its subsequent gloss, it became a specific subject of interest during the pontificate of John XXII (1316–1334). In 1317 he promulgated the bull *Spondent quas non exhibent divitias, pauperes alchimistae* (Poor alchemists promise riches that they cannot produce). Like the decree of the First Lateran Council, it was concerned solely with the fraudulent sale or use of alchemically produced metals. It prohibited the production of alchemical gold or silver, on the ground that the act of debasing coinage or introducing fake coin into circulation was an offence in and of itself. Nowhere does the bull suggest that alchemists genuinely believed that they could transmute metals. On the contrary, it explicitly stated that the alchemists were “conscious of their ignorance.” Fully aware of the falsity of their claims, they were forced to “pretend that there is real gold or silver from a sophistic transmutation, when [such a transformation] is not in the nature of things.”[[38]](#footnote-38) Although the bull declared the absolute impossibility of *chrysopoeia*, it did not suggest that alchemists chose to appeal to demons in order to achieve their ends. They were to be considered as no more than frauds, and should be treated as such.

The evidence from the bull suggests that John XXII did not seek to prosecute alchemists on the ground that they were engaged in superstitious or heretical practices. He was nevertheless responsible for a significant re-evaluation of the status of magic and divination in Christian society. He began this process in 1317, following a failed attempt to use magic to assassinate him. The following year Cardinal Santa Sabina wrote to a number of local inquisitors and bishops, urging them to take action against particular forms of magic, specifically those that required the magician to make sacrifices to demons or baptise images.[[39]](#footnote-39) Continuing the precedent established in the *Liber sextus*, these letters restricted the definition of illicit magic to those acts that involved an explicit ritual element. They did not encourage the prosecution of other forms of magic, or the further examination of contested operative arts. Indeed, John seemed relatively unconcerned by those operative arts that functioned by ostensibly natural means.

Although Santa Sabina’s letters urged immediate action against necromancers, they did not produce a surge of prosecutions. One of the recipients, Bernard Gui, the Inquisitor of Toulouse, later recorded that during his term of office he had overseen the prosecution of some 603 cases. The cardinal’s entreaties notwithstanding, he tried no one for practising magic.[[40]](#footnote-40) Despite their apparently limited effect on Gui’s work as an inquisitor, these letters may have influenced the production of his inquisitorial manual, the *Practica inquistionis heretice pravitatis*. Probably completed at some point between 1323 and 1324, it offered a clear guide to inquisitorial practice and descriptions of the various types of heresy an inquisitor might face, including Catharism and Waldesianism. It also contained a short section entitled *De sortilegis et divinis et invocatoribus demonum* (On Sortilegers, Diviners and Invokers of Demons). This discussion of magic was brief, but significant because it represented an early example – perhaps the first – of these activities being incorporated into an inquisitorial handbook. The account of magic it offered echoed the ideas of John XXII. It encouraged inquisitors to seek evidence of magical activity, and advised them to question the accused about a range of acts, which included: making the sterile pregnant, making pronouncements about future acts, and baptising images. Unlike Aquinas’s account of superstition in the *Summa*, Gui’s handbook did not articulate a sophisticated rationale for the prosecution of magical or divinatory arts. Just as significantly, it did not consider the legitimacy of operative arts that functioned by contested means such as astrology and alchemy.[[41]](#footnote-41)

Throughout the 1320s, John XXII continued his campaign to eradicate maleficent magic from Christendom. Seeking to reinforce the Church’s ability to prosecute these offences, he appointed a commission of theologians to examine whether four specific magical acts should be considered heretical: baptising images; re-baptising children; using the consecrated host to cast spells; and invoking demons. Although none of the commission rejected outright the idea that these offences were heresies, their views were mixed. In 1326, drawing upon the opinions he had received, John XXII issued a new bull, *Super illius specula*. It condemned the practice of worshipping or offering sacrifices to demons, and proscribed a series of specific practices including producing images, and binding demons into rings or phials for the purpose of acquiring information or soliciting assistance. Most significantly, it threatened those who did not abide by these judgements with “each and every punishment, in addition to the simple confiscation of [their] goods, which heretics deserve by law.”[[42]](#footnote-42) This bull therefore provided a rationale for the inquisition to proceed against forms of magic with explicit ritual elements, but it made no specific mention of alchemy, or of any other arts that functioned by contested means.

Some contemporaries were sceptical of John XXII’s attempts to combat demonic magic. Others embraced them, however. The influence of his ideas was evident in the work of the Dominican friar and Inquisitor General of Aragon, Nicholas Eymerich (1316–1399), who in 1376 wrote perhaps the most influential medieval inquisitorial handbook, *Directorium inquisitorum*. In the second part of the text, he tackled the question of the inquisitor’s authority to investigate cases of magic and divination.[[43]](#footnote-43) Eymerich’s defence of the inquisitor’s right to investigate magic and divination was constructed around a very particular understanding of these practices. Above all he wanted to defend the inquisitors’ right to prosecute forms of magic that involved an explicit ritual element, for example, the theurgic practices described in texts such as the *Clavicula salomonis*. He argued that the inquisitor had the right to investigate all such cases because they involved offering either *dulia* or *latria* to demons. To support his case Eymerich drew upon the arguments of a series of theological and legal authorities, including Augustine and Aquinas. Drawing on arguments that they had advanced, in *De civitate Dei* and a commentary on the book of *Isiah* respectively, he showed that they had both condemned those who made contact with demons to work effects. He did not, however, draw attention to the fact that Augustine and Aquinas had considered these offences to be superstitions and not heresies. Eymerich then proceeded to advance arguments derived from papal decrees and conciliar decisions, a list that culminated in the *Super illius specula*, which he quoted in its entirety. Eymerich thus presented his selected arguments – including those of Augustine and Aquinas – as though they all led up to and unequivocally supported the conclusion of the *Super illius specula*’s conclusion that magical offences requiring the invocation of demons should be considered a heresy.[[44]](#footnote-44)

Eymerich continued by offering a more detailed discussion of which particular offences the inquisitor should investigate. Again he invoked the authority of Augustine and Aquinas, but he did so in a selective manner. His reading of Aquinas’s corpus was also notably limited. He did not refer directly to the detailed discussion of superstition that Aquinas provided in the *Summa theologica*, but instead cited texts such as *Scriptum super sententiis*. In the process, Eymerich constructed his own version of Thomist orthodoxy, which at times departed from Aquinas’s thought. On the one hand he broadly supported Augustine and Aquinas’s central contention that it was acceptable for humans to perform arts that functioned by natural means, whilst rejecting those that required the operator to make a pact with demons. On the other, he drew upon the tradition established in canon law that inquisitors should only investigate magical activities with an explicit ritual element.

The results of Eymerich’s approach can be seen in *Pars* II, *quaestio* 42, in which he considered the legitimacy of different forms of divination. He began by distinguishing between “pure” arts, that is, those he considered legitimate, and “heretical” arts. He numbered chiromancy – the art of reading hands – amongst the former, noting that it was used to make natural judgements about the condition of individual people. Eymerich justified the practice of this art by invoking Aquinas’s argument that it was acceptable for humans to create wondrous effects produced by natural means. Although Eymerich provided a characteristically “Thomist” rationale for defining this art as “pure” – that is accepting the legitimacy of arts which produced their effects from natural causes – he used it to justify a practice that Aquinas had in fact condemned. Eymerich went on to contrast these “pure” arts with “heretical” forms of divination; the latter arts, he argued, were those that also included suspicious ritual elements such as re-baptising babies. To determine whether an art was legitimate, the inquisitor should search for evidence of ritual, rather than considering whether they were naturally possible. Echoing the language of both Alexander IV’s 1258 bull and its later gloss, he declared that such practices “indeed manifestly savour of heresy.”[[45]](#footnote-45)

Eymerich did not comment directly upon the legitimacy of alchemy in the section of *Directorium* that justified the inquisition of magic. He did, however, refer to it later in a passage contained in Pars III of the *Directorium*, entitled *Signa per quae necromantici haeretici dignoscuntur* (Signs by which heretical necromancers are discerned). Here, he wrote that if an inquisitor were investigating someone suspected of necromancy, he should also consider whether the accused also practised divination, astrology or alchemy. Engaging with such arts, he argued, provided a good indicator of whether the individual under investigation was truly a heretic, “for when they cannot attain their intended end, they ask for the assistance of demons, they invoke and they implore [those demons] and by imploring [them] they conjure and sacrifice [to them] secretly or openly.”[[46]](#footnote-46) Eymerich’s assessment of alchemy was consistent with his variant form of Thomism. He did not consider the practice of alchemy to be innately superstitious, and maintained that it could be practised without recourse to demons. He nevertheless feared that when alchemists had exhausted their art’s natural possibilities they might turn to demons for assistance. In this manner, he explicitly associated the activities of some alchemists, and possibly some alchemical practices, with the superstitious invocation of demons. Since he had reaffirmed the relatively novel classification of invocation as a heresy, Eymerich had, for the first time, provided a clear rationale for the prosecution of alchemists as heretics.

**The fifteenth century: Observant Reform**

The inquisition of magic was transformed in the fifteenth century by the Observant Reform movement. From the middle of the century some mendicants began to call for reform within their orders, arguing that they had lost their original energy and purpose. In order to create a new form of religious life, one closer to the ideals of their founders, they started to reorganise existing religious houses or, in some instances, to create new ones. These houses became known as “observant” institutions, whilst the un-reformed were referred to as “conventual.” The Observant Reform movement was not intended simply to effect spiritual regeneration of the orders of friars; it was designed to stimulate a broader reformation of Christian society. This was to be achieved by re-engaging the wider population. Ordinary Christians would be encouraged to dedicate themselves to the cultivation of their spiritual lives, but also educated in order to help them to avoid deviance and corruption.[[47]](#footnote-47) This programme stimulated a renewed interest in the investigation and prosecution of magic amongst some observant friars. Mendicants and, by extension, inquisitors began to take a particular interest in the prosecution of popular magic. These interests were fed by a novel series of stories emanating from the Alpine areas that maintained that groups of deviants gathered to worship Satan. With his *Formicarius*, Johannes Nider (1380-1438), a leading member within the Observant reform movement, played a significant role in incorporating these beliefs into Dominican writings on magic and witchcraft.[[48]](#footnote-48)

The *Formicarius* was not intended to be a learned treatise on magic, but a repository of morally edifying stories useful for preaching. Consequently, it did not offer scholarly reflections on the legitimate boundaries of magical activity. Nider did, however, offer more considered comments on magic in another of his works, the *Praeceptorium divinae legis, seu Expositio Decalogi*. This text is important because it demonstrated a renewed engagement with the work of earlier authorities such as Augustine and Aquinas. This development almost certainly reflected the process of observant reform, which encouraged a revival of scholarship within the Dominican Order and particularly the renewed study of the works of authoritative figures such as Aquinas. The *Praeceptorium* indicates that Nider engaged with the *Summa theologica* in a more comprehensive manner than had Eymerich. This offered him a new set of resources to construct an alternative version of Aquinas’s thought on magic and the operative arts. In book 1, chapter 11, Nider explicitly commented upon the utility of the *secunda secundae* of the *Summa* for thinking about issues relating to superstition, especially idolatry and divination. By using such techniques, he noted, “someone can strive to investigate hidden or future things, by means of either an occult or manifest pact that they had entered into with demons.” Nider therefore drew his reader’s attention to the potential danger of forming occult pacts. In this manner he focussed his analysis not only on the actions of the individual performing them, but also on the possibility of the art itself.[[49]](#footnote-49)

Nider used a discussion of the boundaries of natural causation to answer various questions relating to witchcraft, for example, question 7: “Whether it is true that witches can make real animals by means of their art?”; and question 8: “Whether by the work of demons men can be transformed into beasts?”[[50]](#footnote-50) Nider opened his answer to the latter question by rejecting the possibility of such transformations. He justified his response by invoking the writings of Augustine and Aquinas. The former, he noted, had dismissed the possibility of the transformation of human bodies in texts such *De civitate Dei*. Nider did not dismiss transformations entirely. Although he did not refer directly to Augustine’s discussion of seeds in *De trinitate* III, he reproduced a lengthy exert from the section of Aquinas’s *Summa theologica* that discussed these ideas.[[51]](#footnote-51) Nider used the *Summa theologica* to defend the view that demons could perform certain transformations, but only by manipulating natural virtues (*virtute naturae*). He therefore accepted the broad Thomist principle that demons could only act by means of art, and also the specific idea that the existence of seeds, hidden within the natural world, made wondrous transformations naturally possible. It was not clear in this passage whether Nider accepted the position that Aquinas had expressed elsewhere in the *Summa*, namely that the existence of such seeds opened the possibility for the genuine transmutation of metals.[[52]](#footnote-52)

The new approach to reading Aquinas’s work evident in Nider’s work also informed the *Malleus maleficarum*. Written by the observant Dominican friars Henricus Institoris (*ca.* 1430–1505) and Jacobus Sprenger (*ca.* 1437–1495), the *Malleus* was a manual specifically focussed on providing information relevant to the prosecution of magic. It drew on several earlier texts written by Dominicans. Its third book, which detailed the procedures for investigating and prosecuting witches, was derived from Eymerich’s *Directorium*. The second book was informed by Nider’s *Formicarius*, and it drew further attention to his ideas about the threat posed to Christians by covens of devil-worshipping witches. The arguments of the first book were mainly based upon Aquinas’s writings, and its authors, like Nider, drew substantially upon the *Summa theologica*. In this book, Institoris and Sprenger were primarily concerned with proving the reality of heretical witchcraft, rather than discussing the legitimacy of particular magical arts. Nevertheless, they did discuss them on occasion in order to consider themes related to the prosecution of diabolism. To take one example, in book 1, question 5, of the *Malleus* they considered whether the increased levels of witchcraft that they had observed could have been caused by astrological influences. To answer their question, they defended an account of the legitimate boundaries of astrological influence highly similar to that described by Aquinas in the *Summa theologica*, including the idea that the stars could incline humans towards particular behaviours. Elsewhere, they followed Aquinas in condemning the production of astrological talismans, on the ground that they could not produce their effects naturally and so must function by means of a tacit pact with demons.[[53]](#footnote-53)

Institoris and Sprenger also briefly discussed alchemy, in book 1 question 1. Unlike Eymerich, they did not consider the implications of the practice of alchemy, or whether its practitioners should be investigated. Instead, their discussion of alchemy formed part of their attempt to consider the question of whether witchcraft was real, and if its denial amounted to heresy. In scholastic fashion, they began by presenting a series of propositions for and against the question. Amongst the propositions that they examined was the suggestion that demons could create effects by art, but that those arts could not “render a true form.” To support this suggestion they cited Albertus’s rendering of Avicenna’s *Sciant artifices*, which he had used in *De mineralia* to maintain that alchemists could not change *species*. Institoris and Sprenger’s argument continued that, by means of art, demons “cannot cause true states of health or illness.” The corollary of this argument was that it was impossible to attribute the outbreak of illness to either the actions of demons or sorcerers.[[54]](#footnote-54)

In their answer to the question, Institoris and Sprenger laid out a robust defence of the reality of witchcraft. Invoking arguments made by Aquinas in *Scriptum super sententiis*, they maintained that denying the existence of demons and their God-given power to manipulate the natural order would require contradicting passages of scripture and was therefore heretical. Turning to address the specific question of whether demons possessed the power to alter forms, they considered the possibility of alchemical transmutation. Although elsewhere in the *Malleus* Institoris and Sprenger had used the *Summa theologica* to consider the legitimate boundaries of astrology, their account of alchemy was derived from the *Scriptum super sententiis*. Paraphrasing Aquinas’s argument, they reaffirmed his conclusion that demons could only achieve their ends by manipulating natural virtues, that is, by art. Following this reasoning, they concluded that the alchemical transmutation of metals was also naturally impossible. Whilst Aquinas had held the general principle that demons could only produce naturally possible effects throughout his life, Institoris and Sprenger contradicted his mature opinion that it might be possible to transmute metals by means of art. Their discussion of alchemy is instructive because it illustrates how the selective deployment of arguments derived from Aquinas’s corpus could be used to support contradictory conclusions about the possibility of alchemical transmutation.[[55]](#footnote-55)

**The sixteenth century: the Roman Inquisition**

The Roman Inquisition was established in 1542. It was a new initiative, largely driven by the ambition of Cardinal Gian Pietro Carafa (1476–1559) to uproot Protestant and evangelical ideas from Italy. Taking the centrally organised Spanish Inquisition as a model, he sought to provide the Inquisition in Italy with a formal institutional identity and structure.[[56]](#footnote-56) The re-organised Roman Inquisition began to adopt new approaches to the prosecution of magic. Unlike the inquisitors active in late fifteenth and early sixteenth-century Italy, members of the Roman Inquisition showed little concern for rooting out covens of devil-worshipping witches. Both central authorities and local inquisitors focussed on the investigation of forms of ritual magic, and disputed operative arts.[[57]](#footnote-57) The various Indices of Forbidden Books drafted by the Inquisition in the 1550s demonstrate that necromancy and divination – especially astrology – were significant areas of concern. Alchemy, by contrast, attracted little attention. It was not directly condemned in either the Index of Forbidden books promulgated in 1559 by the Inquisition or the version produced by the Council of Trent in 1564. Although the Roman Inquisition’s relative indifference to alchemy may seem surprising, it was consistent with the views of earlier Dominicans such as Nider and the authors of the *Malleus*, who had shown little interest in its prosecution.[[58]](#footnote-58)

On occasion the Roman Inquisition did investigate the activities and ideas of alchemists, however. On 21 June 1574 Pedro Lunel, the Bishop of Gaeta, wrote to Scipione Rebiba in Rome updating him about ongoing investigations into the work of a certain Leonardo Tolentino. After searching his house, he stated that he had discovered a number of papers in his possession including two documents – seemingly in Tolentino’s hand – which pertained to alchemy. Lunel highlighted two separate offences. One document appeared to suggest that Tolentino believed that first materials – the primary constituents of the cosmos – were “produced by God, and not created from whence he inferred that it remains eternally.” Secondly, he found a book, which he believed to be in Tolentino’s hand, in which the latter referred to a “demon in the form of a black man, but with a crown on his head.”[[59]](#footnote-59) We do not know the outcome of the investigation into Tolentino, but neither of these offences raised especially complex problems for inquisitors. The inference that the world was eternal could be readily addressed by invoking the principle that it was impossible to assert as true a statement about the natural world if it contradicted the truth established in the faith. The second problem, Tolentino’s alleged communication with demons, was simply a case of superstition. The alchemical context was largely irrelevant.[[60]](#footnote-60)

From the available evidence, it appears that the Roman Inquisition neither advocated the investigation of practitioners of alchemy, nor did it in fact investigate individuals simply for practising this art. Eymerich’s earlier opinion, it seems, exerted little influence. This situation began to change in 1578, when the canonist Francisco Peña (*ca.* 1540–1612) published a new edition of Eymerich’s *Directorium inquisitorum*, along with an accompanying commentary. Whilst commenting on the passage in Eymerich’s text concerning the signs by which a necromancer could be recognised, Peña made a series of observations about alchemy. He noted that Eymerich had correctly distinguished between “heretical magicians” and “magicians,” for, he continued, there existed forms of natural magical activity that were acceptable to Christians. He continued by providing a series of examples drawn from antiquity to illustrate his case. Echoing Aquinas’s position, Peña maintained that any art that functioned by natural means could be considered legitimate. He nevertheless cautioned that an interest in natural arts could lead individuals to practise a third type of magic: illicit demonic magic. “For when the common people have been disappointed by true art, when they were not able to make those wondrous works, of which we spoke, they made recourse to demons, who taught them these things.”[[61]](#footnote-61) Peña concluded this section by reaffirming Eymerich’s view that the act of invoking demons in order to produce wondrous effects was indeed heresy.

Peña continued by glossing further sections of Eymerich’s account of heretical necromancers. He had little to add to the latter’s remarks on astrology, but devoted around a column of text to his views on alchemy. “Eymerich’s advice against alchemists,” he began, “should not be disparaged.” Peña stated that although he would overlook other cases, he would discuss Arnau de Villanova, who provided a good example of the threat posed by alchemy. It was known that Arnau was not only an alchemist but also a heretic and invoker of demons.[[62]](#footnote-62) Peña continued by acknowledging that this evaluation of alchemy would not be accepted by all. “I hear that now Eymerich is bitterly rebuked, because he has made such a judgement about alchemists, but he has been unjustly slandered, for there are many [things] which prove that alchemists are imposters, as I will shortly show.” In the meantime he provided a list of authorities to bolster his case. He specifically cited Aquinas’s discussion of the production of alchemical metals in the *Summa theologica*, although he did not mention the fact that Aquinas had here acknowledged the possibility of *chrysopoei*a. He instead remarked that whilst some might continue to accept the truth of alchemy, “it is truer and more prudent the opinion of those who acknowledge that it is useless and pernicious to the *res publica*.”[[63]](#footnote-63)

Peña then proceeded to analyse the reasons why some individuals continued to defend alchemy. He noted that it remained unclear whether it was possible to create precious metals or gems. Many, he continued, do not follow Eymerich’s maxim “that anything that is utterly improbable should not be believed,” and as a consequence they claimed to understand the means by which alchemy worked.[[64]](#footnote-64) Perhaps invoking the reference to *pauperes alchimistae* in the opening sentence of John XXII’s bull, Peña claimed that some alchemists argued that if the art were practised by a prince, or an otherwise wealthy person, they should be freed from the suspicion cast by Eymerich. This was because, unlike the poor, the rich could sustain the financial losses that an alchemist would inevitably incur during the course of his or her experiments. Reduced to poverty, it was the poor who would resort either to the invocation of demons or striking fake coin. Peña noted that whatever the alchemists might argue, they were unable to circumvent the judgement imposed in the John XXII’s bull. By means of this bull the pope had “imposed grave penalties upon those who sell alchemical gold, silver or money made from them: for these transformations are sophistic, and not true, as the Pope elegantly noted.”[[65]](#footnote-65) Peña therefore invoked John XXII’s authority to settle the case that *chrysopoeia* was not naturally possible. He then used this evidence to make a further point, one not contemplated in the original bull. He used it to support Eymerich’s argument that those who practised *chrysopoeia* should not only be considered frauds but also as potential heretics.

**Conclusion**

By the time that the Roman Inquisition was founded in 1542, the fact that operative arts could be prosecuted as forms of heresy had long been established in canon law and inquisitorial practice. There were, however, multiple possible standards available for assessing the legitimacy of alchemy. In this article I have traced two approaches that developed out of the thought of Thomas Aquinas. When Aquinas, Nider, and later Institoris and Sprenger, discussed alchemy they treated it as something to think with, rather than about. They treated alchemy not as an art which presented clear and pressing dangers that demanded the theologian’s immediate attention, but as a device useful for determining the limits of demonic power. Nicholas Eymerich developed an alternative view of alchemy. He treated it as an activity requiring the inquisitor’s attention on the ground that it offered compelling evidence of heretical activity. His approach to this art was, nevertheless, informed by Aquinas’s central contention that operative arts should be considered legitimate if they worked their effects by natural means. For Eymerich, the suspicion that an alchemist might be attempting to achieve naturally impossible ends provided the basis for further inquisitorial investigation of their activities. Francisco Peña later defended and elaborated this conception of alchemy. It was by no means inevitable that all inquisitors would accept his opinion. In the later sixteenth century, practising inquisitors possessed a complex, and sometimes contradictory, set of criteria for investigating alchemy, which they in turn were required to interpret.

**Acknowledgements**

I am grateful to my co-editors – Andrew Campbell and Lorenza Gianfrancesco– for carefully reading earlier drafts of this essay, and to our fellow contributors Peter Murray Jones and Justin Rivest for their comments on an early draft. I also wish to thank the two anonymous reviewers for their thoughtful and helpful comments.

1. Unless otherwise stated, all translations are my own. [↑](#footnote-ref-1)
2. Ugo Baldini and Leen Spruit, *Catholic Church and Modern Science Volume 1 XVIth Century Documents,* 4 tomes (Rome: Libreria Editrice Vaticana, 2009). For further discussion see Neil Tarrant, “Censoring Science in Sixteenth-Century Italy: Recent (and Not-So-Recent) Research,” *History of Science* 52 (2014): 1-27. [↑](#footnote-ref-2)
3. Baldini and Spruit, *Catholic Church and Modern Science*, tome 1, 419-23. [↑](#footnote-ref-3)
4. Zachary A. Matus, “Alchemy and Chemistry in the Middle Ages,” *History Compass* 10 (2012): 934-45, on 939. [↑](#footnote-ref-4)
5. Martha Baldwin, “Alchemy and the Society of Jesus: Strange Bedfellows?” *Ambix* 40 (1993): 41-64, on 43-45. [↑](#footnote-ref-5)
6. Chiara Crisciani, *Il papa e l’alchimia: Felice V, Guglielmo Fabri e l’elixir* (Rome: Viella, 2002), 43-54. [↑](#footnote-ref-6)
7. William R. Newman, “Technology and Alchemical Debate in the Late Middle Ages,” *Isis* 80 (1989): 423-445; Newman, *Promethean Ambitions: Alchemy and the Quest to Perfect Nature* (Chicago: University of Chicago Press, 2004), chapter 2; Newman, “Art, Alchemy, and Demons: The Case of the *Malleus maleficarum* and its Medieval Sources,” in *The Artificial and the Natural: An Evolving Polarity*, ed. Bernadette Bensaude-Vincent and William R. Newman (Cambridge Mass. and London: MIT Press, 2007), 109-33. [↑](#footnote-ref-7)
8. 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. [↑](#footnote-ref-8)
9. For a brief biography of Peña and his role in the Congregation of the Index, see the biographical vademecum in Baldini and Spruit, *Catholic Church and Science*, vol. 1 tome 4, 2905-06. [↑](#footnote-ref-9)
10. For a concise overview of the development of alchemy see Lawrence M. Principe, *The Secrets of Alchemy* (Chicago: Chicago University Press, 2013), chapters 1-3. [↑](#footnote-ref-10)
11. First Lateran Council, canon 15, in Rev. H. J. Schroeder, *Disciplinary Decrees of the General Councils: Texts, Translation, and Commentary* (St Louis and London: B. Herder Book Co., 1937), 543: “Quicumque monetam falsam scienter fecerit aut studiose expenderit, tanquam maledictus et pauperum virorum oppressor, nec non civitas turbator, a fidelium consortio separetur.” [↑](#footnote-ref-11)
12. Newman, “Technology and Alchemical Debate,” 425. [↑](#footnote-ref-12)
13. For a discussion of the origins and use of the *Sciant artifices* by medieval Christian and Muslim authors see Newman, *Promethean Ambitions*, 36-43; Newman, “Technology and Alchemical Debate,” 427-33; Principe, *Secrets of Alchemy*, 58-62. [↑](#footnote-ref-13)
14. Newman, *Promethean Ambitions*, 44-50; the quote from Albertus is Newman’s translation, on 46. [↑](#footnote-ref-14)
15. On Albertus and alchemy see: J. R. Partington, “Albertus Magnus on Alchemy,” *Ambix* 1 (1937): 3-20; Pearl Kibre, “Alchemical Writings Attributed to Albertus Magnus,” *Speculum* 17 1942: 499-518; 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. [↑](#footnote-ref-15)
16. Newman, “Technology and Alchemical Debate,” on 431-33. [↑](#footnote-ref-16)
17. Aquinas, *Super sententiis*, lib. 2. d. 7. [↑](#footnote-ref-17)
18. Aquinas, *Super sententiis*, lib. 2. d. 7 q. 3. a. 1 co.: “Daemones virtute propria nullam formam in materiam influere possunt, nec accidentalem nec substantialem.” [↑](#footnote-ref-18)
19. Aquinas, *Super sententiis*, lib. 2. d. 7 q. 3. a. 1 co. [↑](#footnote-ref-19)
20. Aquinas, *Summa theologica*, IIa-IIae q. 11. [↑](#footnote-ref-20)
21. Aquinas, *Summa theologica*, IIa-IIae q. 81 a. 5 co.; on virtue observing a mean see Ia-IIae q. 64 a. 1 co. [↑](#footnote-ref-21)
22. On superstition see Aquinas, *Summa theologica*, IIa-IIae, q. 92 a. 1 co.: “Sic igitur superstitio est vitium religioni oppositum secundum excessum, non quia plus exhibeat in cultum divinum quam vera religio, sed quia exhibet cultum divinum vel cui non debet, veleo modo quo non debet.” [↑](#footnote-ref-22)
23. Aquinas, *Summa theologica*, IIa-IIae, q. 92 a. 2 co. [↑](#footnote-ref-23)
24. Aquinas, *Summa theologica*, IIa-IIae, qq. 93-96. [↑](#footnote-ref-24)
25. For further discussion see Tarrant, “Giambattista Della Porta and the Roman Inquisition,” 609-12. [↑](#footnote-ref-25)
26. Aquinas, *Summa theologica*, Ia q. 114 a. 4 ad. 2: “sed possunt adhibere quaedem semina quae in elementis mundi inveniuntur, ad huius modi effectus complendos; ut Augustinus dicit III *De trinitate*.” [↑](#footnote-ref-26)
27. Augustine *De trinitate*, III. 8. For further discussion of Augustine, seeds, and alchemy see Barbara Obrist, “L’art de l’alchimiste, du peintre et du sculptuer face à la nature: du moyen âge à la ‘revolution scientifique’,” in *Alchimies: Occident-Orient*, ed. Claire Kappler and Suzanne Thiolier-Méjean(Paris: L’Harmattan, 2006), 15-44, on 26. [↑](#footnote-ref-27)
28. Aquinas, *Summa theologica*, Ia q. 114 a. 4 ad. 2: “Ideo dicendum est quod omnes transmutationes corporalium rerum, quae possunt fieri per aliquas virtutes naturales, ad quas pertinent praedicta semina, possunt fieri per operations demonum, huiusmodi seminibus adhibitis; sicut cum aliquae res transmutantur in serpents vel ranas, quae per putrefactionem genari possunt.” [↑](#footnote-ref-28)
29. Aquinas, *Summa theologica*, Ia q. 114 a. 4 ad. 2. [↑](#footnote-ref-29)
30. Aquinas, *Summa theologica*, IIa-IIae q. 77. a. 2. ad. 1: “quae non convenient in auro sophisticato”; “veram speciem non habeat auri et argenti”. [↑](#footnote-ref-30)
31. Aquinas, *Summa theologica*, IIa-IIae q. 77 a. 2. ad. 1: “Si autem per alchimiam fieret aurum verum, non esset illicitum ipsum pro vero vendere, quia nihil prohibet artem uti aliquibus naturalibus causis ad producendum naturales et veros effectus; sicut Augustinus dicit, in III *De trinitate*, de his quae arte Daemonum fiunt.” [↑](#footnote-ref-31)
32. Recent research has questioned whether the Cathars genuinely constituted an organised group of heretics awaiting discovery. See for example Mark Gregory Pegg, *A Most Holy War: The Albigensian Crusade and the Battle for Christendom* (Oxford: Oxford University Press, 2008); R.I. Moore, *The War on Heresy: Faith and Power in Medieval Europe* (London: Profile Books, 2012). [↑](#footnote-ref-32)
33. For a discussion of the factors driving the Dominicans’ participation in inquisition, see Christine Caldwell Ames, *Righteous Persecution: Inquisition, Dominicans and Christianity in the Middle Ages* (Philadelphia: University of Pennsylvania Press, 2009). [↑](#footnote-ref-33)
34. For a discussion of the development of the Inquisition, see Edward Peters, *Inquisition* (Berkeley and Los Angeles: University of California Press, 1989), chapters 1-2; Andrea del Col, *L’inquisizione in Italia, dal XII al XXI secolo* (Milan: Mondadori, 2006), part 1. On the institutionalisation of the Office of Inquisitor see Richard Kieckefer, “The Office of the Inquisition and Medieval Heresy: The Transition from Personal to Institutional Jurisdiction,” *Journal of Ecclesiastical History* 46 (1995): 36-61. [↑](#footnote-ref-34)
35. For a discussion of inquisitorial handbooks see L. J. Sackville, “The Inquisitor’s Manual at Work,” *Viator* 44 (2013): 201-16. An English translation of the *Ordo processus narbonensis* is available in Walter L. Wakefield, *Heresy, Crusade and Inquisition in Southern France, 1100-1250* (London: G. Allen and Unwin, 1974), 250-58; for the *Summa de Catharis et Pauperibus de Lugduno* see Walter L. Wakefield and Austin P. Evans, *Heresies of the High Middle Ages* (New York: Columbia University Press, 1991), 329-46. [↑](#footnote-ref-35)
36. *Corpus iuris canonici* (Rome, 1582), lib. 5. 2. 8, col. 622: “nisi haeresim saparent manifeste.” [↑](#footnote-ref-36)
37. *Corpus iuris canonici*, lib. 5. 2. 8, column 622: “in sicut est circa aras idolorum nefarias preces emittere, sacrificia offerre, daemones consulere, eorum responsa suscipere. 26 q. 2. hi qui. & q. 4. igitur. vel associant sibi propter sortes exercendas haereticos. vel faciant praedicta cum corpore vel sanguine Christi, vel in sortibus ut possint habere respo[ns]a, puerum rebaptizant. vel his similia.” [↑](#footnote-ref-37)
38. *Spondent quas non exhibitent* in *Liber sextus decretalium d. Bonifacii Papae VIII Clementis Papae V Constitutiones, Extravagantes tum viginti d Ioannis Papae XXII tum communes* (Lyons, 1584), col. 332: “suae ignorantiae conscii … ut tandem quod non est in rerum natura, esse verum aurum vel argentum sophistica transmutatione confingant.” [↑](#footnote-ref-38)
39. For the text of the letters see Joseph Hansen, *Quellen und Untersuchungenzur Geschichte de Hexenwahns und der Hexenverfolgungim Mittelalter* (Bonn: Carl Georgi, Universitäts-Burchdruckerei und Verlag, 1901), 4. [↑](#footnote-ref-39)
40. Richard Kieckhefer estimated that in the period 1300-1330 there were as few as one trial for magic per year across Europe in every type of court. See *European Witch Trials: Their Foundations in Popular and Learned Culture, 1300-1500* (Berkeley and Los Angeles: University of California Press, 1976), 10. [↑](#footnote-ref-40)
41. Bernard Gui, *Practica inquisitionis heretice pravitatis*, ed. C. Douais (Paris: Alphonse Picard, 1886), on 292-93. For further discussion of Gui’s text see James Given, *Inquisition and Medieval Society: Power, Discipline, and Resistance in Languedoc* (Ithaca and London: Cornell University Press, 1997), 46; Sackville, “Inquisitor’s manuals,” 210. [↑](#footnote-ref-41)
42. Hansen, *Quellen*, 5: “ad infligendas poenas omnes et singulas, praetor bonorum confiscationem dumtaxat, quas de iure merentur heretici.” For a discussion of the context in which the bull was produced see Alain Boureau, *Satan the Heretic: The Birth of Demonology in the Medieval West*, trans. Teresa Lavender Fagan (Chicago and London: Chicago University Press, 2006); Michael D. Bailey, *Fearful Spirits, Reasoned Follies: The Boundaries of Superstition in Late Medieval Europe* (Ithaca and London: Cornell University Press, 2013). [↑](#footnote-ref-42)
43. Nicholas Eymerich, *Directorium inquisitorum* (Rome, 1587), *Pars* II, qq. 42-43, fols. 234-41. [↑](#footnote-ref-43)
44. Eymerich, *Directorium*, fols. 236-240, *Super illius specula* cited on, fols. 239-40. [↑](#footnote-ref-44)
45. Eymerich, *Directorium*, fols. 234-35, quote on fol. 234: “quae quidem sapiunt haeresim manifeste.” [↑](#footnote-ref-45)
46. Eymerich, *Directorium*, Pars III, fol. 295: “nam quando non possunt pertingere ad finem intentum, daemonis auxilium quaerunt, invocant & implora[n]t & implorando obsecrant & sacrificant tacite, vel expresse.” [↑](#footnote-ref-46)
47. For a survey of recent literature on the observant movement see James D. Mixson, “Religious Life and Observant Reform in the Fifteenth Century,” *History Compass* 11 (2013): 201-14; and on observant movement in the Dominican Order, see Robin Vose, “The Dominican Order in Late Medieval and Early Modern History,” *History Compass* 11 (2013):967-82. See also the essays in James Mixson and Bert Roest, *A Companion to Observant Reform in the Late Middle Ages and Beyond* (Leiden and Boston: Brill, 2015), especially Michael D. Bailey “Reformers on Sorcery and Superstition,” 230-54. [↑](#footnote-ref-47)
48. On Nider and the *Formicarius* see Michael D. Bailey, *Battling Demons: Witchcraft, Heresy, and Reform in the Late Middle Ages* (Pennsylvania: Pennsylvania State University Press, 2003), in particular chapter 5. [↑](#footnote-ref-48)
49. Johannes Nider, *Praeceptorium divinae legis, sive Expositione decalogi* (Paris, 1474), 1.11. A.: “quis aut occulta, aut futura i[n]vestigare nitit[ur] p[er] pacta aut occulta, aut manifesta inita cu[m] demonibus.” [↑](#footnote-ref-49)
50. Nider, *Praeceptorium*, 1.11.7: “An veru[m] sit quod malefici possint facere vera a[n]i[m]alia arte suas.”; 1.11.8: “An op[er]e demonu[m] tra[n]sformat[i]o[n]es p[ossu]nt fieri ho[m]ine[m] in bestias.” [↑](#footnote-ref-50)
51. Nider, *Praeceptorium*, 1.11.8. Since Nider’s text differs slightly from the version of Aquinas cited in n. 28above, I have included the passage here: “Dicit t[ame]n Tho[mas] p[ar]te p[ri]ma q. cxiiii. Ar. Iiii. Q[uo]d om[n]es tra[n]smutationes corp[or]arliu[m] rer[um], q[uae] possunt fieri p[er] aliquas v[ir]tutes naturales, ad quas p[er]tinent semina q[ui] in eleme[n]tis huius mu[n]di inveniu[n]t[ur], po[ssu]nt fieri p[er] op[er]ationes demonu[m], h[uius] mo[d]i semi[n]ibus adhibitis.” [↑](#footnote-ref-51)
52. Nider, *Praeceptorium*, 1.11.7 and 8. [↑](#footnote-ref-52)
53. Christopher S. Mackay, *The Hammer of Witches: A Complete Translation of the Malleus Maleficarum* (Cambridge: Cambridge University Press, 2006), 1, q. 5, on 145-46; c.f.: Aquinas, *Summa theologica* IIa-IIae q. 95 a. 5. On talismans see *Hammer* 1 q. 2 ag. 8 and ra. 8, on 108 and 118. [↑](#footnote-ref-53)
54. Mackay, *Hammer of Witches*, part 1, q 1, 91-105, quote 96. [↑](#footnote-ref-54)
55. Mackay, *Hammer of Witches*, 1, q. 1, 92-105. For a contrasting interpretation of this passage see Newman, “Art, Alchemy, and Demons,” especially 110-17 and 127. [↑](#footnote-ref-55)
56. On the formation of the Roman Inquisition see Christopher Black, *The Italian Inquisition* (New Haven and London: Yale University Press, 2009) chapters 1-2; Peters, *Inquisition*, chapter 4; Del Col, *Inquisizione*, part 2. [↑](#footnote-ref-56)
57. On the inquisition of magic in late fifteenth-century Italy, see Michael M. Tavuzzi, *Renaissance Inquisitors: Dominican Inquisitors and Inquisitorial Districts in Northern Italy, 1474-1527* (Leiden and Boston: Brill, 2007), chapter 5; on the period after 1542, see Ruth Martin, *Witchcraft and the Inquisition in Venice, 1550-1650* (Oxford: Basil Blackwell, 1989); Jonathan Seitz, *Witchcraft and Inquisition in Early Modern Venice* (Cambridge: Cambridge University Press, 2011). [↑](#footnote-ref-57)
58. For the Indices of 1559 and 1564 see *Index des livres interdits*, ed. Jesús Martínez de Bujanda (Sherbrooke: Centre d'études de la Renaissance, Université de Sherbrooke, 1990), vol. 8. [↑](#footnote-ref-58)
59. On the Tolentino case see Baldini and Spruit, *Catholic Church and Modern Science*, vol. 1, tome 1 “Alchemy,” docs. 1-4, especially doc. 2, “Pedro de Lunel, Bishop of Gaeta, to Scipione Rebiba Cardinal of Pisa, in Rome (Gaeta, 21 June 1574),” 425-26: “in uno pretende, che la materia prima fu prodotta da Dio, e non creata da donde inferisce che eternamente rimane … Demone in forma di huomo negro, ma con corona sul capo.” [again, ellipses to avoid two separate quotations?] [↑](#footnote-ref-59)
60. On the Inquisition and the regulation of knowledge claims about the natural world, see Francesco Beretta, “Orthodoxie philosophique et inquisition romaine au 16e–17e siècles. Un essai d’interprétation,” *Historia philosophica* 3 (2005): 67–96. [↑](#footnote-ref-60)
61. Francisco Peña*, In tres partes Directorii Inquisitorum Nicolai Eymerici Scholiorum, seu Adnotationum*. (Rome, 1578), fol. 143: “Nam cum multi vera arte destituti, mirailla opera, de quibus diximus, fabricare non possent, ad demones confugerunt, qui haec illos docerent.” For a more detailed discussion of Peña’s account of natural magic see Tarrant, “Giambattista Della Porta,” 620-21. [↑](#footnote-ref-61)
62. Peña, *Scholiorum*, fol. 144: “Non est contemnendum hoc Eymerici consilium adversus Alchimistas, quod verum esse multis posset exemplis comprobari. Nam ut ceteros omittam, Arnaldum Villanovam scimus Alchimistam, magnum fuisse haereticum, et daemonum invocatorem”. [↑](#footnote-ref-62)
63. Peña, *Scholiorum*, fol. 144: “verior ettutior sente[n]tia eorum est, qui inutilem et reipublicae perniciosam esse fatentur.” [↑](#footnote-ref-63)
64. Peña, *Scholiorum*, fol. 144: “ne quis prorsus improbabilem esse credat hanc Eymerici sententiam.” [↑](#footnote-ref-64)
65. Peña, *Scholiorum*, fol. 144: “gravissimas poenas illis imponit, qui alchimitum aurum, vel argentum, aut monetam ex illis confectam vendunt: nam hae transformations sophisticate sunt, non verae, ut optime scribit ibi Romanus Pontifex.” [↑](#footnote-ref-65)