The Science of Witchcraft

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On December 9th, 1484, Pope Innocent VIII issued a papal bull reiterating the authority of the Catholic Church on the matter of witchcraft. The Pope spoke with a heavy heart; news from northern Germany had brought “bitter sorrow” to him and his colleagues. Men and women in the provinces of Mainz, Cologne, Salzburg, and Bremen had “abandoned themselves to devils, incubi and succubi” and by the spells and incantations of the demoniac had engaged in horrific acts of murder, abortion, and violent destruction, sparing not even the livestock and produce of the earth (Kramer and Sprenger 1:1). Witchcraft was a delicate issue in the Christian community: acknowledging that some individuals acted on behalf of the demoniac required belief in demons themselves, and this belief often straddled thin line between orthodoxy and heresy.

Pope Innocent VIII sought to amend the situation by granting legal inquisitional rights to Heinrich Kramer and Jacob Sprenger, two Dominican professors of theology. The papal bull of Innocent VIII gave Kramer and Sprenger official authority to “apply potent remedies to prevent the disease of heresy” in north Germany. As the pope wrote, “We [the Church] decree and enjoin the aforesaid Inquisitors to be empowered to proceed to the just correction, imprisonment, and punishment of any persons” (Kramer and Sprenger 1:1). The written word would prove to be the greatest weapon against naysayers and heretics: in 1486, Kramer and Sprenger drafted the three-part manual *Malleus Maleficarum (The Hammer of Witches)*, in order to fully demonstrate...
the complexities of witchcraft and its potential ramifications within catholic orthodoxy.

The Dominicans first worked to prove the existence of the demoniac. The Church wanted to affirm this truth: witchcraft was a dangerous reality. In addition to consulting biblical scripture, Kramer and Sprenger employed the works of natural philosophers such as Plato, Aristotle, Avicenna, Hippocrates, and Galen to lend support to theories explaining how the supernatural intervened in the natural world. The Dominicans utilized natural philosophy in order to validate the existence of witchcraft by demonstrating how immaterial demons could affect the inner senses and the bodily humors, constructing a Christian scientific ideology that accepted an interaction between theology and secular reasoning.

Natural Philosophy and Christianity

Kramer and Sprenger understood the value of natural philosophy within the Christian context. Centuries prior, the Dominican Albert the Great (1200-1280 C.E.) had set out to interpret the entire Aristotelian corpus, knowing well that the Greek philosopher’s work had profound significance for Christian theology. In doing so, Albert founded Christian Aristotelianism (a philosophy that incorporates the work of Aristotle into Christian theology) for the benefit of the Dominican friars. Albert’s pupil Thomas Aquinas further reinforced his mentor’s work by confronting theological problems in Aristotelian philosophy, arguing that God works through nature and that philosophy can explain the reality of nature. Since the Dominicans believed that the theories of natural philosophy proved the reality of the world as well as the reality of the heavens, they relied heavily upon the established theories of early Greek natural philosophers in order to develop sound arguments supporting the existence of demoniac phenomena.

Greek natural philosophy, which led to the development of modern science, was among man’s earliest attempts to explain the world by means of serious, critical inquiry. These inquiries led to the creation of schools of thought concerning various phenomena and contemporary epistemological paradigms. Natural philosophy expanded with the advent of “paradigm shifts”; that is, the adaptation of philosophical theories into related, or entirely different, frameworks of general knowledge. Early Greek natural philosophy sought to explain the
cosmos by natural means, excluding divine intervention almost entirely. This thinking formed a distinction between the supernatural and the natural and created a paradigm upon which later philosophers would formulate ideas about the natural world.

As Dominicans, Kramer and Sprenger belonged to a group of theologians who acknowledged the importance of science and encouraged a philosophical balance between rationality and spirituality. In addition to finding truth in sacred texts, the Dominicans sought truth in the physical world around them. They studied the theories of Aristotle and rationalized theological claims through the Christian Aristotelianism of Albert and Aquinas. Christian Aristotelianism combined elements of Platonic metaphysics with Aristotle's materialist worldview to create a science that allowed for the existence of God.

In the fourth century B.C.E., Plato had argued that the world was composed of two realms: a realm of forms and ideas, which contained the perfect ideas of every single thing, and the material realm in which these forms and ideas were imperfectly replicated. Plato believed that nature was the result of the Demiurge, the prime-mover of a finite cosmos with a beginning and a cause. The Demiurge was unmoving and changeless and existed in the realm of forms and ideas. This theory had great influence on medieval Christianity during the revival of Greek philosophy in that it allowed for the inclusion of God and affirmed the separation of perfect and imperfect (or divine and mortal) forms. Plato created a cosmological model in which the earth was the center of all things, and the motions of the heavens were the result of purpose and design. He differentiated between the form and the matter of physical things; as in Christian doctrine, the soul and the body were separable entities.

Plato believed that all forms of intelligent life were perfect souls imprisoned in imperfect bodies and the only way to experience the true reality of nature was to bypass mortal sense experience, which was limited and incapable of revealing truth. His idea that one can only know essential reality “through the discourse of reason unaided by the senses” (Lindberg 48) drew a wide community of followers, though his student Aristotle later refuted the idea and proposed that actual knowledge was in the essence of physical objects, and that one must utilize the senses in order to understand the realities therein. In the wake of
Aristotle, natural philosophy began to focus primarily on the physical, material world.

Aristotle’s work greatly influenced Christian theologians, but some elements of his corpus conflicted with certain Christian beliefs. Aristotle focused on the world of change and nature rather than on the eternal realm of forms and perfection. He believed that the process of acquiring knowledge began with the senses (thus giving priority to observation, an essential element of modern science) and led to intuition concerning the universal features of subjects and thus the fundamental realities of the world. Aristotle had a lasting effect on natural philosophy well into the Middle Ages, a result of his ability to persuade with logically sound explanation.

By the early first millennia C.E., many Christian scholars had abandoned the pagan works of Aristotle and most of his contemporaries because many of the ideas were contrary to Christian theology. Some Christian apologists studied Platonism to find philosophies that supported the validity of various Christian claims such as the finite nature and creation of the universe and the existence of God. This blend of Platonic philosophy and Christian mysticism, called Neoplatonism, was an attempt to find harmony between natural philosophy and religion. Advocates of these new sciences, such as St. Augustine of Hippo, argued that Christians should look to natural philosophy as a handmaiden of religion. He believed that the Church could use science to support Christian theology, a belief that carried into the Dominican tradition and, ultimately, *Malleus Maleficarum*.

Greek philosophy had a lasting effect on Christian scholars and was invaluable for members of the faith who wished to synthesize science and religion. The task to do so, however, was difficult. Utilizing reason to prove the divine allowed for the idea that reason could also *disprove* the divine, a major problem in the relationship between science and religion. With this in mind, Kramer and Sprenger referenced Christian Aristotelianism to support their theological arguments and studied the works of Islamic philosopher Avicenna (980-1037 C.E.) and Greek philosopher Hippocrates (460-377 B.C.E) to validate theories as to how demons interact with the natural world through the inner senses and the bodily humors.
Heretical Inquiries

Kramer and Sprenger believed that science was essential for understanding the realities of the perceivable world, but they struggled with the theological relevance of witchcraft. Many Christians doubted that belief in supernatural forces (other than Christ and God) was orthodox. By proving the reality of witchcraft, Kramer and Sprenger ultimately strove to reveal two truths: first, that belief in the existence of the demoniac was essential to the Catholic faith; and, second, that demons did intervene with the material world.

The Dominicans organized Malleus Maleficarum into three parts, each of which they divided into a series of questions. This scholastic method for advancing their argument was efficient and practical. They cited the objections to the question first, making sure to leave no stone unturned, and then presented their arguments. The Malleus Maleficarum opens with Part I, Question I: “Whether the belief that there are such beings as witches is so essential a part of the Catholic faith that obstinately to maintain the opposite opinion manifestly savours of heresy” (Kramer and Sprenger 1:1).

The Dominicans twisted the idea that those who believe in witchcraft are heretics against itself, stating that any man who “gravely errs in an exposition of Holy Scripture is rightly considered to be a heretic” (Kramer and Sprenger 1:1). Whatever stands against orthodoxy is, by definition, heresy. They presented biblical text to reinforce the reality of witchcraft, noting that in the 18th chapter of Deuteronomy God commands “that all wizards and charmers are to be destroyed” (qtd. in Kramer and Sprenger 1:1). And in Leviticus, they remind readers, God says, “the soul which goeth to wizards and soothsayers to commit fornication with them, I will set my face against that soul, and destroy it out of the midst of my people” (qtd. in Kramer and Sprenger 1:1). It was a simple remedy; Holy Scripture itself acknowledged the existence of wizards and soothsayers and hence proved the existence of the demoniac.

Kramer and Sprenger further supported their argument by discussing the work of Thomas Aquinas, the Dominican and Christian Aristotelian who also claimed that wizards and sorcerers did exist and that God permitted their existence. After proving through sacred scripture that denying the existence of witchcraft was heresy, Kramer
and Sprenger turned to natural philosophy to show how immaterial demons interacted with the material world.

Heavens, Souls, and Inner Senses

In the Malleus, the objection to Question I states that the heavens have the greatest influence on the natural world. Demons must, therefore, affect the motions of the heavens if they are to interact with the physical properties of nature. The objection further reasons that “it is unlawful to hold that the devil’s evil craft can apparently exceed the work of God, so it is thus unlawful to believe that... man and beast, can be harmed and spoiled by the power of the devil (Kramer and Sprenger 1:8 ). This objection created a riddle which questioned the power and authority of the divine. Given that the incorruptible nature of the heavens reflected the incorruptible nature of God, how could it be that demons have an influence within a sphere governed by God? Kramer and Sprenger thus needed to provide a solution as to how the heavens remained unchanged while the demoniac affected man. They looked to the work of the Islamic philosopher Avicenna for answers.

Avicenna, one of Aristotle’s most recognized commentators, provided theories as to how non-material agents such as the demoniac influenced material beings. Aristotle had argued that matter could only be moved by other matter; this was a premise for his theory that the universe existed infinitely, and a tenet which Christian Aristotelianism attempted to censor. Kramer and Sprenger, however, acknowledged the problem of non-material cause and cited Avicenna to elaborate on a possible loophole. They argue that “very often the soul may have as much influence upon the body of another to the same extent as it has upon its own body, for such is the influence of the eyes of anyone who by his glance attracts and fascinates another” (1:2). This was to say the actions of the soul affect the human body and that the body (a material agent) then affects other material bodies. In this way, non-material agents influenced the material world. This was crucial evidence that demons could do the same by affecting mortal senses.

The Malleus states that “the work of the soul is in the body, to inform it and fill it with life; so that it exists not merely locally, but in the whole matter” (Kramer and Sprenger 2:9). Demons, however, work locally, instigating changes in the mental faculties of man. Thomas Aquinas wrote that all angels, good and bad, by their natural power,
which is superior to all bodily power, are able to influence bodies. Kramer and Sprenger demonstrated this idea by providing examples as to how demons, with the permission of God, could enter the head and make impressions on the inner faculties corresponding to the bodily organs. And by those impressions the organs are affected in proportion as the inner perceptions are affected in the way which has been shown: that the devil can draw out some image retained in a faculty corresponding to one of the senses; as he draws from the memory, which is in the back part of the head, an image of a horse, and locally moves that phantasm to the middle part of the head, where are the cells of imaginative power; and finally to the sense of reason, which is in the front of the head. And he causes such a sudden change and confusion, that such objects are necessarily thought to be actual things seen with the eyes. (2: 9)

This explanation refers to the “inner senses,” faculties and functions of the spirit in the human mind. Kramer and Sprenger cited Avicenna’s theory on the inner senses, an early psychological concept, in order to explain in greater detail how immaterial demons interacted with the mind and thus the material world.

Many theories explaining the inner senses circulated during the Middle Ages but those of Avicenna had the most influence on Christian Europe and on the natural philosophies of Malleus Maleficarum. The Dominicans implemented Avicenna’s arguments in order to prove how demons manipulated human subjects through corpuscular motion, thus reinforcing the idea that satanic manipulation did in fact abide by natural laws. Kramer and Sprenger argued that the mental faculties of man (thoughts themselves) were physical entities with which the demonic could interact as if they were tangible objects existing outside of the intangible spirit.

Avicenna claimed that the mental functions of men were composed of five inner-senses which resided in three connected ventricles (cavities) in the head. Each sense affected the other in a particular order: common sense, imagination, cogitation, estimation (instinct), and memory.

Following Avicenna, Kramer and Sprenger believed the sensory
nerves of the body (i.e. eyes, tongue, ears, etc.) directly affected the common sense, which resided in the front ventricle. Common sense differentiated various modalities of perception from one another, allowing the individual to discriminate between bitter and sweet, hot and cold, etc. and is described in Malleus as the “sense of reason” (2: 9). It also received and filtered information relayed from the physical senses, implanting “images” on the imagination which existed in the back of the front ventricle, behind the common sense. Demons, they postulated, could transmute these images by implanting themselves in the head and disrupting the natural mental faculties in order to influence men. Having no legitimate method to witness or document this demonic transmutation, the Dominicans hypothesized a connection between Avicenna’s established theory of the mental faculties’ subconscious tendencies to reverse the imaginative process in dream and the advantage any demon would have in exploiting this counter-current of thought.

Avicenna believed that the common sense affected the imagination while one is awake, but in dream the function often reversed itself, allowing information stored in the memory to affect the common sense and thus muddle man’s ability to differentiate between reality and illusion. Kramer and Sprenger noted this as a vulnerability inherent in the inner senses, for demons could draw an image from memory and “push it” to the front of the head, deceiving the common sense by reversing the order of mental function. In this manner demons forced certain individuals (witches and their victims) to believe that things were real which, in fact, only existed in the mind.

The Dominicans believed that the cognitive sense could act completely independent of the other four inner senses to produce hallucinations and effect disorders. The cognitive sense (which followed the imagination in the process, relaying information from the physical senses through the inner senses) housed the rational soul of man and enabled animals to perform complex functions by piecing the images gathered through the first two inner senses together in new combinations, forming never before experienced images and memories (e.g. an image of a man and an image of a bird may connect to form an image of an angel, even though the individual has never perceived an angel in reality). Cognition was very active in dreams and Kramer
and Sprenger claimed that demons had the power to concoct images of illusion and unreality to delude the thoughts of man and forsake the physical senses. They argued that demons had the ability to enter the ventricles in order to act on images stored in memory: “For in these [the five inner senses] also the devils can stir up and excite the inner perceptions and humours, so that ideas retained in the repositories of their minds are drawn out and made apparent to the faculties of fancy and imagination, so that such men imagine these things to be true. And this is called interior temptation” (1:7). According to Kramer and Sprenger’s theory, a demon could thus enter the head of a man while he was sitting at home in front of a fire. In order to create a hallucination that would confuse or frighten the man, the demon would take an image of a wolf from the man’s memory and push it through his second ventricle (the cognitive and estimative senses), combining images of fire and its associated instincts with those of the wolf. The demon would then push this new image of a fiery, demonic wolf to the common sense (the sense of reason), where the man would then perceive an image of a fiery wolf standing in the room.

In this manner, the demoniac worked to terrify or seduce men (the image might be one of a beautiful woman or even an idea of some secret, heretical knowledge) and communicated with witches to convince them to commit blasphemous deeds. This same process of “interior temptation” affected the victims of witchcraft; Kramer and Sprenger believed that the victims of witchcraft perceived demonic images and thus believed that they were experiencing some frightful or debilitating reality. While the images were entirely of mental origin, the demon that transmuted the images was a physical reality.

This theory reflected Christian Aristotelianism in that it obeyed Aristotle’s idea that every motion required a cause, mainly the influence of another affecting body. Kramer and Sprenger demonstrated that the images stored in one’s head were in fact material bodies which spirits could move. Rather than creating images from nothing, demons had the ability to act on established images and memories; hence, this quelled the objection that spirits could not, as immaterial forms, directly affect the material functions of man.

Kramer and Sprenger argued that the spirit of a demon (a physical essence akin to those of ideas) entered men’s heads and influenced
the images therein, creating new and seemingly unnatural forms which were in fact mirages crafted from bits of memory and imagination. The “devil does not,” they argued, “change the perceptive and imaginative powers by projecting himself into them, but by transmuting them; not indeed by altering them” (1: 2). Kramer and Sprenger did not believe that demons could create images out of nothing – this would violate Aristotelian physics – but rather that they could transmute images already stored in the inner senses. The authors of Malleus Maleficarum were careful to integrate these theories of natural philosophy with their theological arguments and provided testimonies as to how demons coerced potential witches into an unholy and servile alliance.

In one of their more interesting examples of this demonic coercion, Kramer and Sprenger stated that demons were able to manipulate perceived reality in order to seduce women into blasphemous copulation through dark pacts. These pacts were made through ceremonies in which demons used elements of the natural world to achieve their unholy mission:

witches meet together in the conclave on a set day, and the devil appears to them in the assumed body of a man, and urges them to keep faith with him, promising them worldly prosperity and length of life; and they recommend a novice to his acceptance. And the devil asks whether she will abjure the Faith, and forsake the holy Christian religion and the worship of the Anomalous Woman (for so they call the Most Blessed Virgin MARY), and never venerate the Sacraments; and if he finds the novice or disciple willing, then the devil stretches out his hand, and so does the novice, and she swears with upraised hand to keep that covenant. And when this is done, the devil at once adds that this is not enough; and when the disciple asks what more must be done, the devil demands the following oath of homage to himself: that she give herself to him, body and soul, forever, and do her utmost to bring others of both sexes into his power. He adds, finally, that she is to make certain unguents from the bones and limbs of children, especially those who have been baptized; by all which means she will be able to fulfill all her wishes with his help. (2: 2)
The novice and the devil thus affirmed a pact and, after doing so, the novice agreed to practice witchcraft in order to sway the minds of other humans, leading them toward the power of the devil. The new witch undertook this task with the assistance of various demons who disturbed the minds of men by affecting their inner senses and thus the body. The devil corrupted the soul of a witch through this blasphemous pact, taking advantage of the novice’s inherent weakness as a woman and her unbalanced humours which by way of the zodiac and thus intemperate emotions led her to sin.

The Four Humors

Kramer and Sprenger clearly demonstrated how demons could affect the mind and, therefore, the physical world. This relationship between the inner senses and the body included the aforementioned extroversive action instigated through demonic manipulation of the cognitive process, as well as the delicate balance between mental function, emotion, and physical health. They claimed that “the devil can, by moving the inner perceptions and humours, effect changes in the actions and faculties, physical, mental, and emotional, working by means of any physical organ soever” (1:10). The humours to which the Dominicans referred were part of the Greek physician Hippocrates’ early medical doctrines on how four unique biological substances could infirm the body and mind. Changes in temperament agitated these substances; by altering the temperament of an individual, the demoniac altered the balance of the four humors and caused disease or death:

For since the devil has power over inferior things, except only the [immortal] soul, therefore he is able to effect certain changes in those things, when God allows, so that things appear to be otherwise than they are. And this he does, as I have said, either by confusing and deluding the organ of sight ... Or by operating on the imaginative faculty by a transmutation of mental images, as has been said. Or by some agitation of various humours, so that matters which are earthy and dry seem to be fire or water: as some people make everyone in the house strip themselves naked under the impression that they are swimming in water. (2: 7)
Hippocrates stated in his work The Nature of Man that “the human body contains blood, phlegm, yellow bile, and black bile. These are the things that make up its constitution and cause its pain and health” (Lloyd 262). The term “humor” is a translation of the Greek word chymoi, meaning juice or flavor. According to Hippocrates, the human body was healthy when these four humors were in correct proportion to one another both in strength and in quantity. Pain occurred when one of these humors was lacking or in excess; the affected area of the body often wept the associated humor (i.e. a cold would produce an excessive amount of phlegm, which would run out of the nose and cause headaches). Hippocrates claimed that the four humors were composed of varying qualities of heat, cold, dryness, and moisture. Phlegm was the coldest (by means of touch) and most viscous, increasing in the winter; blood was wet and warm, increasing in the spring; yellow bile was dry and hot, increasing in the summer; black bile was the driest and hottest, increasing in autumn. As Hippocrates stated, and as Kramer and Sprenger reiterated, the humors and the temperament of the body and mind directly correlated with each other. If an individual was born under the astrological sign of a choleric season, the individual was naturally more irritable; under a sanguine sign, more calm and collected.

Kramer and Sprenger argued that demons affected the humors via the inner senses in order to bring harm upon men. Witches could “learn the dominating characteristics of men, and so discover that some are more disposed to work witchcraft than others, and that they molest these chiefly for the purpose of such works (1: 3). Demons possessed those individuals who, by nature of their zodiac, held inherent qualities more apt to seduction and sin than others.

The Dominicans claimed that the humors were inferior elements over which the devil had power because he was able to affect the senses and, in turn, the disposition of the body. “For it is obvious,” they claimed, “that the disposition of a body variously causes many variations in the humours and character of the soul; for generally the soul imitates the complexions of the body” (1:5). The disposition of the body was immediately and powerfully influenced by the “lower nature” (compared to the higher heavens in which only God operates); this lower nature referred to the physical senses and inner senses of
man that the demoniac were able to manipulate. By transmuting the images stored in one’s memory, demons implemented a confusing reality in order to alter the temperament of the individual.

Kramer and Sprenger’s theory as to how the humors and the inner senses relate provided further explanation in accordance with Christian Aristotelianism and Christian theology about how immaterial demons affected the material world. The Dominicans acknowledged Aristotle’s axiom of corpuscular motion, that the motion of a body is the result of another body acting upon it, and prescribed the transmutation of thought to demonic intervention. The soul remained untouched as the demon entered the head, affected the images therein, and caused sensory disruption. The demon influenced the disposition of the body by causing anxiety, grief, and fear through the realization of disturbing images and thoughts. In turn, these emotions influenced the strength and quantity of their related humors and thus diseased the body.

Conclusion

Natural philosophy was important to the rhetoric of the Malleus because without observable evidence only theological claims could support the matter of witchcraft, which any heretic would inevitably dispute. The Dominicans utilized contemporary natural philosophy, both fully genuine and slightly modified (in the case of Christian Aristotelianism), so that any objection against the validity of their arguments would find itself at fault. Kramer and Sprenger combined evidence found in natural philosophy with the theological arguments of the Catholic Church to present a reasonable explanation of demonic influence.

Malleus Maleficarum provides valuable insight to both the secular and theological philosophies of the western world in the fifteenth century. While Kramer and Sprenger were not the first to appreciate and utilize the contemporary sciences, they did prove the utility of natural philosophy in supporting Christian ideologies by tackling a crucial issue that involved a connection between the temporal and metaphysical worlds. The Dominicans presented witchcraft in terms of biology, astronomy, and psychology, employing scientific fields that would not come into modern maturity until some time later. They pioneered new methods of incorporating scientific theory into religious ideologies by adopting the theories of Plato, Aristotle, Hippocrates, Avicenna,
and Galen. *Malleus Maleficarum* connected the works of these natural philosophers to threatening varieties of heresy, placing the authority of the Catholic Church in the hands of science.

**Notes**

1When citing passages from *Malleus Maleficarum*, I will refer to part and question parenthetically.

**Works Cited**


