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Matter over mind: Pietro d'Abano (d. 1316) and the science of physiognomy

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MATTER OVER MIND: PIETRO D'ABANO (D. 1316) AND THE SCIENCE OF PHYSIOGNOMY

by

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CERTIFICATE OF APPROVAL

PH.D. THESIS

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To Millie, in whose face could be read the most profound expressions of love and joy

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SCHOLARLY ABSTRACT

This dissertation examines the *Liber consolationis phisonomie* by Pietro d'Abano (c. 1250-1316) and places it both in the context of medieval psychological theories and of scholastic culture. The treatise, the earliest known work of an unconventional and underappreciated scholar, gives instructions to the reader on how to decipher a person's emotions, personality, intellectual capacities, and moral character from his or her physical features. The theoretical mechanisms posited to justify the practice of physiognomy illustrate how medieval people conceived of the relationship between mind and body, a relationship which this study elucidates through an analysis of various theories about emotion, personality, and intelligence.

Pietro d'Abano, who studied and taught at the universities of both Padua and Paris, was an unusual figure who bridged the occupational identities of physician and philosopher just as the study of psychology bridged the disciplines of medicine and philosophy. Pietro was highly materialist in his conception of human nature. While scholars of Pietro's work have noticed this tendency in his more mature thought, especially his medical text the *Conciliator*, his *Liber consolationis phisonomie*, has been largely overlooked. This is understandable as it is primarily an aphoristic summary of what physical traits indicate what mental ones. However, it provides valuable insights into the development of Pietro's thought as well as the role of physiognomy in medieval learned and popular culture.

This dissertation concludes with an analysis of Pietro's legacy, namely the reputation he obtained in the Renaissance for being a magician and necromancer. It examines medieval theories regarding magic, the role of spurious attributions in creating textual authority, and how Pietro's own materialist conception of the universe and human nature may have contributed to his constructed posthumous identity.

PUBLIC ABSTRACT

This dissertation examines the earliest known treatise of Pietro d'Abano (c. 1250-1316), the *Liber consolationis phisonomie*, and places it in the wider framework of medieval psychological theories and in the context of the university culture in which Pietro operated. Physiognomy, the practice of studying a person's physical appearance in order to discern his or her emotions, personality, and intellectual capacities, rests on the assumption that the physical body is connected to the spiritual self. This study explores how medieval people conceived of that relationship through a broader examination of theories about emotion, personality, and intelligence.

Pietro d'Abano was an unusual figure who bridged the occupational identities of physician and philosopher. While scholars have examined Pietro's psychological theories in his later works, particularly his medical textbook the *Conciliator*, the *Liber consolationis phisonomie* has been largely overlooked. This is understandable, as it lacks the intellectual sophistication of Pietro's more mature writings. However, the *Liber consolationis phisonomie* provides valuable insights into the development of Pietro's theories as well as the role of physiognomy in medieval elite and popular culture.

After his death, Pietro was largely remembered for a work about magic which he did not in fact write. This dissertation concludes by exploring the historical memory of Pietro with an analysis of the role played by falsely attributed texts in creating textual authority. The project considers medieval theories regarding magic and how Pietro's own work may have contributed to his posthumous identity as a magus.

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INTRODUCTION

Pietro d'Abano died in 1316. His death itself does not appear to have been a particularly dramatic event—at least, we have no accounts of it—but for the fact that it occurred in the middle of his heresy trial. Yet his death was not the end of his story. It is more fitting to regard it as a middle point, a change in direction, a moment at which we transition from the story about a real man named Pietro d'Abano to a fictional character who was in some ways just as significant as his living, breathing namesake. At some point after Pietro's burial, the authorities responsible for the proceedings against him judged it fitting to destroy his remains. They were worried enough about his teachings and followers that they ordered his bones exhumed and burned. Thomas of Strassbourg, Prior General of the Augustinian Friars from 1345-1357, records this event and also lists the heretical errors for which Pietro was found guilty. He observes with a note of triumph that Pietro's posthumous fate was justified. But was Thomas telling the truth? Did church authorities really dig up Pietro's grave for a public conflagration? Did Pietro really believe those ideas which Thomas attributed to him? There are no other accounts to corroborate Thomas's description of the burning of the bones, and later writers give slightly different versions of what became of Pietro. The fifteenth-century Italian physician Michael Savonarola insists Pietro's reputation for magic rather than heresy was what got him into trouble and claims that Pietro's powerful friends ultimately succeeded in having his Dominican enemies driven from Paris. Pietro's reputation for magic also manifested in other places: a magical grimoire, the *Heptameron*, was printed in 1496 under Pietro's name, and although it is now known to be spurious, such important Renaissance thinkers as Johannes Trithemius and Heinrich Cornelius Agrippa were convinced that it was genuine. The legends continued to grow: a sixteenth-century account from Bernardino Scardeone tells how Pietro's friends or housekeeper succeeded in hiding his remains so that inquisitors were forced to burn him in effigy only.

Lynn Thorndike, whose multi-volume *History of Magic and Experimental Science* was a watershed publication in the history of science, finds all of the accounts of what became of Pietro's remains to be dubious. Thomas of Strasbourg might be considered truthful, but Thorndike also notes that his account is characteristic of the "gossipy reminiscences" of friars when writing about saints and heretics. Thorndike also says Savonarola's story of the revenge taken on Pietro's Dominican accusers is patently untrue.[1] Nevertheless, Pietro d'Abano's reputation as a heretic or magician was great enough that seventeenth-century scholar and librarian Gabriel Naudé felt it necessary to include him in his *History of Magick*, a work devoted to exonerating men from antiquity to Naudé's own day of charges of magic. Pietro's fame as a physician and scientist rivaled his notoriety as a magician, though, and Naudé showers Pietro with praise for his medical achievements.[2]

Pietro d'Abano was also a legitimately famous physician in his own day. He actively participated in the translating craze which gripped so many medieval scholastics. These individuals translated works by numerous Greek and Arabic scientists, from Aristotle to Galen to Averroës. Pietro himself translated several texts from Greek into Latin and may even have been familiar with Hebrew or Arabic. He did not limit himself to the tradition of commenting on philosophical and medical texts by ancient authorities, a particularly popular genre at the University of Paris at this time, but seemed much more concerned with drawing together and reconciling the thought of his predecessors in freestanding works. Much of his scholarly output was begun while he was at the University of Paris, but he spent the last decade of his life as a professor of medicine at the University of Padua. Highly educated, widely travelled, a prolific author of influential medical and philosophical works, he has now sunk largely into obscurity. His

[1] For a summary of stories about Pietro's encounters with the Inquisition and death, see Lynn Thorndike, *A History of Magic and Experimental Science*, vol. 2 (New York, 1929), 881-882, 938-947.

[2] Gabriel Naudé, *The History of Magick, By Way of Apology For All the Wise Men who have unjustly been reputed Magicians, from the Creation, to the present Age*, Englished [*sic*] by J. Davies (London: 1657).

name is unknown even to most medievalists, especially those outside of Italy. All the same, Pietro has been making a steady reappearance in scholarship in more recent decades. This work was spearheaded by historian of medicine Nancy Siraisi in her 1973 work on the medieval *studium* at Padua, which devotes considerable discussion to Pietro's contributions to the study of medicine and the arts there.[3]

This dissertation is only partly about the real Pietro d'Abano and his thought. It also examines what he can show us about many other larger patterns in medieval intellectual life. For the purposes of this study, it is not relevant whether or not Pietro's bones were actually burned for heresy. How he was remembered, and how his image was used after his death to give authority to spurious texts, are as much a part of his legacy as his actual contribution to science and medicine. Pietro was not alone among medieval philosophers who were fondly misremembered by Renaissance magi as forerunners of their own intellectual projects; such illustrious figures as Albertus Magnus, Roger Bacon, Raymond Lull, and Arnau de Villanova also had reputations as magicians and alchemists which were the fabrications of later generations. Raymond Lull, for example, did not write a single work on alchemy, and his own writings suggest that he was skeptical of the practice, yet he became the "author" of a vast alchemical corpus (vast both in the number of works and in the number of copies made of each of those works) in the centuries following his death.[4]

The Renaissance strategy of putting a famous name on a work by a less famous or simply unknown author to garner readership goes back millennia and, far from being a

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[3] Nancy Siraisi, *Arts and Sciences at Padua* (Toronto: Pontifical Institute of Medieval Studies, 1973), *passim* but especially pp. 117-140 for Pietro's contributions to the study of the arts and pp.143-165 for his role in the school of medicine.

[4] All of these thinkers and their false reputations are addressed by Thorndike, but there have been many other thorough studies since. For example, on Raymond Lull, see Michela Pereira, *The Alchemical Corpus Attributed to Raymond Lull* (London: Warburg Institute, 1989), 1-5 and *passim*. A very recent consideration of the posthumous magical reputation of Roger Bacon, written for a popular audience, can be found in Brian Clegg, *The First Scientist: A Life of Roger Bacon* (New York: Carroll and Graff Publishers, 2003).

benign means of upping sales, has had a profound influence on Western history. Perhaps the most dramatic example would be the false attribution of the gospels, written decades after Jesus's death, to eyewitnesses. False attribution of texts to well-known and highly respected thinkers, especially Aristotle, has also shaped the history of philosophy and science. By attaching famous names to their works—especially if those works were subjects lacking universal approval or acceptance, typically things which we today might call "pseudo-sciences" like alchemy or astrology—authors gave their works added authority and thus ensured these works' ability to have a greater influence on subsequent generations than they would have had with a less famous name attached to them. Pietro himself, who like his contemporaries had great reverence for the writings of Aristotle, relied heavily on pseudo-Aristotelian works like the *Physiognomy*, the *Secretum secretorum*, and the *Problems* in his own works. Thus Pietro's legacy is not limited to his actual achievements but rather to the uses of his memory by subsequent generations, just as he contributed to the shaping of Aristotle's memory by taking spurious works for genuine ones.

The present study takes Pietro d'Abano's first known work, his *Liber compilationis phisonomie* (*LCP*), as its starting point. Pietro wrote the *LCP* while he was studying in Paris but dedicated it to an Italian, the Captain-General of Mantua, Bardelone Boncassi. In the surviving versions, dated 1295, Pietro suggests that an original version of the work had been stolen in transit, so we can guess its first composition came a few years earlier. The *LCP* has attracted relatively little attention from modern scholars, who prefer to focus on Pietro's more mature writings. His most popular work (in his own lifetime, in the centuries after his death, and amongst more recent scholars) was his *Conciliator*, first completed in 1303 while Pietro was working in Paris and then revised in 1310 after his return to his hometown of Padua. This later work survives in numerous manuscripts and went through at least eighteen print editions in the Renaissance. It is devoted to reconciling disparate medical opinions. As was conventional in medieval

scholastic discourse, the *Conciliator* is organized by questions with yes-or-no answers, followed by Pietro's interpretation of arguments from authorities in answer to those questions.[5] This particular work has played the central role in Pietro scholarship from Naudé himself to the works of modern scholars like Graziella Federici Vescovini, Danielle Jacquart, and Dag Nikolaus Hasse.[6] Pietro's *Expositio problematum Aristotelis*, also completed in 1310, once overshadowed by the *Conciliator*, has begun receiving considerable attention in recent decades from scholars such as Joan Cadden, Matthew Klemm, Gijs Coucke, and again Vescovini.[7] There is now a project underway to create a critical edition of the *Expositio*, evidence of a transition in scholarly interest from Pietro's medicine to his philosophy. Unlike these larger, later works, the *LCP* is almost always noted only in passing in studies of Pietro's work. Yet while never as widespread as the *Conciliator*, the *LCP* was not so overlooked in its own day as it has been by modern scholars. It was at least popular enough to survive in a number of manuscripts and to warrant a print edition in 1474 in Padua.[8]

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[5] For more on the layout and proliferation of *Conciliator*, see Matthew Klemm, "Medical Anthropology in the Late Middle Ages: Body, Soul, and the Virtues According to Peter of Abano (d. 1316)" (PhD diss, Johns Hopkins University, Baltimore, 2007), 12-14.

[6] Graziella Federici Vescovini, "Peter of Abano and Astrology," in *Astrology, Science, and Society: Historical Essays,* ed. Patrick Curry (Woodbridge: Boydell Press, 1987) , 31-39, and "L'antropologia naturale di Pietro d'Abano," in *Paradigmi* 45 (1997), 525-541; Danielle Jacquart, "La soleil, la lune, et les états du corps humain," in *Micrologus* 12 (2004), 239-256; Dag Nikolaus Hasse, "Pietro d'Abano's 'Conciliator' and the Theory of the Soul in Paris," in *Nach der Verurteilung von 1277: Philosophie und Theologie an der Universität von Paris im letzten Viertel des 13. Jahrhunderts. Studien und Texte*, ed. Jan. A. Aertsen, Kent Emery, Jr., and Andreas Speer (Berlin, 2001), 635-653.

[7] Joan Cadden, "Preliminary Observations on the Place of the *Problemata* in Medieval Learning." In *Aristotle's* Problemata *in Different Times and Tongues*, ed. Pieter de Leemans and Michèle Goyens (Leuven: Leuven University Press, 2006), 1-19; Matthew Klemm, "Medical Anthropology in the Late Middle Ages: Body, Soul, and the Virtues According to Peter of Abano (d. 1316)" (PhD diss, Johns Hopkins University, Baltimore, 2007); Gijs Coucke, "Translation and Textual Criticism in the Middle Ages: Peter of Abano's 'Expositio Probelmatum' (1310)," in *Filologia mediolatina* 16 (2009), 187-213; Graziella Federici Vescovini, "L'*Expositio succinta problematum Aristotelis* de Pierre d'Abano," in *Aristotle's* Problemata *in Different Times and Tongues*, 55-69.

[8] The 1474 edition forms the basis of this study; manuscripts listed in the bibliography have also been consulted. Thorndike had identified six manuscripts, the earliest of which (BN 16089 and BN 2598) may be 13th-14th century; other manuscripts are 15th-century (Thorndike, vol. II, 917-918). The most current count I have found for manuscripts of *LCP* is thirteen, identified by Johannes Thomann. Hubert Steinke, "Giotto und die Physiognomik," in *Zeitschrift für Kunstgeschichte* 59.4 (1996), 530, citing Johannes

Why has the *LCP* been so often neglected by recent scholars, and why choose to focus on it here? I offer the same answer to both questions—in the harshest terms, it is boring, unoriginal, and aphoristic; it does not reflect the kind of penetrating thought Pietro would later demonstrate, nor does it seem to say anything controversial. For the most part, Pietro simply lists physical traits and connects them with mental characteristics. When he finally attempts a theoretical explanation for the mechanism which makes these judgments valid, he simply repeats the views of his sources, especially Aristotle, Galen, and Avicenna. But what may appear as shortcomings are precisely what make it worth studying. It gives us insight into the origins of Pietro's thought and illustrates how he changed over time. It also indicates what he thought was worthy of his attention at the beginning of his career. Pietro begins the *LCP* with a list of body parts and the emotions or mental traits which those body parts indicate, starting at the top of the head and working his way down, with sections devoted to such parts as the hair, the nose, and the hands. This constitutes the entire first half of the work. Pietro then offers an exhaustive listing of the signs of different personality traits, such as audacity and timidity, and subsequently catalogues numerous traits—both mental and physical—that correspond with different signs of the zodiac and planets. As will be shown throughout this study, Pietro rarely provides a mechanism to justify why physiognomical judgments would be valid. This lack of detailed method is particularly interesting in the *LCP*, because Pietro later wrote extensively on physical mechanisms for pseudo-scientific phenomena like fascination and astrology—topics which were controversial and often judged as magical. Only in the last few pages of the *LCP* does Pietro go into an in-depth discussion of why physiognomy is valid. Here he draws on the major authorities in theoretical scholastic medicine and cites Galen and Avicenna in particular.

Thomann, *Studien zum Speculum physionomie des Michele Savonarola*, (Ph.D. Diss., Heidelberg, 1990), 148.

Physiognomy is the science of reading a person's emotional state, personality characteristics, and mental capacities in his or her physical features—nose shape, color and texture of hair, even voice. While it may not have been a popular topic for serious scholarly debate in Pietro's day, it was very much a part of the mental universe of medieval people—both university scholars and the wider population. Human beings, both then and now, make physiognomical judgments naturally and reflexively, especially in matters of transitory mood. For example, lowered eyebrows, narrowed eyes, and flared nostrils are indications across cultures that a person is angry. Modern psychological studies suggest that it is only sociopaths who struggle to identify basic emotions from facial expressions. Ancient, medieval, and early modern writings on physiognomy usually do not investigate whether or not these judgments are valid but simply identify which external trait corresponds with which internal one, as the *LCP* does. This reveals to us what people in different times and places took for granted about their own abilities to judge a person based simply on his or her appearance. While the academic study of physiognomy as a science did not reach its height of popularity until the early modern era, it did have a discernable presence in ancient and medieval thought. The Roman orator Polemon's work on physiognomy was particularly influential for later ancient, Islamic, and medieval European works on the subject, including the *LCP*, and the sources of Polemon's text and its legacy in early medieval Islam is the topic of a recent (2007) volume of articles.[9] However, the likewise recent (2005, 2009) work of historian Joseph Ziegler notwithstanding, physiognomy in medieval Europe has received relatively little attention in contrast with the attention given sources in ancient or early modern physiognomy.[10]

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[9] *Seeing the Face, Seeing the Soul: Polemon's* Physiognomy *from Classical Antiquity to Medieval Islam*, ed. Simon Swain (Oxford: Oxford University Press, 2007).

[10] Joseph Ziegler, "Skin and Character in Medieval and Early Renaissance Physiognomy," in *Micrologus* 13 (2005), 511-53, and "Physiognomy, science, and proto-racism, 1200-1500," in *The Origins of Racism in the West*, ed. Miriam Eliav-Feldon, Benjamin Isaac, and Joseph Ziegler (Cambridge: Cambridge University Press, 2009), 181-199.

While Pietro was unique among scholastics in devoting an entire work to physiognomy, material related to physiognomical judgments can often be found buried in scholastic discussions of other topics, as will be explored in Chapter 3 of this dissertation. To validate a belief in the scientific plausibility of physiognomy, medieval scholastics provided a mechanism connecting physical features to the mind. This required at least some level of materialism in their accepted view of psychology—the mind must have some power over the features, the features over the mind, or a common cause over both. For medieval people, the latter was generally true. They argued that some common internal cause, perhaps a combination of vital heat and the humors, could indeed influence both the exterior features and the mind. Physiognomy thus provides an unconventional side-entrance into studying the history of psychology, an approach which enables us to investigate unspoken assumptions as well as explicit debates.

Historians have approached the subject of medieval psychology from a variety of points of origin, which is in keeping with how it was approached by medieval people themselves. There was no single discipline dubbed "psychology" but rather an assortment of questions people asked about the nature of the mind. Medieval theories of perception and cognitive psychology have been the subjects of major works by such scholars as David Lindberg, Katherine Tachau, Katherine Park, and others, exploring how medieval thinkers engaged in conversation with each other and earlier authors, through their written commentaries, concerning how the mind receives and processes information.[11] Overlapping with, yet also often distinct from, the study of scholastic/philosophical psychology is medical psychology. Historians of medicine, such as Michael McVaugh and Nancy Siraisi, fruitfully explore how medieval physicians

[11] David C. Lindberg, *Theories of Vision from Al-Kindi to Kepler* (Chicago: University of Chicago Press, 1976); Katherine Tachau, *Vision and Certitude in the Age of Ockham: Optics, Epistemology, and the Foundations of Semantics, 1250-1345* (Leiden: Brill, 1988); *The Cambridge History of Renaissance Philosophy*, edited by Charles B. Schmitt (Cambridge: Cambridge University Press, 1988); *The Cambridge History of Late Medieval Philosophy*, vol. 1, ed. Robert Pasnau (Cambridge: Cambridge University Press, 2010).

learned from and interpreted earlier texts about health and the body.[12] Psychology was not purely an academic subject in the Middle Ages any more than it is today, and there are also relevant studies on the clinical and therapeutic aspects of psychology. Martha Nussbaum, focusing on Hellenistic philosophy, discusses the role of philosophy in the care and treatment of negative emotions. A recent doctoral dissertation by Na'ama Cohen-Hanegbi pertaining to the medieval treatment of emotional problems is particularly pertinent to this study, as it investigates the relationship between care provided by both priests and physicians and the difficulty in identifying psychological problems as either spiritual or physical.[13] This leads to perhaps the most important problem in psychology for medieval thinkers themselves, the role of the mind and body in virtues and vices. Many sins and vices actually were emotional in nature, and work by scholars like Siegfried Wenzel draw the connection between understandings of the nature of the mind and the problems of sin and salvation.[14] All of these studies help demonstrate why medieval thinkers took seriously the task of reading a person's moral character and personality in his or her features.

Obviously, a major shortcoming in the study of medieval intellectual history—indeed, of history in general—is that we are limited by what surviving sources discuss. Most studies focus on deep analysis of the words of these medieval authors to understand exactly what their ideas were and how these ideas were transmitted between thinkers. However, I would suggest that we must pay more attention to what is omitted from discussions and ask *why* these omissions occur, even if we cannot achieve a fully

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[12] Michael R. McVaugh, *Medicine before the Plague: Practitioners and Their Patients in the Crown of Aragon, 1285-1345* (Cambridge: Cambridge University Press, 1993); Nancy Siraisi, *Taddeo Alderotti and His Pupils: Two Generations of Medical Learning* (Princeton: Princeton University Press, 1981).

[13] Martha Nussbaum, *The Therapy of Desire: Theory and Practice in Hellenistic Ethics* (Princeton: Princeton University Press, 1994); Na'ama Cohen-Hanegbi, "Accidents of the Soul: Physicians and Confessors on the Conception and Treatment of Emotions in Italy and Spain, Late 12th-15th Centuries" (Ph.D. Diss, Jerusalem: Hebrew University, 2011).

[14] Siegfried Wenzel, *The Sin of Sloth: Acedia in Medieval Thought and Literature* (Chapel Hill: University of North Carolina Press, 1960).

satisfactory answer. Focusing on the loudest debates going on in universities tends to obscure broader assumptions on which everyone agreed, and focusing on what scholars were struggling to find explanations for can lead us to overlook what they already felt that they understood. What Pietro thinks is worthwhile to discuss, not necessarily what he ends up saying about those subjects, is why the *LCP* is worthy of deeper consideration than it has heretofore been given by scholars. It is important to consider why Pietro was writing with the assumption that physiognomy was valid and did not bother defending it. This may not tell us much about his theories of nature, but it does tell us about his values and those of his world. This study is concerned as much with the questions as the answers, and to that end it will also examine how the answers are presented and the level of emphasis placed on different topics, rather than simply dissecting the details of Pietro's theories.[15]

Another argument for this approach is that it helps us get a wider sense of what others outside of the university environment may have taken for granted as well. This awareness enables us to move towards something of a popular intellectual history and popular history of science, so very hard to achieve for the Middle Ages since so much of the population was illiterate. The study of silence, attempting to learn the ideas of people who did not write down their thoughts by using the omissions of people who did write, is of course a very tentative endeavor. It will never allow us to achieve a high level of certainty. All we are left with are vague guesses and assumptions, in contrast with the safer and more concrete answers we get from picking apart the excruciating detail of the theories medieval scholars *did* choose explicitly to address. But I contend that it is still worth pursuing—a misty impression of what a larger group of people may have known or

[15] In this respect, I align with theorists and historians of contemporary science such as Robert Proctor, who argue that science *is* socially constructed, not in the radical postmodern sense that we cannot every reach an objective truth, but that the choices of what questions scientists even think are worth answering *are* socially constructed. Robert Proctor, *Value-Free Science? Purity and Power in Modern Knowledge* (Cambridge: Harvard University Press, 1991).

cared about is better than no picture at all, and that may be just as useful to understanding our medieval past as a high-focused zoom of a very tiny subject. Physiognomy helps us to get at a popular intellectual history in other ways as well, since works devoted to physiognomy were often intended for non-academic audiences. For example, Michael Scot's work on physiognomy was for his patron, Frederick II, and Pietro's *LCP* was written not for his compatriots at Paris but for the minister general of Mantua. Of course, political leaders hardly constitute a popular audience, but they at least represent a slightly wider view of who received these ideas than those limited to the university milieu.

Overall, this study uses Pietro d'Abano and his *LCP* as a lens for clarifying many aspects of medieval intellectual history, including the role of authority in textual transmission, theories of emotion and personality, and the relationship between science and magic. "Chapter 1: Pietro d'Abano's World" describes the general contributions of Pietro d'Abano and the institutional context in which he was working. It summarizes the basic trajectory of his travels and studies, especially his work at the two very different universities of Paris and Padua. It also places him in the broader context of scholastic philosophy and medicine before and during his lifetime. "Chapter 2: Emotions and the Body" is devoted to exploring pre-modern theories of emotion and how they fit into ancient and medieval understandings of the relationship between the body and the soul. Ancient and medieval thinkers defined emotions as passive movements of the soul, hence the phrase *passiones animae*, and Pietro in turn actually defines physiognomy as a study of the "passions." This chapter also addresses the relationship between emotion and sin in theological writing, as well as the relationship between emotion and physical health, with the goal of understanding their moral and ethical implications. Can emotions be sins or virtues? Can we always control our actions when under the sway of powerful emotions? Who is responsible for the care of emotions, priests or physicians? And, most importantly, what is the relationship between emotions and free will?

Even a cursory look at the *LCP* and other texts on physiognomy reveals that the transitory emotions are only a small part of a physiognomer's interests. In truth, despite Pietro's statement at the beginning of his treatise, that physiognomy is the science of reading the passions, he is far more interested in using physiognomy to read more stable and permanent traits. "Chapter 3: Permanent Traits: Personality and Mental Capacities" focuses on what the *LCP* asserts an observer could learn about another person from his or her physiognomy. It places Pietro's ideas about personality and intelligence in the context of late-thirteenth century theories more broadly by examining how other scholastic authors like Albertus Magnus and Richard of Middleton explained the link between the bodily humors and intellectual capacity. "Chapter 4: Transmission, Culture, and the Science of Physiognomy" examines the history of physiognomy and the sources used in Pietro d'Abano's *LCP*, many of which were spurious. It also investigates some of the possible social consequences of a worldview which validates physiognomy as a means of forming judgments about people and situates physiognomy in medieval organizational schemes of disciplines of study, particularly its relationship to other "pseudo-scientific" fields. Finally, "Chapter 5: Inventing the Magus" considers how and why Pietro came to be remembered not only as a physician but also as a magician, particularly the false attribution of the *Heptameron* to him. Here, this study investigates the convention in both the Middle Ages and Renaissance of constructing or elaborating the memories of ancient authorities to give credibility to magical texts. This chapter also investigates medieval theories of the physical mechanisms of natural magic and how Pietro's own genuine ideas may have made him appear like a magus to Renaissance thinkers.

Ultimately, for historians, the *LCP*'s value lies in the insights it can provide into medieval theories about psychology, about conceptions of the relationship between mind, body, and virtue, and about how scientific theories were used to validate social prejudices. While on the surface it may not appear to be particularly interesting or

profound, in fact it is valuable not for what it explicitly says but for what it does not say. It shows us what Pietro took for granted, links together many different intellectual disciplines, and provides insight into Pietro's interests and values at an early stage of his life's work. Furthermore, by investigating the *LCP* and Pietro's authentic thought, this project will explore the relationship between science and magic in Pietro's own day and in the Renaissance world which recast him as a magician.

CHAPTER I

PIETRO D'ABANO'S WORLD

Pietro d'Abano was probably born in 1250. As is so often the case with medieval intellectuals, even those of far greater renown than Pietro, historians have struggled to determine his precise birthdate. With the exception of heirs to thrones, most medieval births went without written record. No important medieval intellectual began life as an important intellectual, so even with the most famous ones, we must guess at their birthdates, counting back from casual references made in dated works. This is the case with Pietro d'Abano and the reason why there is some ambiguity about when his life began. This date is only arrived at using Pietro's claim in his *Conciliator* that he was fifty-three at the time of the writing of the work.[16] Assuming that he completed it in 1303, the date on one version, would place his birth year in 1250. However, a revised version of the work was completed in 1310, which is why some put his birthdate in 1257. Either way, Pietro's early life is a mystery. The first time he makes an appearance in the written record is not until he is already at the University of Paris in the 1290s—by which point he would have been in his late thirties at the youngest. We do not know where he got his earliest education or how he ended up in Paris. At some point in his life, he traveled widely. His writings include scattered references to such wide-flung destinations as Scotland and Sardinia, but these are only mentioned in passing. We do not know when or why he undertook these travels. Probably his most important, or at least most measurably productive, journey took him to Constantinople, where he studied Greek and researched texts on philosophy and astrology. Like other medieval intellectuals, Pietro did not write about his life events except to make passing references in his academic writings. He wrote instead about his ideas, his theories, his discoveries, his opinions. For

[16] Pietro d'Abano, *Conciliator differentiarum philosophorum et medicorum* (Venice, 1476) Diff. 9.

historians of ideas, of course, these are the most important things he could be writing about, but in order to understand the origins of these ideas, the context in which they were formed is also important. It is tempting to think of philosophers, from Aristotle to Aquinas to Rousseau to Russell, as disembodied brains, pondering mysteries of the universe, engaged in telepathic dialogue with other important disembodied brains across the centuries—and that their ideas are proper (in the Aristotelian sense) to those brains themselves, and would have occurred in those brains even if you plucked them up and shifted them around by a few hundred miles or years. I contend that events, culture, friends and family, physical health, personality, and other contingencies also have bearing on the intellectual output of such individuals. Sadly, those are exactly the sorts of things that remain absent from the sources. But we can at least try to make a little headway, if not in understanding the actual details of Pietro's life, at least in obtaining a picture of the world around him and how that might have had an impact on his ideas regarding psychology, personality, and the "reading" of the body to discern the nature of the mind, before delving into his work on physiognomy itself.

Padua—Politics and Medicine

The town of Abano, where Pietro was born, is now just a train station on the outskirts of Padua. Even in Pietro's own time, it is doubtful that Abano was a place of any note. Much to the frustration of this researcher, "d'Abano" or "Aponensis" will only yield a fraction of the references to Pietro in both modern and medieval sources—often he is "Peter of Padua" or the same in Latin or Italian (thus someone looking for references to Pietro needs to be in the habit of searching at least six different names, since mercifully French scholars tend to use the Latin or Italian forms). It is unclear exactly when Pietro would have moved to Padua itself—if he did so before leaving on his more prolonged travels, or if it was only his home after his return to the region from Paris around 1306. The only really interesting thing about Abano itself for our consideration

of Pietro is that it had hot springs which he used for his analysis of the formation of stones—an illustration of the breadth of his natural philosophical interests. This he explained as a consequence of the "coagulation" of hot water.[17] The Abano hot springs drew the attention not only of Pietro but of his contemporaries at the University of Padua.[18]

The Italy in which Pietro grew up was an Italy in which fiercely independent and autonomous cities resisted the power of foreign emperors (Pietro's likely birthdate coincides with the death of Emperor Frederick II, shortly after the dissolution of the Lombard League). It was also an Italy where the power of merchants was steadily on the rise, where newly sophisticated banking and finance techniques enabled increasingly ambitious trading ventures. Padua itself was within the orbit of Venice, which since the sack of Constantinople in 1204 had been the dominant power in the Adriatic and the eastern Mediterranean. It is not unlikely that for an intellectual living in Padua in the latter part of the thirteenth century, Constantinople itself would have felt even closer than Paris. Pietro himself went to Constantinople to study, where he learned Greek and possibly came across some of the texts which he would later translate and upon which he would comment. The standard narrative of Pietro's life puts him in Constantinople before his arrival in Paris (by 1295), then returning directly to Padua. However, Matthew Klemm and Pieter de Leemans note that in his *Expositio problematum Aristotelis,* Pietro claims to have traveled to Constantinople to learn Greek after having been working on the *Expositio* for a long time.[19] There are many possible alternative life trajectories for

[17] Pietro d'Abano, *Expositio Problematum Aristotelis* (Mantua, 1475), 24.11.

[18] For the study of geology and physical geography at the University of Padua in the time of Pietro, see Nancy G. Siraisi, *Arts and Sciences at Padua: The* Studium *of Padua Before 1350* (Toronto: Pontifical Institute of Mediaeval Studies, 1973), 122-127.

[19] Lynn Thorndike, *A History of Magic and Experimental Science*, vol. 2 (New York, 1929), 876-877; Matthew Klemm, "Medical Anthropology in the Late Middle Ages: Body, Soul, and the Virtues According to Peter of Abano (d. 1316)" (PhD diss, Johns Hopkins University, Baltimore, 2007), 3 n. 9.

Pietro. We also have no idea how long his sojourn in Constantinople would have been, whether weeks, months, or years.

Pietro's life coincided fairly neatly with Padua's heyday as in independent commune, after coming out from under the thumb of Ezzelino III da Romano. Ezzelino controlled Padua and other surrounding cities until 1256. While he was technically an agent of the emperor, Ezzelino acted for the most part as an independent despot, and his reign was remembered as one of terror and tyranny in the writings of individuals like Rolandino of Padua. Rolandino's *Cronica in factis et circa facta Marchie Trivixane*, begun around 1260, is devoted to recounting the horrors of Ezzelino's reign. Despite its title, it omits other parts of Paduan history and the surrounding region. The work became a key part of Paduan cultural identity, a reminder of a troubled past which contributed to a sense of unity and pride in the communal period. After Ezzelino's fall, Padua was run as a commune—the leading families controlling an urban area with a population of around 35,000 to 40,000 in the second half of the thirteenth century.

Padua also controlled a large surrounding territory, the *contado*, from which it obtained most of its food. In this period, the size of the territory controlled by Padua expanded, and Paduans enjoyed something of a reprieve from the violence which afflicted many neighboring cities. Historian J.K. Hyde argues that despite its vicinity to Venice, who stretched her fingers far and wide across the Mediterranean, Padua's trade was mostly local. The late thirteenth and early fourteenth centuries were also a period of what historians have dubbed "Paduan prehumanism." This movement, led by Lovato Lovati (1241-1309) studied classical texts not only for themselves but also for the glorification of Padua, focusing in particular on the figure of Antenor, legendary founder of the city and survivor of the Trojan War. By developing the Antenor legend and even constructing a magnificent tomb for what they claimed had been Antenor's bones, the Paduans sought to identify their city as a second Rome. Concern for the well-being of their citizens and civic pride, especially as they were thriving as a republic while many of

their neighboring city-states were succumbing to the rule of powerful families, also led the commune to invest in infrastructure and what we would today call public art in this period.[20] The commune thrived throughout this period, but beginning shortly after Pietro's return from Paris, which was around 1306, things went awry. Padua entered into conflict with Verona, and then riots and civil war periodically plagued the commune until Marsiglio da Carrara seized control in 1328. His family would rule the city until it was absorbed by Venice in 1405. Later Paduan writers would treat the communal period, particularly the first few decades immediately after Ezzelino's fall, as a golden age of Paduan history.[21]

Against this backdrop, Padua's university developed. It had begun, like Europe's first university in Bologna, as a school of law, later developing faculties of arts and medicine. Salerno, once the most famous site of medical study though never officially organized as a university, had lost its once preeminent place by the thirteenth century. Other options, most notably Paris, presented appealing alternatives to bright students interested in the study of medicine. But in the thirteenth century, Padua itself still had some catching up to do as far as its medical school was concerned. The *studium generale* of Padua was founded in 1222, although law might have been being taught there before this date, as a result of the migration of students from the University of Bologna, who were probably boycotting the town as a result of some unpleasantness with the citizens. Such student migrations were not uncommon in the fledgling universities either north or south of the Alps. For example, a migration of students from Oxford led to the foundation of the University of Cambridge. Like its progenitor the University of Bologna, and unlike the northern universities, the University of Padua was formed as a guild of students, meaning that the students had the right to set everything from

[20] Carrie Benes, *Urban Legends: Civic Identity and the Classical Past in Northern Italy, 1250-1350*, (University Park: Pennsylvania State University Press, 2011), 44-55.

[21] J.K. Hyde, *Padua in the Age of Dante*, (Oxford: Manchester University Press, 1966), 2-35, 287-289.

curriculum to professorial salaries—but often the power of the students was not as expansive in practice as it appeared in the statutes.[22] In 1228, the students made a contract with the city of Vercelli with the intention of migrating there next. This document is particularly useful to historians, as it lists the professors (one theologian, three professors of civil law, four professors of canon law, two professors of medicine, two professors of logic, and two professors of grammar). Historians do not know whether the students and professors actually moved to Vercelli, but certainly enough stayed behind in Padua that the neophyte university was able to take root. Ezzelino's reign was a lull in the university's development—or at the very least in the production of documents related to it—but after the final fall of the da Romano in 1260, it was revived.[23] The College of Doctors of Arts and Medicine only appears in this second iteration of the University of Padua, and this college remained "subordinate to the jurist universities."[24]

The University of Padua's beginning may have been rocky, and its emphasis may have been on legal sciences from the start, but this is not to suggest that Padua did not exert a strong intellectual pull on those with interests in natural philosophy even in its early days. Albertus Magnus studied at Padua, although given debates about his actual date of birth (1193 or 1206), it is hard to tell exactly how advanced his studies would have been and if he would have only been a student or also a teacher. Witelo, the noted scholar of optics, also studied there, and according to historian of medicine Nancy Siraisi, "Witelo's *Perspectiva* undoubtedly reflects its author's studies in natural science while at

[22] Pearl Kibre and Nancy G. Siraisi, "The Institutional Setting: The Universities," in David C. Lindberg, ed., *Science in the Middle Ages* (Chicago: University of Chicago Press, 1978), 134.

[23] For brief surveys of the origins of the University of Padua and its role in the commune, see Hastings Rashdall *Medieval Universities*, vol. 2 (Oxford: Clarendon Press, 1936), 10-21, Hyde, *Padua in the Age of Dante,* pp. 176-177, and Siraisi, *Arts and Sciences*, 16-20.

[24] Siraisi, *Arts and Sciences*, 23.

Padua."[25] The university would eventually become a significant source of pride for the commune of Padua and a significant feature of its self-identity. Although citizens could not hold university posts, and professors and students could not hold civic ones, the two were still intimately intertwined. The Paduan government had considerable control over the schools and paid the professors' salaries, "despite a policy maintaining the university's independence from Paduan politics." Pope Nicholas IV even threatened to close the university as a means of punishing the commune.[26]

In the 1260s and 1270s, as a young Pietro would have been considering his educational future, the fledgling faculty of arts and medicine may not have looked like the best alternative to him. It seems surprising that he would choose distant Paris over nearby Bologna for the study of medicine, however. Bologna was the home of the famed physician Taddeo Alderotti (d. 1295).[27] Bologna's prominence as a medical school was in large part due to Taddeo and his circle of students, and it is less clear why Pietro would have chosen Paris over Padua than over Bologna. On the other hand, although older than the University of Paris, studies at Bologna focused mainly on law, one of the few subjects in which Pietro expressed no interest. Furthermore, Paris had a greater reputation for the study of Aristotelian texts, including those on natural philosophy, and this perhaps might have influenced Pietro's decision.[28] Sadly, the sources fail to illuminate Pietro's motivations—for all we know he had personal connections in Paris, or he started with an ambition to study philosophy or theology and then switched to medicine, or he had some other reason entirely which drew him to Paris. Regardless of his reason, Pietro's decision to pursue his studies in Paris rather than in Italy had a profound effect on his life, thought,

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[25] Siraisi, *Arts and Sciences*, 112-114, 118. It also reflects Witelo's time at Paris and Viterbo, as noted by David Lindberg.

[26] Benes, 43.

[27] For a thorough discussion of Taddeo Alderotti's career and contributions, see Nancy G. Siraisi, *Taddeo Alderotti and His Pupils: Two Generations of Italian Medical Learning* (Princeton: Princeton University Press, 1981), especially 13-24 for the development of the medical school at Bologna in the time of Pietro.

[28] Siraisi, *Arts and Sciences*, 147.

and intellectual output, as well as on the University of Padua itself, whose faculty of arts and medicine Pietro himself would help to reconfigure upon his return home.

Paris—Prestige and Controversy

Paris was a much more established center of learning than Padua. Padua would indeed have been a place where Pietro could pursue his medical and philosophical studies, but Paris probably appeared to offer more enticing intellectual opportunities. Paris would have been an exciting place at the time of Pietro's arrival, whenever that was—and all historians can say for certain is that he was there in time to start work on the *Liber de compilationis phisonomie*, as he places himself there. This means he was there by the 1290s. It makes sense to assume that he arrived earlier, but we have no idea how much earlier. He may have begun his studies at the traditional age, in his early teens, but since we have no solid evidence that he was there from such an early date, it seems just as likely that he was like the nontraditional students of today, beginning his academic studies after a career elsewhere.

Long before there was an official university there, Paris played host to such notorious intellectual giants as Peter Abelard in the early twelfth century. Towards the end of the century, thinkers such as Peter the Chanter and Peter Lombard, along with their followers, turned Paris into a more permanent intellectual center and started to set the tone and structure of academic study there, particularly in the field of theology. The University of Paris was certainly in existence as a guild or *universitas* of masters by the year 1210, and by 1215 they were officially recognized by the papacy as a corporation.[29] For the most part, we see a trend of royal and papal support of the scholars whenever they

[29] For a more thorough discussion of the corporate development of the University of Paris, see Gaines Post, "Parisian Masters as a Corporation," *Speculum* 9.4 (Oct., 1934), 421-445.

came into conflict with the city in the university's early years—it was in the interest of both papal and royal courts to have the scholars as their allies and employees.[30]

As the University of Paris became a more formal institution, its academic practices became increasingly standardized.[31] Most academic output came in the form of commentaries on earlier texts. For students of theology, commentaries on the *Sentences* of Peter Lombard formed the standard genre. The *Sentences* dealt with a variety of questions about theological matters, ranging from the nature of creation to the sacraments to Christ's suffering. These quotations were synthesized and organized to make them more useful to later thinkers. Theologians would then address these questions, drawing on a wider range of ancient and "modern" (ie. medieval) thinkers. The practice of commenting on earlier writings also guided the study of the liberal arts, which focused on the writings of Aristotle. The twelfth and early thirteenth centuries witnessed a vast surge of translations of Greek and Arabic texts on philosophy and medicine into Latin.[32] These included not only the works of Aristotle but also a vast array of Greek and Arabic texts, including writings of Euclid, Ptolemy, Galen, al-Kindi, Avicenna's *Canon*, and Averroes's *Colliget*. Earlier medieval thinkers had only had access to the so-called *logica vetus* of Aristotle, translated by Boethius. The introduction of Aristotle to Paris led to a surge in philosophical output but also controversy over some of Aristotle's views which were irreconcilable with Christian teaching, such as the notion of a world without a beginning.[33] Medical texts also tended to follow the commentary format, taking works

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[30] A detailed explanation of papal intervention on behalf of Parisian scholars can be found in Pearl Kibre, *Scholarly Privileges*, 85-131.

[31] Kibre and Siraisi, "Institutional Setting," 124-133; John W. Baldwin, "Masters at Paris from 1179-1215: A Social Perspective," in *Renaissance and Renewal in the Twelfth Century*, ed. Robert L. Benson and Giles Constable (Cambridge, MA: Harvard University Press, 1982), 138-164; Hastings Rashdall, *Universities of Europe*, vol. 1, 299-320.

[32] For a detailed account of the early translation efforts, see Marie-Thérèse d'Alverny, "Translations and Translators," in Benson, Robert L., Giles Constable, and Carol D. Lanham, eds., *Renaissance and Renewal in the Twelfth Century* (Oxford: Clarendon Press, 1982), 421-462.

[33] The translation of Aristotelian works and the reactions to them have received extensive scholarly treatment. See, for example, J.M.M.H Thijssen, *Censure and Heresy at the University of Paris, 1200-1400*

like those of Galen, particularly the *Tegni*, and Avicenna's *Canon* as their points of departure.[34] However, among medical texts, we also find more small, independent treatises on specific topics—particular ailments or cures, for example.

Like modern universities, Pietro's University of Paris was a substantial institution with a complex maze of internal divisions. First, the undergraduate student body was divided into "nations" based on the students' places of origin. These served mainly to administer student affairs—especially the collection of fees and fines.[35] Another important division was by religious order. Many of the most important intellectuals of the scholastic age—Albertus Magnus, Bonaventure, Roger Bacon, Thomas Aquinas, William of Ockham—belonged to mendicant orders, the Franciscans and Dominicans. Historians have been quick to note the irony of this. The mendicants began by wandering the hills and plains of southern France and Northern Italy, bathing the feet of the poor (in the case of the Franciscans) and preaching against heresy (in the case of the Dominicans). Settling down in a world of books and surrounded by a community of reasonably well-fed and well-educated fellow religious hardly seemed to align with the lifestyle or mission of either founder, St. Francis especially. Yet by the time Pietro would have been arriving in Paris, both orders were solidly established there.[36] As a physician, it is unlikely Pietro would have had many encounters with the mendicant side of the university. As a philosopher, though, he would have had opportunities to encounter the

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(Philadelphia: University of Pennsylvania Press, 1998) and Edward Grant, *Science and Religion, 400 B.C. to A.D. 1550* (Baltimore: The Johns Hopkins University Press, 2004).

[34] The sources studied in medieval medical schools have likewise received a great deal of attention from historians. See, for example, (article in Lindberg) and Nancy G. Siraisi, *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice* (Chicago: University of Chicago Press, 1990), 48-77.

[35] Pearl Kibre, *The Nations in the Medieaval Universities*, (Cambridge, MA: 1948), 65-75; for the role of the nations at Padua, which were modeled on the structure used at Bologna rather than Paris, see Kibre, 116-121.

[36] See M. W. Sheehan, "The Religious Orders 1220-1370," in Jeremy Catto, ed., *The History of the University of Oxford*, vol. 1 (Oxford: 1984); see also M. Michèle Mulchahey and Timothy B. Noone, "Religious Orders," in Jorge J.E. Gracia and Timothy B. Noone, eds., *A Companion to Philosophy in the Middle Ages* (Malden, MA: Blackwell Publishing, 2003), 45-53.

ideas of these mendicant theologians, even if he did not interact much with them personally.

This brings us to the final major division, the four faculties. Study at medieval universities began with the liberal arts—grammar, logic, rhetoric, arithmetic, geometry, astronomy, and music. After one achieved a mastery of these seven subjects, he could progress to one of the three higher faculties—theology, law, or medicine. Advanced study in any of these could prepare one for a prolonged career in academia, but medicine and law could also be the foundations of rather more lucrative careers outside of either the university or the church. Those engaged in the study of theology and the arts often criticized lawyers and physicians for being greedy, pursuing their studies for worldly gain rather than faith and better understanding of God. However, the most heated conflicts took place not between the worldly and spiritual faculties but between philosophy and theology, over which subjects "belonged" to which discipline.

The Condemnations of 1270, the Oath of 1272, and the Condemnations of 1277 form a set of perfect examples of the internal strife within the University of Paris. It is possible that Pietro d'Abano was present to witness them, if he had gone to Paris at a young age; it is likewise possible that he was not. Either way, the legacy they left for the study of natural philosophy and the general culture of academic conflicts and condemnations would inevitably have affected Pietro's experiences as a student and scholar at Paris. In 1270, Bishop Stephen Tempier condemned thirteen articles of Aristotle and his Islamic interpreter, Averroës, as contrary to Christianity. Two masters of arts, Boethius of Dacia and Siger of Brabant, were particularly targeted, although their actual views remain matters of debate among historians. The possibility that the controversy was not just about the heterodox viewpoints of a few individuals but about the whole relationship between the faculties of arts and theology was made evident in 1272, when members of the arts faculty were required to swear an oath that they would not openly discuss questions which were clearly theological in nature. But that was not

the end of the battle—on March 7, 1277, Bishop Tempier, condemned 219 propositions of Aristotle as heretical. In other words, no scholar, regardless of faculty, was permitted to debate these propositions.

The propositions dealt with a variety of topics, from the eternity of the world to astrology. Each of the condemned propositions that related to God's power restricted that power in accordance with the natural limits that Aristotle tried to impose. For example, Aristotle had said that the spherical closed universe could not be moved rectilinearly, as this would create a vacuum, which was impossible in Aristotle's understanding of nature.[37] But the Condemnations upheld the view idea that God *could*, if he wanted to, create such a vacuum. Even if Parisian academics agreed that Aristotle accurately described the way the world worked, they were not allowed to say that it *necessarily* worked that way because God could break any of those rules if he so chose. By eliminating these propositions even from debate, Tempier and those working alongside him endeavored to affirm God's omnipotence. While this looks like a victory for religion in the "religion vs. science" battle many people in the post-Darwin world try to impose on their medieval forbearers, it is also possible that this was a step towards freeing scholastics from a rigid Aristotelian worldview, which allowed them to consider the implications if Aristotle's natural laws did not apply (which, as it turns out, they do not).[38] For Pietro, probably the most significant propositions to be condemned were those that had to do with astrology, a topic on which he would write extensively. The

[37] John Buridan's discussion, during the 1330s, of the counterfactual possibility of God creating a vacuum by moving the earth rectilinearly is evidence of how the Condemnations of 1277 altered natural philosophical speculation at Paris. See Buridan in Grant, *Source Book*, 50-51.

[38] Interpretations of the reasons behind the condemnations and their larger significance in the history of philosophy have evolved over time. Pierre Mandonnet's 1911 depicts the condemnations as part of the larger conflict between science and religion, but subsequent scholars have focused more on the subtle nature of the kinds of argument taking place which Tempier was targeting. See Thijssen, 40-52; see also Edward Grant, *Science and Religion, 400 B.C. to A.D. 1550* (Baltimore: The Johns Hopkins University Press, 2004), 177-184. For a discussion of how the modern conflict between religion and science has colored popular and scholarly interpretation of medieval religion and science, see David Lindberg, "Medieval Science and its Religious Context," in *Osiris*, vol. 10 (1995), pp. 60-79.

problem with astrology from the perspective of the authors of the condemnations was the threat its determinism posed to free will. Pietro's astrological thought and the fears of astrology among religious authorities will be discussed more fully in Chapters 4 and 5.

Yet another way to interpret the Condemnations is not as a conflict between two sets of values but as a much more mundane conflict between theology and philosophy—not as forms of knowledge but as groups of people, tussling over who has permission to discuss which topics. In fact, certain condemned propositions were clearly aimed at keeping the arts masters in their place and today seem almost petty in tone. Arts masters were not allowed to maintain the ideas: "That there is no higher life than philosophical life" (Proposition 40), "That nothing is known better because of knowing theology" (Proposition 153), or "That the only wise men of the world are philosophers" (Proposition 154).[39] The ultimate consequence of the enactment of the Condemnations was that natural philosophy continued to be used and studied by theologians, but that theology had no place in strictly philosophical writings. Only theologians might do theology, but anyone—physicians, lawyers, and theologians—might do philosophy, not just people who identified themselves strictly as philosophers.

At Paris, Pietro probably interacted quite a bit with the arts faculty. His writings show a thorough melding of philosophical and medical practices, of philosophical and medical sources. However, his writings also deviated from the sources and conclusions reached by his contemporaries in the arts faculty. Some contrasts are evident between Pietro's examination of the soul in his *Conciliator* and the *De anima* commentaries produced by a handful of arts masters around the same time. First of all, Pietro employed a wider range of sources, particularly medical authors such as Avicenna and Galen, when discussing the vegetative soul. The vegetative soul was the lowest of Aristotle's tripartite division of the soul and responsible for growth and nutrition. Pietro's optical theories are

[39] These and other condemned propositions are found in Grant, *Source Book*, 48-50.

a bit old-fashioned, aligning more with the ideas of Albertus Magnus than with later scholars like Roger Bacon and Witelo. On other topics, Pietro differs with his contemporaries by moving in the opposite direction, rejecting more traditional approaches. For example, on the question of touch and the role of nerves, "one finds that his discussion of the issue is much more thorough and knowledgeable than that of any of his medieval predecessors."[40] Aristotle had had no knowledge of nerves, and Pietro was willing to disagree with the Philosopher on this issue. The arts masters were more likely to ignore Aristotle's failing or even try to attribute to Aristotle a theory of the nerves. Pietro, as he had done in his discussion of the vegetative soul, drew on a far wider variety of sources than his contemporaries when discussing the nerves, including Averroës, Avicenna, Algazel, Rhazes, Galen, and Celsus, and acknowledged that the theory of nerves was in disagreement with Aristotle's understanding of touch. Overall, Pietro distinguished himself from philosophers at Paris by incorporating more medical authors into his philosophical discussions and by showing a willingness to disagree overtly with Aristotle, which members of the arts faculty were apparently reluctant to do.[41]

Medical study was taking place at Paris well before its official establishment as a university. Even in the twelfth century, such writers as Gerald of Wales, Walter of Chatillon, and Odo of Soissons were writing to criticize scholars of medicine at Paris for pursuing the subject with an eye to material gain rather than devoting their energies to the more edifying study of theology.[42] Other subjects were disparaged as selfish pursuits for material ends or simple *vana curiositas*. However, the earliest official evidence we have of medicine as one of four distinct faculties at the university is from a letter written by

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[40] Dag Nikolaus Hasse, "Pietro d'Abano's 'Conciliator' and the Theory of the Soul in Paris," in Jan. A. Aertsen, Kent Emery, Jr., and Andreas Speer, eds., *Nach der Verurteilung von 1277: Philosophie und Theologie an der Universität von Paris im letzten Viertel des 13. Jahrhunderts. Studien und Texte* (Berlin, 2001), 643.

[41] Hasse "Pietro d'Abano's 'Conciliator'," 640-650.

[42] Cornelius O'Boyle, *The Art of Medicine: Medical Teaching at the University of Paris, 1250-1400* (Leiden: Brill, 1998), 11.

Queen Blanche and addressed to all scholars of Paris.[43] The faculty of medicine was overwhelmingly secular—that is to say, not comprised of members of religious orders. But unlike physicians in southern universities, physicians at Paris had clerical status. This meant that they had to take the tonsure, wear clerical attire, and take vows of celibacy. In his study of the faculty of medicine at Paris, Cornelius O'Boyle finds no evidence of the exact procedure by which medical students became clerics, nor any trend of when they entered priesthood.[44] The clerical status of these students benefited and protected them in the same way it protected students in other faculties, giving them special privileges. Pietro must have had benefit of clergy while studying at Paris, but in Italy university students and faculty were not necessarily clerics. At some point, he married and in his will bequeaths property to his sons.[45] However, members of the so-called "lower orders" of clergy, such as acolytes, were permitted to marry if they could afford to do so financially. While he could not have advanced far in the priesthood, Pietro's exact status at different points in his life remains unclear.

The time spent he spent in Paris—at least eleven years, quite possibly as many as thirty—was central to the formation of Pietro d'Abano's thought. The bulk of Pietro's intellectual output was executed or at least begun during his time there. Pietro's first major work was his *Liber compilationis phisonomie* (*LCP*), from 1295, in which he explicitly states that he is writing in Paris, although the text is dedicated to the captain-general of Mantua, Bardelone Boncassi.[46] The dedication suggests that Pietro was maintaining his Italian connections, possibly even seeking patronage from Boncassi and a position in the captain-general's employment. It is possible that Pietro's translation of the astrological writings of the twelfth-century Toledan Jew Abraham ben Ezra antedate

[43]O'Boyle, *Art of Medicine*, 19.

[44]O'Boyle, *Art of Medicine*, 45-48.

[45] For a discussion of Pietro's will, see Thorndike, *Magic and Experimental Science*, 941-943.

[46] Pietro gives his name and title as "domino Bardeloni de bocosis mantue honorandissimo capitaneo generali," *LCP*, 1r.

the *LCP*, but it was probably completed around the same time, while he would have been at Paris. Some of Pietro's works remain undated, and there are also short works, many with magical leanings, including a work on geomancy, attributed to him but of uncertain origins. His famous *Conciliator differentiarum philosophorum et medicorum* was completed in Paris in 1303, although he revised it in 1310 after he had returned to Padua. The *Lucidator*, Pietro's major work on astrology, was also completed in 1310. Although there is evidence that he did not start working on it until after the *Conciliator*, the *Lucidator* may also have been the product of work in the Parisian venue. To round out Pietro's achievements in 1310, the *Expositio problematum Aristotelis* was completed in that year as well. This certainly looks the most Parisian of his works, structured as it was as a commentary on a text of Aristotle—or at least what Pietro and his contemporaries believed to be a text of Aristotle. Pietro also had a copy of the completed commentary sent to his friend and colleague, the controversial arts master Jean of Jandun, demonstrating his continued ties to the Parisan arts faculty even after he had returned home to Padua.[47]

Disciplinary Battlegrounds: Psychology, Science, Medicine, and Theology

We come now to the division and hierarchy of subjects which Pietro would have studied and will consider precisely where his work on psychology and physiognomy in particular would have fit into the scope of medieval science. The word "psychology" was not coined until the late sixteenth century, and popular convention today holds that psychology did not exist before the nineteenth century with the work of Freud, yet medieval thinkers were in truth extremely concerned with the same questions that occupy psychologists and psychiatrists today. The Greek word "psyche," which translates into Latin as "anima" and English as "soul," provides the source of the modern word

[47] Thorndike, 879-882, 917-926.

"psychology." Today, "soul" has a decidedly religious and unscientific ring to it, but ancient and medieval thinkers were not hindered by such a barrier between science and religion and saw nothing amiss in subjecting the human soul to the same kind of study as other features in the natural world.[48] For Aristotle, psychology was a branch of natural philosophy, that field which would evolve into what moderns call "natural science." Because he believed the soul moved, and because the study of things which move he called physics, psychology fit into the field of physics—and because of the nobility and importance of the subject matter, psychology was the highest branch of physics. To Aristotle and other ancient thinkers, psychology would have belonged to pure science and not to medicine.[49]

In the Middle Ages, theology was the "queen of the sciences." At least this was true in Paris—as we shall see, things were rather different in the Italian universities. But in the north, theology was the highest and most dignified field of study because of the nature of its subject, God himself. Thomas Aquinas argues in his *Summa theologica* that theology is in fact the higher of two forms of science because it "proceeds from principles made known by the light of a higher science, namely the science of God and the blessed" whereas lower sciences like arithmetic and geometry "proceed from principles known by the natural light of the intellect."[50] "Science," then as now, was about learning the truth, but the acceptable methods for learning that truth were very different. Medieval scholars put far more faith in revelation—not necessarily their own revelations, but the revelations recorded in sacred texts. Now, this would raise objections

[48] Unfortunately my attempts to convince my psychologist friends that they should call themselves "soul doctors" have been lamentably unsuccessful.

[49] Aristotle's *De anima* is the main source of his psychological theories. It was extensively read and heavily commented on by medieval scholars. It focuses primarily on perception and cognition—other Aristotelian works, such as the *Nicomachean Ethics* and the *libri naturales* such as *De memoria et reminiscentia* and *De sensu et sensato* deal at greater length with questions of emotion and personality, with which this project is more concerned. See Chapters 2 and 3 below.

[50] Thomas Aquinas, *Summa Theologica*, I.I.1.

from a number of quarters. Spontaneous, personal revelations are inadmissible evidence in a scientific method which demands reproducible results. Furthermore, a scientist cannot simply accept those experiences when reported by someone else, much less when they were written down about an experience which had occured a hundred or a thousand years earlier. But the Middle Ages were a time of faith—and faith in authority (like Aristotle or Galen) and in ancient texts played perhaps a stronger role in setting the tenor of scientific discussion than faith in God. This was the major distinction between the methodologies of the arts and theology. The former was expected to demonstrate its conclusions completely through the use of reason, the latter also relied on revelation. The incorporation of the logical methods of philosophers into the practice of theology was a touchy process—applying dialectic to theology was part of what got Peter Abelard into trouble in the early twelfth century, yet it also is what built the reputations of Peter Lombard in the late twelfth and Thomas Aquinas in the thirteenth.[51]

While theology was a science, medicine was a mere art. In antiquity, the mechanical arts, medicine among them, were treated as worthy of far less dignity than the so-called liberal arts—these were the subjects of study for free men who did not have to dirty their hands with practical things like designing temples or healing the sick. While there were numerous methods of dividing and categorizing subjects of study in antiquity, in general, the more abstract the subject, the more dignified.[52] Both the name "liberal arts" and the liberal arts themselves continued as the foundation for organized medieval education in the cathedral schools and later universities.

When we think of these disciplinary divisions, it is important to consider them separated not just horizontally, controlling separate territories of intellectual pursuit, but

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[51] John W. Baldwin, *The Scholastic Culture of the Middle Ages* (Prospect Heights, IL: Waveland Press, 1971, 1997), 80-94.

[52] For a more detailed account of how ancient philosophers organized their subjects of study, see James A. Weisheipl, "The Nature, Scope, and Classification of the Sciences," in David C. Lindberg, ed., *Science in the Middle Ages* (Chicago: The University of Chicago Press, 1978), 461-468.

also vertically. There was a definite hierarchy to the different university disciplines. Scholars as a group had a great deal of prestige and from the twelfth century onwards comprised a new form of social elite, a "new knighthood."[53] The perceived parallels between this new scholarly elite and the old feudal elite are evident as early as the time of Abelard, who spoke of exchanging the arms of Mars (the knightly lifestyle) for study at the bosom of Minerva.[54] Ancient and medieval intellectuals would probably scoff at modern psychology's desire to be counted as a natural science or a medical science. In their eyes, the modern university's college of liberal arts would make the most dignified home. They would ask why a modern psychologist would want to study something as mundane as the brain when her very field is named for the study of the soul.

It was more than just its practical nature that made medicine inferior to and less dignified than pure philosophy or theology in the eyes of many medieval thinkers. The very morality of medicine was a topic of debate in the twelfth century, when medical practitioners came under harsh criticism by moralists. Just as such moralists as Gerald of Wales disparaged students of law and medicine for seeking wealth and fame instead of studying theology, so moralists also criticized physicians for prescribing "immoral" cures like therapeutic sex.[55] Furthermore, critics were repulsed by the emphasis physicians placed on caring for the body, seeing such care as threatening the idea of man as primarily spiritual. Some moralists would argue that physical ailments were just bodily manifestations of spiritual disorders and that trying to cure the person just by healing the body was fundamentally the wrong approach. Only by correcting some problem with the

[53] Pearl Kibre and Nancy G. Siraisi, "Institutional Context," 121.

[54] Abelard, *Historia Calamitatum*, 3.

[55] Gerald of Wales, *The Journey through Wales and the Description of Wales*, trans. L. Thorpe (New York: Penguin, 1978), 63-64.

soul could illness be cured. If a medical remedy would place the spirit in jeopardy, it should not be pursued, a conclusion affirmed by Pope Innocent IV (1243-1254).[56]

The rise of the Cathar heresy—or, at least, the widespread fear of a Cathar heresy whose actual strength and genuine doctrines continue to be the topic of debate—in part led to a mitigation of the attacks on medicine. The dualist Cathars allegedly believed that the body was evil, something that dragged down the soul. Perhaps to distance themselves from this belief, Catholics began to treat the care of the body as a moral good. They started to regard medical knowledge as a necessary aid to the ethical obligation Christians had to care for the sick and elderly.[57] The goodness of the body was reaffirmed, and its care came to be seen as having a positive spiritual consequence. Medicine was successfully rehabilitated over the next several decades. Humbert de Romans, who was Minster General of the Dominican Order from 1254-1263, praised the practice of medicine not only for practical but also spiritual reasons, while he still criticized those physicians who caused harm or charged exorbitant fees.[58]

As we saw above, controversies leading to such consequences as the Oath of 1272 and the Condemnations of 1277 helped to harden disciplinary divisions and establish a hierarchy of faculties at the University of Paris. Theologians could do philosophy, but philosophers could not do theology. What about the relationship between theology and medicine? There was no need for a theologian to be well-versed in medicine or law, or for a physician to be an expert in theology. Nevertheless, there appears to have been a good deal of exchange of ideas across disciplinary bounds. Even famous theologians sometimes dabbled in medical topics. The considerable amount of physiological material

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[56] For a discussion of the debate over the morality of medicine, see Klemm, "Medical Anthropology," 41-44.

[57] J. Agrimi and C. Crisciani, "Charity and Aid in Medieval Christian Civilization," in M. Grmek, ed., *Western Medical Thought from Antiquity to the Middle Ages*, trans. Antony Shugaar (Cambridge, MA and London: Harvard University Press, 1998), 170-196.

[58] Ziegler, *Medicine and Religion*, 1-2, 20.

in Albert the Great's and Thomas Aquinas's writings provide evidence that philosophers and theologians did have some knowledge of contemporary theories about the body. Because these authors' works have been so extensively studied, they make good case-studies of the kinds of medical knowledge to which even individuals who focused their interests primarily on theological and philosophical questions would have had access.

Albert the Great was a magnificent polymath and particularly interested in natural philosophy. While he probably received little formal training in medicine and his writings demonstrate little familiarity with some of the standard texts used in teaching university medicine, such as works of Hippocrates and the *Isagoge* of Johannitus, nevertheless Albert gained substantial knowledge of Galenic medicine. His works show a gradual increase in medical knowledge over time, as Nancy Siraisi demonstrates by comparing his early work *De homine* with his much later *Quaestiones de animalibus*. Just how much of Galen Albert read directly and how much he received indirectly via Avicenna is also unclear. And whenever Aristotle and Galen came into conflict, Albert tended to side with the former. Nevertheless, his works demonstrate a lifelong interest in medicine and the belief that medical knowledge was relevant to the pursuit of natural philosophy.[59]

Albert's more famous pupil was less broad in his interests. Thomas Aquinas did not produce anywhere near the kind of output on biological topics as his mentor had. When he does talk about medical and biological topics, he uses Aristotle rather than Galen, and his citations of Avicenna are limited to the latter's philosophical work, *Liber VI Naturalibus*, rather than his medical work, the *Canon*, the standard text for teaching medicine in medieval universities. In some of his discussions of psychological matters, like the nature of emotion, Thomas extensively uses the Greek patristic author Nemesius of Emesa, whom he misidentifies as Gregory of Nyssa. Nemesius in turn cites not only

[59] Nancy G. Siraisi, "The Medical Learning of Albertus Magnus," in *Albertus Magnus and the Sciences*, ed. James Weisheipl, OP (Toronto: 1980).

Galen but also Hippocrates directly in his discussions of sorrow, fear, and anger to define and categorize emotions, but Thomas does not follow his source's particularly strong preoccupation with the role of organs and the humors in emotional experiences. Mark Jordan argues that, despite assertions from late nineteenth and early twentieth-century historians that Thomas was well-trained in medicine and had connections at the famous medical school of Salerno, in fact Thomas's medical knowledge was limited.[60] Even Thomas's most overtly medical work, the brief *De motu cordis*, composed sometime between 1260 and 1273, is entirely Aristotelian and does not use explicitly medical sources.[61] Jordan concludes that "there is no strong evidence that Thomas knew much medicine beyond what was mediated by Albert or taught by Aristotle and his commentators." Furthermore, "Thomas seems to deliberately exclude much that Albert has to offer... Thomas's parsimony in the matter of medical sources is his strengthening of the philosophical and theological teleology of Aristotelian speculation about nature."[62] In other words, Thomas simply did not think that medicine was that important to what he saw as the main goals of either theology or natural philosophy.

Joseph Ziegler finds Jordan's rejection of Thomas's medical learning a bit too strong and not fully reflective of the character of the relationship between medicine and theology in the later thirteenth century. Ziegler examines the work of the Oxford theologian Nicholas of Ockham and finds copious evidence of Nicholas's up-to-date medical learning, particularly on the topics of reproduction and radical moisture. The case of Nicholas of Ockham, especially as he was working at Oxford, which did not have a particularly strong medical program in comparison with continental universities,

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[60] Mark D. Jordan, "Medicine and Natural Philosophy in Aquinas," in Albert Zimmerman, ed., *Thomas von Aquin. Werk und Wirkung im licht neuerer Forschungen* (Berlin: de Gruyter, 1988), 233-234.

[61] Thomas Aquinas, *De motu cordis*.

[62] Jordan, "Medicine and Natural Philosophy in Aquinas," 246.

suggests that theologians did have access to a fair amount of medical learning.[63] Cornelius O'Boyle argues that scholastic medicine embraced Aristotelian physics in part to legitimate itself as a science—that some of the vicinity between medicine and the other faculties was the consequence of medical doctors trying to get theologians and philosophers to take medical work as a science seriously by associating medicine with Aristotle and demonstrating the medical doctors' mastery of other subjects:

> By incorporating these physical principles into their works, university masters [of medicine] were grounding their discipline within the totally new structure of the Aristotelian universe. In doing so, they were establishing a new philosophical justification for the traditional microcosmic-macrocosmic analogy between the human body and the cosmos, which extended the physician's domain of expertise from local matters of health and illness to an understanding of the natural world itself.[64]

According to this perspective, physicians aspired to use philosophy and theology, while theologians and philosophers only condescended to employ medicine. O'Boyle also provides a list of scholars who received degrees in both medicine and theology, proving that it was not uncommon (although not highly typical, either) for a single person to study both. Perhaps, then, Thomas's lack of medical knowledge was unusual for his time. But he actually set the tone for a de-medicalizing of the discussion of emotions and personality among those who identified strictly as philosophers and theologians. Later scholastics, among them such prominent thinkers as John Duns Scotus, Peter Auriol, William of Ockham, and Gregory of Rimini, used less medical material in their philosophical works than had their thirteenth-century predecessors. This growing

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[63] Joseph Ziegler, "*Ut Dicunt Medici*: Medical Knowledge and Theological Debates in the Second Half of the Thirteenth Century," in *Bulletin of the History of Medicine* 73.2 (1999), 208-237.

[64] Cornelius O'Boyle, "Discussions on the Nature of Medicine at the University of Paris, ca. 1300," in Jan Van Engen, ed., *Learning Institutionalized: Teaching in the Medieval University* (Notre Dame: University of Notre Dame, 2000)," 205.

division between theologians and physicians has also been noted by historians of medicine.[65]

In universities south of the Alps, theology did not reign supreme. Students and masters at Italian universities did not question the morality of medicine in the same way that their Parisian counterparts did. The University of Padua did not even have a department of theology until 1363, although the subject did have a place at local mendicant *studia*.[66] The liberal arts were studied more for their utility in preparing someone for practical careers in law and medicine. Although it might be possible to study the arts and medicine simultaneously, it was much less likely for someone in Italy to study only the arts and end there, and "the subjects of the curriculum were arranged in a hierarchy in which medicine held the highest place."[67] But while medicine was prestigious within the universities, physicians do not seem to have held a particularly high place in Paduan society. The medical school did not attract students from the wealthy and powerful Paduan families; instead, students were more likely to come from the *contado*, the area around Padua subordinate to the commune. Pietro himself, hailing from Abano, would be a perfect example. Pietro was paid particularly well by Padua, but it was not enough to truly elevate him or any other physician into the *crème de la crème* of Paduan society.[68] Nevertheless, it is safe to say that Pietro enjoyed a far higher status as a physician and professor of medicine in Padua than he would have in Paris.

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[65] Luis Garcia-Ballester, "Introduction," in *Practical Medicine from Salerno to the Black Death*, ed. Luis Garcia-Ballester, et al. (Cambridge: Cambridge University Press, 1994); Michael McVaugh, *Medicine Before the Plague: Practitioners and their Patients in the Crown of Aragon, 1285-1345* (New York: Cambridge University Press, 1993), 72-75; Joseph Ziegler, *Medicine and Religion, c. 1300: The Case of Arnau de Vilanova* (Oxford: Clarendon Press, 1998), 5-10.

[66] Siraisi, *Arts and Sciences at Padua,* 134.

[67] Kibre and Siraisi, "Institutional Setting," 137.

[68] Hyde, 175-178; although his salary was high, at the time of his death Padua still had a substantial amount in arrears. For more on Pietro's salary see Thorndike, 931-933.

The Many Faces of Pietro d'Abano

Having considered the world in which Pietro d'Abano lived, the educational milieux he knew, and the disciplinary interactions at the universities of Padua and Paris, we are now in a position to consider the question: how can we characterize Pietro d'Abano? Today, anyone who has heard of him would probably identify him first and foremost as a physician, and Pietro probably would have done so, too, since most of his writings were medical in nature and he was employed in medical faculties. Yet in many ways he was not a typical medieval physician. Either complementary with or secondary to his identity as a medical practitioner, he would have seen himself as a philosopher. His commentary on the *Expositio problematum Aristotelis* of pseudo-Aristotle is definitely a philosophical work, and many of his efforts actually seem in line with the kinds of work modern historians do—tracking down hitherto lost or forgotten sources.[69] He was actively involved in the project of translating Greek and Arabic texts which gripped so many medieval scholastics—who translated works by numerous Greek and Arabic scientists which would form the basis of study in numerous fields at the medieval universities. Pietro himself translated several texts from Greek into Latin and may even have been familiar with Hebrew or Arabic. It is unclear which language Pietro was working with in his first major translation, the works of Abraham ben Ezra—whether it was Hebrew, Arabic, or Greek.[70] These massive translation efforts and philosophical commentaries set Pietro apart from other physicians of his day but formed common ground between him and those who would identify themselves more strongly as philosophers.

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[69] Pietro was the first to comment on the *Problemata*, followed by Walter Burley and Evrart de Conty. While medieval scholars believed the text to be genuine, it never attracted the kind of attention other Aristotelian texts received, possibly due to the sweeping range of topics it covered. For a discussion of the *Problemata* in medieval learning, see Joan Cadden, "Preliminary Observations on the Place of the *Problemata* in Medieval Learning," in Pieter de Leemans and Michèle Goyens, eds., *Aristotle's* Problemata *in Different Times and Tongues (*Leuven: Leuven University Press, 2006), 1-19.

[70] Thorndike, 878-879.

Most new medical doctors at Paris began their careers with a year of teaching. Some stayed in medical teaching for prolonged periods, even several decades. Cornelius O'Boyle argues that one of the main benefits of teaching was that it offered flexibility to pursue a second career as well, either as a practicing physician or in another non-medical field. Here we see another distinction between the medical professors in Paris and those in Italy—in Paris, teachers were supported by student fees as well as outside sources of income, but in Italy, the communes, like Padua itself, paid the professors' salaries.[71] As seen above, it was uncommon but not exceptional for physicians to take on additional degrees in fields like theology and law. However, physicians trained at Paris only rarely devoted themselves to writing and research with Pietro's level of intensity. O'Boyle finds that only 3% of Parisian medical scholars devoted themselves to writing, and then mostly on practical medical topics like recipes, *consilia* (medical opinions on particular cases), and health regimens.[72] Pietro's major works—the *Conciliator*, *Expositio problematum Aristotelis*, and *Lucidator*—were all highly exceptional among both physicians and scientists. The treatises on more specific topics, such as the *Liber compilationis phisonomie* and *De venenis,* were perhaps less extraordinary. Nevertheless, the scope and style of his writing show that Pietro broke the molds of medieval intellectuals and physicians.

Pietro's major work, the *Conciliator*, shows his dual identity as a physician and a philosopher. It does not fit into the most common genre of philosophical writing, the commentary. In some ways the *Conciliator* seems more akin to the *Summa* genre, and in its ambitions and scope has distinct similarities with such works as Roger Bacon's *Opus Maius* and Thomas Aquinas's *Summa Theologica*. The former is an attempt to distill all important philosophical knowledge and present a comprehensive picture of the ideal,

[71] For the careers of Parisian-trained physicians, see O'Boyle, *Art of Medicine*, 71-73; for the income sources of Paduan physicians and medical professors, see Hyde, 175-178, and Siraisi, *Arts and Sciences*, 27-28; for discussion of Pietro's own salary, see Thorndike, 931-933.

[72] O'Boyle, *Art of Medicine*, 78.

most useful form of education; the latter is an attempt to address all important theological questions. The *Conciliator* does not try to address all that must be known about medicine but rather to reconcile all major disagreements between medical authorities. Thus, in terms of genre, it does not quite fit in the standard categories in which Pietro's contemporaries were writing. The goal of reconciling has more in common with the aims of philosophical and theological authors than those of most medical authors, who tended to be concerned with practical matters. If anything, the *Conciliator* resembles works like Peter Abelard's *Sic et non* and Peter Lombard's *Sentences*, both of which addressed a large number of discrete questions, more than it does the philosophical commentaries and medical treatises of Pietro's own day.

Pietro's medical interests influenced his position on philosophical matters, particularly the nature of the soul. Pietro expressed less interest in the nature of the intellect than did his contemporaries who were identified as pure philosophers or theologians.[73] He was far more concerned with "organic soul" more broadly conceived—the powers and virtues of the soul, and its material and physiological aspects. He speaks of the "virtues" of the soul, which he defines broadly as its potential for different kinds of action, as being part of the physical body in terms not unlike those used by thinkers from Galen to Avicenna to Roger Bacon.[74] Similarly, he adopts the Galenic idea of *spiritus* as a refined, elevated form of matter which traveled through the *rete* system, essentially the nerves, and the ventricles of the brain. This material *spiritus* was responsible for a number of important psychological functions.[75] Pietro was unusual

[73] Hasse, 650-653.

[74] *Conciliator*, Diff. 57; see Klemm, 76-79 for an analysis of Pietro's theory of the virtues of the soul and their material composition.

[75] Galen, *On the Usefulness of the Parts of the Body*, trans. Margaret Tallmadge May (Ithaca: Cornell University Press, 1968), bks. 8 and 9; Pietro d'Abano, *Conciliator*, Diff. 38; for more on Galen's neurophysiology, see Ch. 3 below. This also resembles the Stoic idea of *pneuma*, the material animating breath, but it is unclear whether Pietro would have direct access to knowledge of this particular Stoic teaching.

among philosophers in the extremity of his materialist position on the soul and unusual among physicians in devoting so much energy to thinking about and explaining theories on the nature of the soul.[76]

Pietro's unconventional views managed to get him into trouble. He came under scrutiny from the Dominicans of St. Jacques while at Paris, probably in 1303, and was accused of 54 errors.[77] Most likely these had something to do with his astrological interests and his materialism, but the only record we have comes from Pietro's own passing reference to the incident in the *Conciliator,* and it remains a mystery exactly what alleged errors the Dominicans found in Pietro's teachings. Luckily for Pietro, the pope at the time was Boniface VIII, who had great faith in natural magic. For example, this pope enthusiastically accepted talismanic treatments for kidney stones from Arnald de Villanova. Boniface's intervention saved Pietro from his attackers. Pietro may also have written his treatise on poisons, which he dedicated to a pope, for this particular pontiff.[78] While the exact details of his troubles in Paris may be mysterious, Pietro was clearly not the sort to follow the crowd. He was belligerent and skeptical in his writings—which, ironically from a modern perspective, actually inclined him towards believing in what we would today describe as "magical" phenomena. He saw subjects like astrology as purely natural. On the other hand, he was highly suspicious of any discussion of the purely immaterial, which he saw as supernatural. Such topics he regarded as naive and superstitious. Matthew Klemm characterizes Pietro's skepticism thus:

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[76] Klemm provides numerous examples of the originality of Pietro's work on the soul. See, for example, 2-8, 75, 86-87, 98, 140.

[77] *Conciliator*, Diff. 48.

[78] Agostino Paravicini-Bagliani, *The Pope's Body*, trans. David S. Peterson (Chicago: University of Chicago Press, 1994), 226. Thorndike had also considered John XXII as a possible recipient of *De venenis* but did not reject the possibility of Boniface (Thorndike, 935-938) but rejected other popes, such as Clement V. It is difficult to date the work precisely, but Boniface's intervention on Pietro's behalf and his interests make him seem most likely to be the one to whom the work was dedicated.

> In the long tradition of learned medicine, he is a consistent critic of those who would ascribe supernatural explanations to things; here he is not referring to unlearned peasants, but to his colleagues in philosophy and theology...It is easy to imagine him, as a physician trained in the more secular climate of the Italian schools, rolling his eyes at the vigorous debates about divine illumination and transcendent human perfection that transpired during his time at Paris.[79]

After almost twenty years in Paris and possibly much longer away from home, Pietro returned to Padua in 1306. The conflicts which eventually signaled the demise of the commune as commune were probably mere shadows on the horizon, and it is highly doubtful that for all his study of divination Pietro would have had access to much genuine foreknowledge of his city's fate. He brought with him Parisian ideas and traditions and was, according to Nancy Siraisi, "a particularly important channel of Parisian influence."[80] Despite the fact that students at the University of Padua had access to the same Aristotelian texts as those at Paris and that the *libri naturales* were required study for anyone wishing to pursue an advanced degree, we have no commentaries on these Aristotelian works from Padua before Pietro's return. Pietro's own commentary on the *Expositio Problematum Aristotelis* of Pseudo-Aristotle seems to be the first commentary of the period completed in Padua—and this he began at Paris, not Padua. Siraisi also argues that Pietro likely introduced the commentaries on Aristotle by such prominent Parisian masters as Thomas Aquinas and Albertus Magnus to Padua.[81]

Yet even in Italy, Pietro's teachings attracted unwanted attention. In general, what makes a heterodox teaching dangerous is not the idea itself but the level of popularity it achieves. After his return to Padua, Pietro was in a position of respect and authority. He had students and even followers. In the final years of his life, he came under suspicion from the Inquisition. While Thorndike concludes that Pietro probably died without the official taint of heresy and his sons were able to inherit his wealth (if he

[79] Klemm, 7.

[80] Siraisi, *Arts and Sciences*, 115.

[81] Siriasi, *Arts and Sciences*, 117-8.

had been condemned as a heretic, his property would have been seized), as noted above an account from the mid-fourteenth-century by Thomas of Strassbourg says that Pietro's bones were exhumed and burned.[82] In the Middle Ages, no one was in the business of burning the bones of lone rogue thinkers. Bones were burned to prevent mortal remains from becoming objects of adoration for a popular rogue thinker's followers—which tells us that Pietro enjoyed a fairly high level of fame and popularity, even if we do not have the writings of a direct circle of followers. So we might even add the modern title, appropriated from the Sanskrit, "guru," to labels useful in identifying Pietro d'Abano. Thorndike argues that Renaissance thinkers held Pietro up not as a translator, philosopher, or compiler of texts, in the scholastic tradition, but rather as an adventuresome scientist and forerunner of their own ventures into magic and experimental science:

> The writers of the Renaissance and of the early modern times became so enthusiastic over Peter of Abano, and at the same time so failed to appreciate the character and accomplishments of medieval learning in general, that they were wont to depict him as a miracle of learning in a rude age...a precursor of their own period rather than as a final representative and product of a rich earlier period of culture.[83]

For all of his originality, Pietro was still very much a product of his world. While he chose to reject many of the conclusions of his contemporaries, his thought was new in how it synthesized so many different medieval traditions. This came not from some sort of prescient understanding of modern science and psychology but from an exceptionally thorough understanding of both the medical and philosophical methods for thinking about human nature and about the relationship between body and mind. Pietro's work on physiognomy, as his earliest major treatise, may not demonstrate the level of sophistication or nuance of his later, more famous works, but it still reflects the

[82] Thorndike, 938-944.

[83] Thorndike, 883.

complexity of Pietro's thought and his place at the intersection of medicine and philosophy, of the practical and the speculative, of the orthodox and the heterodox.

CHAPTER II

EMOTIONS AND THE BODY

Pietro d'Abano begins the *Liber compilationis phisonomie* by defining physiognomy as the study of how the emotions manifest themselves on the body, although most of his work focuses on how we can learn about personality traits and intellectual capacities through studying physical features.[84] While Chapter III of this project will focus on the more stable, lasting features of a person's soul which physiognomy claimed the power to divine, this chapter focuses on the transitory emotions. And while modern individuals are in fairly strong agreement that, on a rational and objective level, it is ludicrous to judge a person's intellect from features like the thickness of his or her eyebrows or the fullness of his or her lips, we also tend to agree that it is perfectly fair to read happiness or sorrow in another's face. Psychological studies have shown that there are base emotions with corresponding facial expressions which people across cultures are able to recognize—with sociopaths being a notable exception, as they struggle particularly with recognizing fear on the faces of others.[85] Pietro, like his contemporaries, would not have been surprised by the modern notion that there is some sort of mechanism connecting internal emotions with their visible expression and that this mechanism is somehow universal (that the expression which indicates sadness in person A also indicates sadness in person B). But, seeing as he took the trouble to write a book full of instructions, unlike modern psychologists he clearly did not think that the ability to automatically *recognize* such emotions was universal.

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[84] "Phisonomia est scientia passionum anime naturalium corporisque accidentium habitum vicisim permutantium utriusque," *LCP*, fol. 1r.

[85] See, for example, A.A. Marsh and R.J. Blair, "Deficits in Facial Recognition Among Antisocial Populations: A Meta-Analysis," in *Neurosci Biobehav Rev* 32.3 (2008), 454-65; Jean Decety, et al., "Neural Processing of Dynamic Emotional Facial Expressions in Psychopaths," *Social Neuroscience* 9.1 (Jan. 2014), 36-49.

In order to understand how Pietro believed emotions could be read in the body, it is important to first understand exactly what medieval people thought emotions *were*. This chapter is devoted to explaining how emotions were defined, explained, and categorized, from ancient Greece up to the writings of Pietro himself. It will also look at how emotions were seen to bridge the gap between the soul and the body and how the study of emotions likewise bridged the gap among the scholars who studied those subjects—the theologians, the philosophers, and the physicians. And because this project is also concerned with questions of free will and determinism, answers to which got Pietro d'Abano into such trouble with the Inquisition, this chapter will look at theories about the control and manipulation of emotions as well as understandings of the morality of emotions themselves.

Defining and Classifying Emotions

Ancient philosophers, along with their medieval successors, generally saw emotions as problems to be solved rather than states to be pursued. That is, they tended to concentrate not only on advising readers on avoiding negative emotions such as anger, sadness, or fear, but also cautioned against pursuing pleasure. Happiness, which they regarded as entirely distinct from pleasure, was not considered an emotional state but a transcendence of emotions. Emotions interfered with reason and thus could drive human beings to dangerous acts. Anger was a particular culprit in this regard, although other negative emotions such as sorrow and fear could also lead to harmful actions. Plato and Aristotle embraced reason as the source of truth, generally seeing emotions as susceptible to control by the force of reason, and the Stoics took an even harder line against emotions. Emotions, both positive and negative, could cloud reason and thus had no place in the philosopher's toolbox. Other means of arriving at truth which were more open to emotional experiences have had moments of popularity in Western civilization, like Christian mysticism in the Middle Ages or a feverish embrace of emotion by early

nineteenth-century Romantics, but reason as the warrior for truth battling against the distracting or downright obstructing force of the passions has returned time and again as a theme. [86]

It is only relatively recently that neuroscience has shown us the interrelatedness of emotion and reason and how both are dependent upon actual physical structures. For example, in his 1994 book *Descartes' Error: Emotion, Reason, and the Human Brain*, neurologist Antonio Damasio explains the limits of reason in decision-making processes and challenges the Cartesian mind-body dualism. He reports findings that show patients who have suffered lesions in the part of their brains called the limbic system, which governs emotion, became paralyzed when forced to make even the most trivial decisions.[87] Such patients could make wonderful lists of pros and cons, but without the involvement of the emotional parts of their brains, they were unable to weigh the relative merits of those lists. The book might well have been called *Plato's Error*. While it would be false to equate Plato's and Descartes' philosophies of mind, in light of modern scientific developments their errors are quite similar—both failed to recognize the necessary role emotion plays in cognition, and both failed to recognize the physical grounding of psychological processes. They also emphasized the power and responsibility of the rational intellect to exert control over emotions.

This is a study of medieval philosophy and science, not modern neuroscience. These modern developments deserve note, however, because they show us how powerfully and for how long the Platonic and Aristotelian philosophies of the mind held sway. Alternative views of the relationship between reason and emotion, between mind

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[86] Later thinkers would develop an idea of the will able to exert itself over emotions which had been absent from Aristotle's thought. However, Aristotle did have a doctrine of choice, and he distinguished between different levels of voluntary action. Lack of knowledge of possible consequences, rather than overwhelming impulse or passion, was the main mitigating factor when assigning praise or blame for choices. For a discussion of Aristotle's doctrine of choice, see G.E.R. Lloyd, *Aristotle: The Growth and Structure of his Thought* (Cambridge: Cambridge University Press, 1968), 227-235.

[87] Antonio Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain* (Penguin Books, 1994), 191-196.

and body, existed. Physiognomy itself, while its practitioners made many mistaken assumptions about the nature of the mind/body relationship, presents a challenge to the view championed by the ancient Greeks.

For ancient and medieval thinkers, emotions belonged first and foremost to the soul. These thinkers recognized that the body played a part in emotional experiences, but felt that this was often a *response* to the soul's movement. They defined the soul as immaterial, and explaining the precise nature of its interface with the physical body proved difficult for all of the philosophers. They had a much easier time analyzing to their own satisfaction what went on inside the soul itself. Plato, followed by Aristotle, followed by the medieval thinkers examined here, divided the soul into three parts. These are the animal, the sensitive, and the rational. Plato's main evidence for the division between the sensitive and rational pieces is that a person may seem to be of two minds, desiring to take two contradictory courses of action—one of these being an emotional desire and thus the wrong path to follow, according to Plato, and the other a course of action arrived at through reason. Plato's example of this internal discord is the story of a man who both has an impulse to look at a corpse while at the same time knowing it is something he ought not to do.[88]

According to Plato's formulation, only humans have the rational soul, which is responsible for conscious thought and reason. The animal soul is responsible for movement, the sensitive soul for sensation and perception. It is also the sensitive soul which gives us emotion, and thus animals could be capable of emotion. Indeed, scholastics frequently used animal examples for reflexive emotional responses, like the sheep who feels fear upon seeing a wolf. In their acknowledgement of feelings in animals, our earlier thinkers were closer to modern notions of animal minds than an early modern thinker like Descartes, who had posited that animals were machinelike and

[88] *Republic,* 4.439e-440a.

lacking in emotions. Ancient and medieval philosophers did not have a word which was directly analogous to our term "emotions." The Latin terms we see repeatedly are "passiones" or "passiones animae" (passions of the soul)—simply expressing what the soul passively experiences. They might also employ the phrase "affectiones animae," affects of the soul. Medieval thinkers obtained the idea of movement of the soul from Aristotle, and this movement is critical to Aristotle's theory of how the soul works. Aristotle placed the study of the soul into the category of physics because the study of the soul involves the study of motion and rest.[89] In fact, one may find it tempting to think that Aristotle is referring mainly to emotions when talking about the soul having motion, given the modern tendency to describe emotional experiences as "moving." However, Aristotle uses "moving" in a much broader sense. In talking about the soul "moving" he refers more to the soul's active role in the locomotion of living beings, from making plants grow to moving the mind of human beings to make decisions. The passions are just one of many types of movements of the soul, and they are passions because they are passive experiences in the soul rather than its actions. That is, emotional movements of the soul are caused by something extrinsic to the soul itself.

As compared to his teacher Plato, we see in Aristotle a more physiological picture of emotions and psychology in general—perhaps not surprising, given Aristotle's more pronounced interest in biology and the natural world. For Aristotle, emotions exist both as disembodied movements in the soul and as physiological responses to the world, and while the spiritual aspect is primary and the biological one secondary, he treats both sides as important. He distinguishes between "dialectical" and "physical" definitions of the passions, addressing the strange way in which spiritual and physiological elements combine in how we experience emotions.

[89] For a discussion of Aristotle's classification of the study of the soul as a part of physics, see Ronald Polansky, *Aristotle's* De Anima (New York: Cambridge University Press, 2007), 6-26.

> The naturalist and the dialectitian will define each of these differently: what anger is, for instance. For the latter [defines it as] an appetite for vindication, or something of this sort, while the former [defines it as] the raging of blood or heat around the heart. One of these gives the matter, the other the species and nature.[90]

In other words, a feeling can be defined in terms of its purpose—its final cause, to use the standard Aristotelian terminology—or in what it does to the body. While springing from a movement of the soul, the passion is both fully a phenomenon of the soul and of the body.

We come next to the question of how to identify and define particular emotions. Developing a concrete, finite list of fundamental emotions is a preoccupation of modern psychologists, and it is a preoccupation they inherited from earlier philosophers—yet not Plato and Aristotle. Given how deliberate both Plato and Aristotle were with placing nature into clear categories and breaking it down into a finite number of fundamental parts, from the four Platonic solids beneath the celestial sphere to the three levels of the soul, it may come as some surprise that neither one made an attempt to lay out some list of fundamental emotions. For Aristotle, discrete emotions, like sadness, anger, or joy, are not things in themselves. They are what we feel as responses to the movements of the soul. It is not that the soul has a sadness box it moves into or a sadness shape it takes. Rather, its movements produce a collection of symptoms which we describe after the fact as sadness. Thus, while he does list distinct emotions, he has no theory of the structure of emotions. They are defined by what they do rather than what they are.[91]

The matrix of fundamental emotions on which medieval scholastic thinkers relied was originally put forth by the Stoics and then developed and transmitted by St. Augustine (354-430 CE). For the Stoics, the soul was a physical substance identified with the psychic "pneuma," a kind of "corporeal spirit" which actually flows through the

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[90] Aristotle, *De anima* I.1.403a29.

[91] For further discussion of Aristotle's discrete emotions, see Simo Knuuttila, *Emotions in Ancient and Medieval Philosophy* (Oxford: Clarendon Press, 2004), 23-33.

body.[92] The details of Stoic emotional theories need not concern us here because much of their work was inaccessible to medieval scholastic theologians and physicians and is not cited by Pietro d'Abano. However, their means of categorizing emotions *did* make it to the medieval universities through the writings of St. Augustine. The Stoics had separated the passions by the nature of the soul's motion, whether it is towards or away from an external stimulus, and also by whether the event or experience triggering the emotion is future or present. Sorrow is the soul's motion away from a present perceived evil, fear its motion away from a future perceived evil; on the other hand, joy is the soul's motion towards a present perceived good and desire is its motion towards a future perceived good. Augustine explained this model in his *City of God.*[93] Later, Boethius (480-524 CE) kept the same distinction but replaced desire with hope, a substitution which later medieval thinkers maintained.[94] This makes for a nice, logical package, effectively pairing off major emotions.

Table 1. Augustine's Emotional Matrix

	Present	Future
Perceived Good (Towards)	Happiness	Hope/Desire
Perceived Ill (Away)	Sadness	Fear

Unfortunately, the Stoic/Augustinian/Boethian model fails to take into account a particularly significant emotion—anger. Aristotle had repeatedly identified anger as a separate emotion (many of Aristotle's other distinct emotions, like envy and pity, end up as subspecies of other emotions in the Augustinian scheme) and given it considerable

[92] Knuuttila, 47-48.

[93] Augustine, *De civitate dei* 1.14 c. 7-9.

[94] Boethius, *De consolatione philosophiae*, 1.1.7 vv. 25-28; Albertus Magnus, *De Bono*, V.2.83-85, in *Opera Omnia*, ed. H. Kühle, et al. (Muenster: Aschendorff, 1951), 197.

attention in his *Rhetoric*. This was to place our scholastic thinkers in an awkward position. They were devoted to Augustine, and his matrix of the soul being attracted or repelled by an external good or evil was very symmetrical and clean, yet they were forced to acknowledge that Augustine did not treat anger as an emotion. They accepted Aristotle's assertion that anger can be understood in two ways—by the philosopher as a desire for vengeance or by the physician as a physiological process involving the heating of the blood. While never explicitly stating that Augustine was wrong, such prominent thinkers as Albertus Magnus and Thomas Aquinas were unable to apply Augustine's system in the case of anger and thus dealt with it separately.

Scholastic thinkers—not just those who were also physicians, like Pietro, but even career theologians who had only a smattering of biological interests—also delved more fully into the physiological aspect of emotions than Plato, Aristotle, the Stoics, or Augustine had done. The medical side of scholastic emotional theory comes primarily from Galen as transmitted by two important early Christian thinkers, Nemesius of Emesa and John of Damascus. Very little is known about Nemesius of Emesa, and medieval scholastics mistakenly attributed his work to St. Gregory of Nyssa (ca. 335-395).[95] Nemesius's *De natura hominis* is a thorough study of the human being with particular interest paid to the body. For Nemesius, man is fully hylomorphic—Nemesius declares in no uncertain terms that the soul and body are united. *De natura hominis* is Nemesius's only known work, and it was translated into Latin by Burgundio of Pisa in the twelfth century. The work combines Platonic, Aristotelian, Stoic, and Galenic elements. Galen's influence is especially clear, although Nemesius was not himself a physician. The prevalence of pagan philosophy is so strong that some scholars suggest Nemesius composed the work before his conversion to Christianity and then reworked it into a

[95] For a full discussion of Aquinas's mistaken citations of Nemesius as Gregory of -Nyssa, see Emil Dobler, *Falsche Väterzitate bei Thomas von Aquin: Gregorius, Bischof von Nyssa oder Nemesius, Bischof von Emessa?: Untersuchung über die Authentizität der Zitate Gregors von Nyssa in der gesamten Werken des Thomas von Aquin* (Freiburg: Universitätsverlag, 2001).

Christian framework afterwards.[96] Although an influential 1914 monograph by Werner Jaeger dismissed *De natura hominis* as an unoriginal synthesis of earlier thinkers, more recent assessments credit it as being the first anthropological work by a Christian and particularly groundbreaking in its application of pagan philosophy to a Christian conception of human nature.[97] Nemesius deviates from the earlier understanding of emotions as being first and foremost movements of the soul, with the body only responding, and also from the Aristotelian, Stoic, and Augustinian presentations of emotions as primarily ethical concerns. He treats them as biological phenomena and places them alongside his chapters on sense perception, mental faculties, even nutrition and the pulse—emotions thus fit into the discipline of natural philosophy rather than moral philosophy. The passions of the soul have become medical concerns for him. This, as we shall see, is the approach to the morality of emotions which Pietro embraces. Nemesius draws on Hippocrates and Galen alongside philosophers in his attempt to explain the passions.

In the spirit of both ancient thinkers and modern psychologists, Nemesius is a compulsive categorizer. For example, building off of Augusine's matrix, he divides *timor*[98] into six different varieties, *tristitia*[99] into four. I believe his divisions of *timor* and *tristitia* are original (he does not credit them to anyone else, nor do the editors of his works, nor have I found any earlier sources which divide them in this way), but throughout his *De natura hominis* he cites both Galen and Aristotle extensively.

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[96] For a discussion of *De natura hominis* and Nemesius's philosophical influences, see Knuuttila 103-110; see also Beatrice Motta, "Nemesius of Emesa," in *The Cambridge History of Philosophy in Late Antiquity*, ed. Lloyd P. Gerson (Cambridge: Cambridge University Press, 2010), 509-510, 518-519.

[97] Motta, 518-519, gives a concise explanation of *De natura hominis* in twentieth-century historiography.

[98] "Dividitur autem et timor in sex: in desidiam, in erubescentiam, in verecundiam, in kataplexim (id est percussionem), in ecplexim, [id est] in agoniam," Nemesius of Emesa, *De natura hominis* XX, ed. Verbeke and Moncho, 103.

[99] "Tristitiae vero species sunt quattuor: achos (id est acedia), achthos (id est anxietas), invidia, misericordia. Acedia vero est tristitia vocem amputans; anxietas vero est tristitia aggravans; invidia vero est tristitia in alienis bonis; misericordia vero est tristitia in alienis malis," Nemesius, *De natura hominis* XVIII, 101.

Table 2. Nemesius's Divisions of Fear and Sorrow

Types of Fear	**Nemesius's Definition**
desidia	fear of a future deed (*timor futuri actus*)
erubescentia	fear resulting from the expectation of reproach (*in expectatione convitii*)
verecundia	fear resulting from a disgraceful act (*in turpi perpetrato)*
kataplexis	fear resulting from a great imagination [ie. awe] (*ex magna imaginatione*)
ecplexis	fear resulting from an unhabitual imagination (*ex inconsueta imaginatione*)
agonia	fear from not having control over one's misfortunes (*timor no potiendi, infortunii*)
Types of Sorrow	**Nemesius's Definition**
achos/acedia	sorrow which cuts off the voice
anxietas	aggravated sorrow
invidia	sorrow at another's good [fortune]
misericordia	sorrow at another's bad [fortune]

Nemesius also gives a physiological account of the emotions, albeit a brief one. He emphasizes the relationship between emotions and the body, proposing that emotions are caused by humoral imbalances. His account of anger includes mania/insanity under the category of *irascibilitatis* along with *ira*.[100] He also discusses the organs responsible

[100] "Ira est fervor eius qui circa cor est sanguinis et ex vaporatione vel returbatione fellis facta. Ideoque et fel dicitur et fellea. Est autem quando ira est et concupiscentia recruciationis; laesi enim vel existimantes laedi, irascimur et fit tunc mixta passio ex desiderio et ira. Species autem irascibilitatis sunt tres: ira, quae vocatur fel et fellea, et mania, quae dicitur insania, et furor. Ira enim principium et motum habens, ira adhuc est," Nemesius, *De natura hominis* XIX, 102-103.

for emotions, which includes claiming that *tristitia* comes from the mouth of the stomach.[101] This emphasis on the anatomy and physiology of emotions is critical. Many philosophers and theologians had little or no interest in medicine, yet their study of this particular work, small and insignificant though it might otherwise appear to historians, induced them to integrate a more serious awareness of the body into their theories of emotions.

Scholastics had access to Nemesius, and through him a medical approach to emotions, via the more overtly theological work of John of Damascus (d. 749 AD). In *De fide orthodoxa*, John of Damascus borrows heavily from Nemesius. For example, he gives the same overall species of *tristitia*[102] and *timor*,[103] as Nemesius did. There are, however, some minor changes—he distinguishes between the definitions of "accidia" and "achos" and he uses slightly different terminology for certain types of fear. But it is difficult to tell if his exact word choice is actually a reflection of John's innovation or the consequence of the process of transmission and translation of both texts. Minutiae of vocabulary aside, John of Damascus's discussion of emotions was heavily influenced by Nemesius. In fact, it appears that all of his discussion of separate emotions, plus his discussion of some mental faculties like imagination and sensation, are pulled directly from Nemesius. Elsewhere in his work, John of Damascus does give a separate

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[101] "Tristitiae vero organum est os ventris. Hoc enim est quod mordicationem sentit in tristiis, sicut Galenus in tertio Demonstrationum ait ita: 'Tristantibus non paucem in ventrem defluit rubrae cholerae, quod mordicationem eis tribuit, et non prius quiescunt a contristatione et mordicatione, quam evomuerint choleram'," Nemesius, *De natura hominis* XX, 103-104.

[102] "Tristitae vero species sunt quatuor: accidia, achos, invidia, misericordia. Accidia igitur est tristitia aggravans, achos vero est tristitia vocem auferens, invidia vero est tristitia in alienis bonis, misericordia vero tristitia in alienis malis," John of Damascus, *De fide orthodoxa*, 28, ed. E.M. Buytaert (St. Bonaventure, NY: Franciscan Institute Publications, 1955), 121.

[103] "Dividitur autem et timor in sex: in segnitiem, in erubescentiam, in verecundiam, in admirationem, in stuporem, in agoniam. Segnities igitur est timor futurae operationis." "Erubescentia vero est timor in expectatione convicii: optima autem est haec passio. Verecundia vero est timor in turpi actu; neque hoc vero insperabile ad salutem." "Admiratio vero est timor ex magna imaginatione. Stupor vero est timor ex inassueta imaginatione. Agonia vero est timor per casum, scilicet per infortunium: timentes enim infortunari actionis agonizamur," John of Damascus, *De fide orthodoxa*, 29, 121-122.

discussion of fear—there are two distinct chapters titled "De timore."[104] His second chapter draws heavily on Pseudo-Athanasius's *Doctrina patrum* and approaches fear in a completely different way from the first chapter, focusing more on its ethical components. Thirteenth-century definitions of the passions, like those given by Albertus Magnus and Thomas Aquinas, copy John of Damascus directly: "passio est motus appetitivae virtutis sensibilis in imaginatione boni et mali."[105] On the whole, John of Damascus is not particularly original in his thoughts on emotions. His contribution to the discussion lies mainly in how he transmitted the work of Nemesius.

We return now to the University of Paris in the thirteenth century, medieval scholasticism at its height. My discussion of scholastic thinkers prior to Pietro d'Abano will focus on the contributions of Albertus Magnus (1193/1206-1280) and Thomas Aquinas (1225-1274), whose views had widespread influence and whose commentaries on Aristotle Pietro brought back with him when he returned to Padua. On many topics, including theories of emotion, Albertus Magnus has been unfairly overshadowed by his famous student. Modern historians of philosophy tend to emphasize the significance of Thomas Aquinas's contribution to thinking about passions, and Thomas certainly devotes far more attention to them than any of his predecessors did—or any successors for generations to come. However, it is unfair to overlook the original contributions of the teacher because the student was more verbose and systematic. Aquinas relied heavily on the work done by Albertus, often copying Albertus directly. Albertus had already set a precedent for discussing the passions not only as asides to questions about perception or about virtues and vices, as Aristotle and many early medieval thinkers had done, but as a full subject in themselves. He devoted an entire, quite substantial *Quaestio* of his work *De bono* to the passions alone. Thomas took this a step further, devoting separate

[104] John of Damascus, *De fide orthodoxa*, II.15.29 and III.23.67.

[105] John of Damascus, *De fide orthodoxa* 1.2 c.22, 94; Albertus Magnus, *De bono*, ed. Kühle, 195; Thomas Aquinas Sent. 3 Dist. 26 Quaestio 1 Art. 1 and *Summa Theologica*, I.II.22.3.

Quaestiones to individual emotions such as joy and fear. The scale of Thomas's discussion of the passions is unprecedented, but recent scholarly works gives a misleading impression of Albert's significance and Thomas's originality by providing extensive treatment of Thomas's analysis of the passions at Albert's expense.[106] Thomas also relies on precisely the same authors as Albert: Aristotle, Augustine, Avicenna, Nemesius of Emesa, John Damascene, and a little bit of Cicero.

Albertus, and later Thomas, both question but ultimately embrace the definitions of the passions in general, fear and sorrow in particular, and the subcategories of fear and sorrow laid out by Nemesius and John of Damascus. Thomas further divides emotions into two categories, the "concupiscible" (sometimes translated as affective) and the "irascible" (sometimes translated as spirited). I prefer to use the terms "concupiscible" and "irascible" because they were precise and technical concepts which the English translations cannot quite capture. The concupiscible passions are the more "passive" passions which respond to good or evil (*gaudium*, *tristitia*, *amor*, *odium*, etc.) whereas the irascible passions are active when the soul must struggle to attain good or avoid evil (*audacia*, *timor*, *spes*, etc.).[107] In Thomas's formulation, all emotions have a contrary (within their same category), except for anger, which has no contrary.[108] Thomas was not the first to use these terms; Aristotle, Galen, and Albert had all included the terms

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[106] There is a long tradition of emphasizing Thomas's significance at the expense of his predecessors, including but not limited to Albert. See, for example, Kemp, Perler, Miner, Pasnau's thorough analyses of Thomas on the passions and their relationship to both questions of morality and their relationship to other psychological topics. The amount of work done to date on Thomas's writings certainly facilitates a continued emphasis on Thomas's thought.

[107] "objectum potentiae concupiscibilis est bonum vel malum sensibile simpliciter acceptum, quod est delectabile vel dolorosum. Sed quia necesse est quod interdum anima difficultatem vel pugnam patiatur in adipiscendo aliquod hujusmodi bonum, vel fugiendo aliquod hujusmodi malum, inquantum hoc est quodammodo elevatum supra facilem potestatem animalis: ideo ipsum bonum vel malum secundum quod habet rationem ardui vel difficilis est objectum irascibilis.

Quaecumque ergo passiones respiciunt absolute bonum vel malum pertinent ad concupiscilem: ut gaudium, tristitia, amor, odium, et similia. Quaecumque vero passiones respiciunt bonum vel malum sub ratione ardui, prout est aliquid adipiscibile vel fugibile cum aliqua difficultate, pertient ad irascibilem: ut audacia, spes, et hujusmodi," Thomas Aquinas, *Summa Theologica* I.II.23.1

[108] Thomas Aquinas, *Summa Theologica* I.II.23.3.

"concupiscibilis" and "irascibilis" in their own discussions.[109] However, Thomas dramatically increases the significance of this distinction to the discussion of emotions. In this distinction, Thomas contributes something new and significant to the discussion of emotions—his division between concupiscible and irascible emotions would play a more important role in subsequent discussions of emotions by scholastic authors than they had before.

Emotions as Vices and Virtues

While popular discourse today describes sins as actions (murder, theft) or at least active thoughts (desiring something forbidden and dwelling actively on that desire), a careful look at the seven deadly sins actually reveals most of them to be emotional in nature in modern terms. Anger, lust, envy, and pride are the items on the list—not "lashing out in anger" or "succumbing to lust." If one conceives of the sins as passive passions, uncontrollable reflexive movements of the soul, how can they also be sins? Must not sinful acts be under the active control of the will? The problem of emotional sins was much more a concern of theologians than philosophers or physicians, but understanding why negative emotions had to be kept in check, as well as how the physicality of emotions influenced how they were understood as virtues and vices, is important to a complete understanding of the sorts of ideas about emotions with which physicians such as Pietro would have been working.

The shifting relationship between emotion and sin is a complicated one which evolved gradually in the writings of the Church Fathers. The list of seven deadly sins does not make an appearance in the Bible itself, and even after the list was finally formulated it continued to evolve gradually over the early history of the Church. Most of

[109] Miner emphasizes Aquinas's continuity with tradition in the use of "concupiscibilis" and "irascibilis" (46-57), but I feel that this is a prime example of where Aquinas departs from tradition, particularly the example set by Albert, to impose his own strict categorization. Albert seems perfectly content to stick to the divisions set out by Nemesius/John of Damascus.

the credit for codifying the sins in their current recognizable form rests with the fourth-century Greek monk Evagrius Ponticus, who developed a list of eight. These were reduced to seven in the late sixth century by Pope Gregory the Great, who had *tristitia* (sorrow) absorbed into *acedia* (sloth), combined pride and vainglory, and introduced envy. For Evagrius, negative and sinful emotions were caused by bad thoughts. By controlling those bad thoughts, one could attain a state of *apatheia*, a soul free from passions (both pleasurable and painful ones). Only in this state of apathy could the soul be open to the love of God.[110] Thus Evagrius takes a rather different approach to the question of how much control an individual has over emotions from many other thinkers, both his pagan predecessors and later medieval scholastics. Rather than seeing them as direct reflexes of the soul responding to external stimuli, Evagrius held that emotions actually respond to thoughts over which we do have control. This opens up the possibility of treating emotion as sin. But we should also bear in mind that Evagrius was writing a century before Augustine, who treated emotions as much more passive experiences. Evagrius's texts, in Greek, were not nearly as widespread or influential as Augustine's, and while Evagrius's list of emotional sins did take gain acceptance in the west, his theories about the relationship between will, emotion, and the body did not actually have considerable influence upon scholastic theories.

Theologians were left with a number of questions connecting morality and emotions. The ethical problems posed by emotions were twofold, first in how to control one's actions in response to emotions, second in how to regulate the emotions themselves. As described above, Aristotle had discussed the passions of the soul much more thoroughly in his *Ethics* than his *De Anima*, the latter of which was concerned with perception and cognition rather than emotion. For him, the first problem was most central. Emotions could be problematic because they might lead a person to act in

[110] Knuuttila, 142.

irrational and destructive ways.[111] The second problem, that of the virtue or vice inherent within the experience of the emotion, Aristotle dealt with briefly. No, we cannot be held responsible for our feelings. Passions are by definition passive. They are natural responses of the soul to outside stimuli. We certainly are responsible for the actions we take in response to our emotions—lashing out in anger, running away from something we fear—but we are not responsible for the emotions themselves. Aristotle did not approve of the experience of strong emotions and argued that the formation of habits which kept one's emotional state balanced and tranquil was critical to the pursuit of happiness, but in any given moment the experience of a passion of the soul could not warrant "praise or blame" for an individual.

Aristotle's analysis was not fully satisfactory for the scholastic theologians and philosophers. They agreed with Aristotle that emotions presented an ethical problem in that they could influence actions, but drawing on centuries of intervening Christian tradition they also concluded that to a certain extent simply *having* certain varieties of fear and sorrow could be virtuous or sinful. While also agreeing with Aristotle about the passivity of the passions and their not being subject to the intellect or to conscious choices, the Christian notion of the will and importance of judging the soul led medieval authors to put a great deal more energy into exploring how emotional states and emotional inclinations could qualify as sins.

In his *Summa Theologica*, Thomas Aquinas claims that the passions can influence the will without actually hijacking it. He argues that they interfere with reason through two of the internal senses, the imaginative and cogitative powers. The intellect and the will are entirely immaterial and hence are not directly subject to the passions, but the passions can influence the imaginative and cogitative powers (which have physical

[111] The extremes of emotions deviate from the "mean," a balanced state—this is part of what makes them dangerous. By training oneself to exist in a state of the mean, one develops a *habitus* which prevents strong emotional responses. For more on *habitus*, see Ch. 3 below. *Nicomachean Ethics*, II.1108a-1108b.

locations within the brain, as discussed below in Chapter III), and hence through these two powers, which are material, impact the intellect and influence the will's choices. The imaginative power is that which forms images in the brain—by helping craft these images, the passions can sway choice not by controlling the intellect itself but by influencing the information available to the intellect. The cogitative power is man's more sophisticated version of lesser animals' estimative power. Avicenna explains that a wolf gives off *intentiones* of "enmity and malice" towards a sheep, which the sheep receives but does not sense (the *intentiones* are "insensible").[112] The sheep then rapidly judges how to respond by what Alhazen calls "a kind of syllogizing" but which does not actually involve words, propositions, or higher reason.[113] Humans have this same on-the-ground practical reasoning ability, "particular reason," which works in a framework made available by the intellect and communicates with the intellect, but unlike the intellect is material and hence can be distorted or buffeted off course by material impetuses like the passions.

In order to better understand the state of the discourse about feelings as virtues and vices at the time of Pietro d'Abano, it is fruitful to look at how several specific negative emotions or emotional sins were discussed by theologians and philosophers before him. One of the most fascinating emotional sins is that of *acedia*. While he Greek word is now usually translated as "sloth" and taken to mean laziness in the form of inactivity, in ancient and medieval times the very experience of *acedia*, not merely its consequent actions, was condemned. *Acedia*, a kind of spiritual malaise, a sense of despair, a disinterestedness in the world in general and in prayer and worship in particular, was the deadly sin. The laziness and lack of interest in activity which it

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[112] Avicenna, *Sextus de naturalibus*, pars 4, c. 1, vol. 2, pp. 6-8; translated in Katherine H. Tachau, "What Senses and Intellect Do: Argument and Judgment in Late Medieval Theories of Knowledge," in *Argumentationstheorie: Scholastische Forschungen zu den logischen und semantischen Regeln korrekten Folgerns* (Leiden: Brill, 1993), 658.

[113] Tachau, "What Senses and Intellect Do," 661.

inspired were mundane consequences of a much more severe ailment of the soul. Evagrius Ponticus, discussed above, receives most of the credit for discussing *acedia* as a Christian vice. Evagrius describes it as the "noonday demon," which afflicts monks around the middle of the day when they are feeling particularly bored or frustrated with the monastic life. The noonday demon even provides them with rationalizations for their lapses in faith and resolve, suggesting that they might even want to leave the monastery because "it is not on account of locality...that one pleases God. He can be worshipped anywhere."[114] They grow tired of prayer and want to wander around. For Evagrius, *acedia* is more than just a feeling. It comes with a series of thoughts over which the monk also has no control because they are placed in his head by a demon. While an emotional sin, *acedia* for Evagrius is not remotely physiological—it is spiritual, about thoughts and movements of the soul.

When making his own list of vices, Pope Gregory the Great eliminated *acedia* as a distinct vice and kept it only as a subspecies of *tristitia*. Siegfried Wenzel, in his study of *acedia* from antiquity through the early modern era, rejects suggestions that Gregory simply eliminated the vice to take the list of deadly sins from eight to a tidy and numerologically significant seven. Even if that was his reason for cutting a sin, why would he choose that one over any of the others? Wenzel suggests that *acedia* as described by Evagrius was not only a uniquely monastic sin but a uniquely desert monastic sin. Western monasticism, as codified by St. Benedict, was far more communal in nature and placed more emphasis on work than on endless, monotonous, private prayer which characterized the lives of the Egyptian monks who surrounded Evagrius. While they still chose a challenging and austere lifestyle, Benedictine monks did not suffer the privations of the earlier Egyptians—they were even allowed afternoon naps, a good way

[114] Evagrius Ponticus, *De octo vitiosis cogitationibus*, 7, as cited in Siegfried Wenzel, *Sin of Sloth*, *The Sin of Sloth: Acedia in Medieval Thought and Literature* (Chapel Hill: University of North Carolina Press, 1960), 8.

to keep away a "noonday demon" of boredom and self-doubt![115] But Wenzel also notes that *acedia* had the last laugh, so to speak. John Cassian, writing in the 420s, included *acedia* in his list of vices, and ultimately Cassian's choice of *acedia* overrode Gregory's use of *tristitia*.

Acedia thus won priority as a sin, but as an emotion it remained subordinate to *tristitia*. As shown above, Nemesius described *acedia* as just one form of sorrow, the sorrow which "cuts off the voice." This is a vast departure from Evagrius's characterization of *acedia* as a sin and a demon which tempts monks away from their tasks. It is not just a spiritual passion, it is a bodily one, of a particularly transitory nature. As such it is not sinful but rather symptomatic of a reflexive motion of the soul. Scholastic authors proved able to absorb both definitions. Thomas Aquinas, for example, in two different works, his *Summa Theologica* and his commentary on Lombard's *Sentences*, treats *acedia* both as a sin (giving into feelings of despair and spiritual malaise—sinful because the will allows those feelings to dominate) but elsewhere as just a feeling.[116]

Even before Thomas's work on the subject, Albertus Magnus had taken significant steps towards medicalizing the sin of *acedia*. He repeats Nemesius's explanation of sorrow which cuts off the voice and adds in a physiological explanation of why it should do so. Citing Avicenna, Albert argues that sorrow is caused by a contractive motion of the heart, and the spirit retreats to the heart and the blood, thus cutting off the voice.[117] Thomas likewise sees the contractive motion of the heart in response to negative emotions as a particularly significant phenomenon. In his

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[115] Wenzel, *The Sin of Sloth*, 23-29.

[116] Thomas Aquinas, II.II.85.1.2; II.II.54.2.1; *Sent*. 2 42.2.3.c.

[117] "Cum enim tristitia causaretur ex motu cordis secundum systolen, ut dicit Avicenna, videtur, quod in omni tristitia recurrat spiritus ad cor et etiam sanguis. Recurrente autem spiritu ad cor, debilitatur vox, quae consistit in continentia et formatione spiritus intra contenti," Albertus Magnus, *De Bono* V.2.40-45, 201.

commentary on the Sentences, Book 3, Distinction 34, he expresses great concern with the idea that fear involves a "contractive motion" as presented by John of Damascus. Albertus expands this idea of contraction to a larger scale, even analogizing the contractive motion within the body with the movement of frightened people congregating at the center of a town when it is under attack[118] But neither Albertus nor Thomas fully explain the mechanism whereby the contraction of the soul and the contraction of the heart are related. Also, the order of operations remains a bit ambiguous in both accounts. Each one seems to be suggesting that the movement of the heart is the origin of the emotion, rather than the movement of the soul itself. Thus we see a progression towards treating sorrow and *acedia* as ailments rather than sins in certain contexts.

Dante Alighieri, contemporary with Pietro d'Abano and for a time also resident of Padua (although there is no evidence that the two ever met) gives a particularly graphic account of the torments in Hell for those who had committed emotional sins in life. Those guilty of lust are caught in a whirlwind; those who succumbed to acedia wallow in mud:

> Lodged in the slime they say: 'Once we were grim
>
> And sullen in the sweet air above, that took
> A further gladness from the play of sun;
> Inside us, we bore acedia's dismal smoke.
>
> We have this black mire now to be sullen in.'[119]

For Dante, these emotions are entirely spiritual sins, unmitigated by the influence of the body. In this respect he not only lags behind the medical opinion current to his day—understandable, as he doubtless had no medical training—he even lags behind the views of Albertus Magnus and Thomas Aquinas. However, given the wide appeal and spread

[118] Thomas Aquinas, *Sent*. 3 D. 34.2.1.

[119] Dante Alighieri, *The Inferno of Dante*, trans. Robert Pinsky (New York: Farrer, Straus, and Giroux, 1994), VII.106-109.

of Dante's writings, it is likely that his views accorded with a wider swath of medieval society than the more academic perspectives of the theologians and scholastic physicians.

When Dante's sinners attempt to justify their actions, they either blame circumstances or give agency to the emotions themselves. The latter is true in the case of the ill-fated lovers Paulo and Francesca, who blame love for their transgressions as though love were an active, conscious entity.[120] But, although Vergil tells Dante that the circle of the lustful holds those who "sinned carnally," in her own account Francesca never blames the body for the experience of lust but repeatedly uses the term "love" (*amor*). She speaks as though a purely spiritual force were even more difficult to resist than a physical one, and thus her transgression ought to be more excusable than succumbing to a passion with biological origins. Dante presents the sinful passions as active, almost self-determined forces, but whose vicious agendas it is the responsibility of the human soul to actively resist. Experiencing these emotions in acute enough form is enough to land a person in Hell—the power of the passion is not enough to excuse the victim in Dante's formulation. Nevertheless, sinful acts remain worse for Dante than the experience of emotional sins. His lustful, gluttonous, wrathful, and sullen sinners are all in the upper levels of Hell, less culpable than those who actively committed acts of murder or betrayal. Thus while negative emotions were sins in themselves for Dante, they were still milder than sinful acts.

All unpleasant-feeling emotions were not necessarily bad or immoral for medieval thinkers, however. Sometimes they could also be virtuous. Just as negative emotions were bad both in themselves and for the actions they inspired, emotions could both be virtuous for bringing about virtuous actions but also for being intrinsically spiritually uplifting. *Verecundia* (shame) falls into the former category. It is not a virtue *per se*, in that simply feeling shame is not laudable or praiseworthy. However, its effects are

[120] Dante, *Inferno*, V.89-96.

positive, according to Albertus Magnus, because even though it does not push us towards what is good it does repel us from what is bad.[121] Thomas Aquinas similarly concludes that fear in the form of shame is laudable, but he agrees with Albertus in not calling it a full-fledged virtue. Shame is fear of doing something *turpis* (disgraceful, base), and as an unpleasant feeling in the consideration of performing such an action it trains one to be honorable.[122] Shame has a clear physical component, seen in blushing. But shame is particularly tricky for Thomas, because we can also feel shame at doing something good which only appears evil. Also, some of the most evil people feel no shame at their acts. Thus while shame is good in that it provides us with some direction for our behavior, it is not a perfect compass for virtuous action. It is most useful for "mediocre" man, because the most truly virtuous man has no need to feel shame and the evil one lacks it. It produces virtuous consequences, then, in this middle sort of person.[123]

Fear (*timor*) was also believed to possibly have a spiritual value. Specific kinds of fear could even be good and virtuous in and of themselves, not merely for the actions they inspired. Thomas presents the fear of God as actively good both in his question *De dono timoris* ("On the Gift of Fear") in the *Summa Theologiae* and in his commentary on Book 3, Distinction 34 of the Sentences, which includes the fear of God as one of the gifts of the Holy Spirit. This fear he divides into filial fear, which is like the fear a son should feel for his father and is based on affection, and servile fear, the fear a servant has for his master. According to Thomas, natural fear, like fear of death, has no spiritual value. Fear of God's punishment has some spiritual value, but as you progress through the stages up towards filial fear—which combines love and fear in the sense of being

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[121] "Nec etiam est dispositio ad optimum, sed sicut disponens per recessum a turpi," Albertus Magnus, *Super Ethica* Liber IV Lectio XVI 300,29-30.

[122] Thomas Aquinas, *Summa theologica*, II.II.144.1

[123] "Ad primum ergo dicendum quod defectus verecundiae contingit in pessimis et optimis viris ex diversis causis, ut dictum est. Invenitur autem in his qui mediocriter se habent, secundum quod est in eis aliquid de amore boni, et tamen non sunt totaliter immunes a malo," Thomas Aquinas, *Summa Theologica,* II.II.144.4.

awe-struck rather than fearing punishment—you move towards the most spiritually beneficial fear.[124] This fear is not so much a passion of the soul in the normal sense, the soul moving in response to some external stimuli, as a separate spiritual phenomenon. It is thus a theological matter and not an ethical one.

While *timor* in certain forms can lead to virtue, *timiditas*, general fearfulness or cowardice, according to Thomas, is always a vice. It is not a particularly seriousvice, however. He says that it may seem worse than intemperance because cowardice is contrary to courage and courage is a greater virtue than temperance, but in the end, the harder a vice is to resist the less severe a vice it is. Fear of death is, to Thomas, a substantial temptation to vice, and hence cowardice in the face of mortal danger is more excusable than intemperance in the face of lust. Also, Thomas says that fears can stupefy the mind, which makes the individual less culpable for his actions.[125] Hence cowardice is less voluntary and less severe a sin than intemperance. In his commentary on *De anima*, Aquinas briefly discusses constitutional predispositions towards fear and other emotions. Specifically, someone who is melancholic can feel fear even if there is no imminent danger, as will be discussed further in Chapter III.[126] But this particular point on the

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[124] Thomas Aquinas, *Summa Theologica*, II.II.19.2; Sent. 3 Dist. 34.2.1; see also Stephen Loughlin "The Complexity and Importance of *timor* in Aquinas's Summa Theologiae," in *Fear and Its Representations in the Middle Ages and Renaissance*, ed. Anne Scott and Cynthia Kosso (Turnhout: Brepols, 2002), 11-16.

[125] "Quanto autem illud commovet ad peccandum videtur esse magis necessarium tanto peccatum legius est [the greater the force which moves us to sin seems to be greater of necessity, so much the lighter the sin]...Primo quidem, quia quanto ille qui peccat magis est compos suae mentis tanto gravius peccat: unde alienatis non imputantur peccata. Timores autem et tristitiae graves, et maxime in periculis mortis, stupefaciunt mentem hominis: quod non facit delectatio, quae movet ad intemperantiam," Thomas Aquinas, *Summa Theologica*, II.II.142.3.

[126] "Omne ad quod operatur complexio corporis non est animae tantum, sed etiam corporis: sed complexio corporis operatur ad omnes passiones animae, ut puta ad iram, mansuetudinem, timorem, confidentiam, misericordiam et hujusmodi: videntur ergo animae passiones omnes esse cum corpore. Et quod ad hujusmodi passiones operetur complexio corporis, probat dupliciter. *Primo sic*. Quia nos videmus quod aliquando superveniunt durae et manifestae passiones, et homo non provocatur, neque timet; sed si accendatur ex furore, seu ex complexione, corpus a valde parvis et debilibus movetur, et sic se habet sicut cum irascitur. *Secundo probat dicens* 'Adhuc fit magis manifestum' quod ad hujusmodi passiones operetur complexio corporis. Videmus enim quod etiam si nullam immineat periculum, fiunt in aliquibus passiones similes his passionibus quae sunt circa animam, ut puta melancholicis frequenter, si nullum periculum immineat, ex ipsa complexione inordinata fiunt timentes. Ergo, quia, sic se habet, scilicet quod complexio

humoral causes of cowardice does not enter into Thomas's discussion of the severity of cowardice as a vice.

Another emotional virtue is the antithesis of fear: courage. Courage is not an emotion in and of itself and will be explored more fully in Chapter III on personality, but it certainly has an emotional element. A person whose soul through habit is inclined towards courage or whose disposition through bodily temperament is similarly inclined is less likely to be susceptible to the movement of the soul in a timorous manner. Albertus Magnus distinguishes clearly between two kinds of courage, audacity (*audacia*) and fortitude (*fortitudo*).[127] Fortitude is one of the four cardinal virtues, and all scholastic authors sing its praises. However, audacity could be dangerous, leading one to act in reckless and impulsive ways in response to threats. It should be noted that fortitude is a virtue both intrinsically, that is, simply possessing it is virtuous, as well as extrinsically, in the consequences it could produce. Audacity is neither a virtue nor a vice in and of itself. Being audacious is not wrong, but it can lead to dangerous consequences.

Anger can perhaps lead to the most dramatic real-world consequences of all of the emotional sins, which might be why it receives so much attention from both ancient pagan and medieval Christian authors. When it comes to controlling the emotions, the scholastics often offer suggestions which would seem maddeningly unhelpful to someone suffering from a choleric disposition. For the most part, the advice is cognitive or behavioral—what one should think about in order to calm an emotion. They do not tend to see emotions as ailments and thus are not overly concerned in "curing" such unpleasant feelings as *ira*. Roger Bacon (1214-1294), the eclectic and belligerent Franciscan who contributed so much to the science of optics and emphasized the importance of experiment and observation over authority when studying the natural

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operetur ad passiones hujusmodi, manifestum est quod hujusmodi passiones 'sunt rationes in materia,' idest habentes esse in materia," Thomas Aquinas, *In Arist. de anima* I.2.22.

[127] Albertus Magnus, *Quaestiones de animalibus* Liber VI Quaestio 14-18 166, 52.

world, takes a surprisingly conservative approach to his discussion of anger. Bacon emphasizes anger's sinful nature because of the negative consequences it has, stating that "anger is a very serious sin. For the angry man blasphemes God, loses his neighbor, confounds himself, scatters abroad his temporal blessings, and is not deterred in venting his rage by the fear that he is neglecting his eternal good and making himself liable to punishments of hell."[128] Bacon relies almost exclusively on Seneca's *De ira*, and on the whole he is more concerned with exhorting readers to avoid anger than with giving them a good guide of how exactly they should do it. He gives extensive examples from history and mythology of why anger is bad and how it has led, time and again, to disaster. When he does give advice on the avoidance of anger, it is almost entirely cognitive. He urges his reader to have "a knowledge of the facts before we give way to anger," claiming that anger often arises from ignorance. He then advises "delay in exacting punishment." Anger must be concealed, suppressed, denied; "Let it be hidden in the lowest depths of our breast: let us carry it, let not it carry us."[129]

Still, around the same time Bacon was relying on the traditional view that simply presenting arguments against anger would help to prevent people from succumbing to it, other thinkers began to recognize that we might sometimes be unable to control our emotions themselves. They even saw that sometimes the actions springing from strong feelings could be beyond the direct control of the will. Maureen Flynn investigates this in the particular case of anger leading to blasphemous words. While in the earlier Middle Ages, impulsive acts, like blasphemy, resulting from anger were mortal sins, Thomas Aquinas later acknowledged that blasphemy could happen "without deliberation" and was only sinful "when a person is aware of the significance of the words."[130] Flynn goes

[128] Roger, Bacon, *The opus maius of Roger Bacon*, trans. Robert Belle Burke, vol. II (Philadelphia: University of Pennsylvania Press, 1928), 685.

[129] Roger Bacon, *Opus Maius,* vol. II, 707-709; Bacon quoting Seneca *De ira* III, 13.

[130] Thomas Aquinas, Summa Theologica, II.8.2 and Ia.2ae.24.4; see also analysis of these passages by Maureen Flynn, "Taming Anger's Daughters: New Treatment for Emotional Problems in Renaissance Spain," *Renaissance Quarterly* 51.3 (1998), 870.

on to explore how Renaissance Spanish thinkers expanded on this idea, claiming that "acts of rage like blasphemy therefore could not easily be suppressed unless one gained control over the specific physiological mechanisms that accompanied the soul's *appetitus vindictae*."[131] This goes beyond identifying anger itself as a physiological occurrence and not a result of direct will. These Renaissance thinkers were now arguing that even seemingly sinful actions which sprang from anger could be excused under specific circumstances.

It is important to consider the relationship between emotion, sin, and the body in relationship to Pietro's work, particularly his study of physiognomy, for several reasons. In the first place, the *Liber compilationis phisonomie*, *Expositio problematum Aristotelis*, and *Conciliator* form part of a much larger general movement in medieval society towards seeing people as being naturally inclined towards certain emotional responses and towards treating emotions and reflexive responses to them as being beyond conscious control. Pietro's work anticipates this trend in removing moral praise or blame from emotionally-driven actions. He does this by giving a highly physiological account of emotions, particularly in his *Expositio problematum Aristotelis*. Here he goes considerably further than Albertus Magnus had in explaining the physiology behind emotions, addressing new scenarios and circumstances; as is so common among medieval scholastics, he does not provide specific scenarios but instead general ones—for example, assuming that people always grow pale or thirsty when afraid. He uses the idea of the contraction and expansion of vital heat which had been so central to Albertus's physiological explanations. He claims that the withdrawal of heat causes pallor and thirst among the fearful, symptoms which were apparently ubiquitous in Pietro's observations,

[131] Flynn, 873.

and uses the same mechanism to explain the occasional loosening of their bowels. Contrariwise, thirst in the brave is explained by the collection of heat around the heart.[132]

The extremity of Pietro's naturalism and materialism in accounting for the behavior of the soul leads him to conclusions about morality that were unusual for the time. He goes somewhere that many scholastics were afraid to go—if we start excusing sins on the basis of biological determinism, saying that a person could not control his or her actions or thoughts because the deed (if not the will itself) had been hijacked by physical emotions, how can we label emotions or thoughts as virtuous or sinful? His discussion of morality includes little discussion of the will or intellect but focuses on cultivating virtuous habits, something which he does not attribute to the will itself. Matthew Klemm finds that Pietro rarely distinguishes between "physiological causes, actions that are completed out of habit, and those that are rationally chosen and willed."[133] Pietro had gone so far as to give a naturalistic explanation for homosexuality.[134] While there is room for virtue in the Aristotelian sense, and for praise and blame, there is little room for sin in Pietro's medical psychology.

Emotions, Physiognomy, and the Question of Care

This chapter has explored ancient and medieval theories of emotion. It has investigated how thinkers presented spiritual and ethical concerns for philosophers and theologians but also how they might sometimes be viewed as ailments to be cured and hence also worthy of study by physicians. We now return to Pietro d'Abano's assertion that physiognomy is the science of studying passions by examining the body.

Descriptions of how we can identify emotions based on physical appearance often

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[132] Pietro d'Abano, *Expositio Problematum Aristotelis*, 27.1-3 (Mantua 1475); for further analysis of this section of the *Expositio* see Klemm, 140-143.

[133] Klemm, 138.

[134] Joan Cadden, "'Nothing is Shameful': Vestiges of a Debate About Sex and Science in a Group of Late-Medieval MSS," *Speculum* 76 (2000), 66-89.

found their way into works which were not explicitly devoted to physiognomy. A vast assortment of medieval writings, from philosophical to literary texts, explain how emotional experiences alter one's appearance. The examples are numerous, so I will only include a particularly striking one from Roger Bacon, quoting Seneca, which explains the way in which anger changes how a person looks. He uses the way in which anger contorts one's features to bolster his moral argument, that anger is a wicked emotion.

> Nor is the appearance of any other passion more repulsive. It defiles the face, renders savage the most tranquil brow. All beauty departs from those angered...and their hair smooth by either nature or art becomes rough along with their disordered mind. Their veins swell, their breast heaves with their rapid breathing, angry ejaculation of the voice distends the throat...we have described the angry man's countenance as fierce and now pallid with the blood withdrawn and banished from the surface, and now red with all the color and energy brought into the face as though covered with blood, the veins swollen, and the eyes now restless and darting from their sockets, now fixed and set in a stare...That you may know that those are not the sane whom anger possesses, look at their appearance. For as there are definite indications of madness, the bold and threatening look, the gloomy brow, the savage face, the hasty step, the restless hands, the changing color, the frequent and labored sighs, so are the same signs visible indicative of anger.[135]

Pietro does not indulge in the same kind of literary freewheeling as Roger Bacon. In fact, some of his descriptions of emotions are almost comical in their utter lack of detail and do not really seem to have much practical value. For example, "a smiling leonine face shows one to be lustful and agreeable, and a sad face to the contrary denotes sadness."[136] This latter statement seems painfully obvious, but Pietro elsewhere cautions against drawing such intuitive conclusions—for example, sad eyes may also be signs of fear, or of someone engaged in thoughtful reflection and study.[137]

Although he says that physiognomy is about studying the passions of the soul, it becomes clear in the *LCP* that to Pietro, the passions get in the way of the

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[135] Roger Bacon *Opus Maius,* trans. Burke, vol. II, 687; Bacon is citing Seneca *De ira* II, 35 and I, 1.

[136] "Letus vultus arridens libidinosum denunciat et iocundum. et tristis econtrario denotat tristem," *LCP,* fol. 26r.

[137] "Et tristes oculi non sunt omnino timendi. Humidorum enim hi cogitationi sunt dediti et optimarum artium denotant studia," *LCP,* fol. 21r.

physiognomer's real goal—to read enduring personality traits and abilities in a person. The temporary passions can sometimes act as a smokescreen, obscuring the genuine qualities of an individual or creating the illusion of traits that are not there at all. At one point, Pietro cautions against using color alone for making physiognomical judgments, because color can actually signify multiple traits.[138] The physiognomer must be careful not to make assumptions about a person's character if their body is simply responding to a temporary passion of the soul. For example, under normal circumstances pallor is a sign of weakness and timidity. However, it can also be the sign of "the love of a woman being withheld."[139] Likewise, while reddish coloring normally shows a person to be clever, like a fox, it may also be evidence that he or she is experiencing the transitory passion of shame.[140] Unfortunately for the would-be physiognomer, Pietro does not give much help on how to distinguish between the possible explanations for a person's coloring.

Navigating the exact nature of the relationship between mind and body with the end of achieving happiness in this life or salvation in the next has proven problematic for ancient, medieval, and modern thinkers alike. This is particularly true when we come to the issue of care—care of the body and care of the soul. How do we care for or cure people suffering from problems with emotion, personality, memory, and cognition? If we think, as Pietro d'Abano did, of the mind as having a physical component and being susceptible to bodily ailments, it naturally follows that the treatment of psychological problems would be of interest to physicians—and the medical knowledge might be of

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[138] "Ex coloribus quoque phisonomcatur pilositatibus motibus totius corporis et creatura simplici et coniuncta. Colorum autem iudicio nisi quas sue cause proprium adiungat effectum error iudicanti in plerisque continget. Nam ipsorum nature sui superioris rationem servando pre aliis corporum proprietatidus (*sic*) et signis multifacie ac leviter perimuntur," *LCP*, fol. 5r.

[139] "Color autem pallore obductus imbecillem timidumque declarat et amore femelle detentum.," *LCP*, fol. 5v.

[140] "Rubei autem valde sunt astuti relati ad vulpes. Cuius facies supertabescit si maior rubedo in fronte sistat et oculus sit divisus prononsticat verecundiam et ad passionem refertur," *LCP*, fol. 5v.

interest to philosophers and theologians trying to understand how and why we experience negative emotions and how and why we could manipulate them. We find evidence of treating emotions as physiological problems to be cured by physical remedies in thirteenth-century scholastic thought. Thomas Aquinas, for example, devotes one interesting little section of his *Summa Theologica* to remedies for sorrow. His therapies are mostly cognitive, although a few are behavioral. He recommends such actions as meditating on truth, seeking the company of friends, and seeking pleasure in general (because pleasure of any sort is opposed to suffering). None of Thomas's recommendations are strictly physical—he does not advise any dietary changes, exercise, etc. The closest he comes to suggesting that kind of remedy is his advice that one weep, sleep, and bathe. This he supports on Aristotelian grounds without any reference to more medical, Hippocratic or Galenic theories (for example, he includes no discussion of humors). Weeping is appropriate for sorrow, and, according to Aristotle, any action which befits a disposition causes some kind of pleasure. It also releases the sorrow, rather than turning the soul in upon itself. Bathing is particularly interesting because this also turns up commonly in health regimens and as a cure for illnesses in assorted medical texts. Thomas does not approach bathing-as-cure from a medical or physiological standpoint—rather he uses an anecdote of Saint Augustine's for empirical evidence of how bathing can help with sorrow, saying that bathing is pleasurable and hence counteracts the pain of sorrow, and offers up the heart as the means by which the pleasure of the bath can diminish the pain of the sorrow: "Every good disposition of the body reacts somewhat on the heart, which is the beginning and end of bodily movements, as stated in *De causa mot. animal*. xi."[141] This further suggests that the heart not only responds to sorrow but can actually cause sorrow—the pleasure of the bath acts not

[141] Thomas Aquinas, *Summa Theologica*, I.II.38.

directly on the sorrow of the soul but on the sorrow of the organ of the heart, which causes the motion of the soul.

Ordinary people would have had little occasion to read scholastic theories of emotion or access to scholastic advice for emotional control. But the thirteenth century witnessed not only an increased academic interest in emotion but also an increased interest in helping the ordinary layperson work through his emotional problems through the process of confession. In 1215, the Fourth Lateran Council declared that people had to make confession once a year. Subsequently, we see a great proliferation of confessional manuals, designed to help confessors target and correct the sins of their flock—sins which, as we saw above, were often emotional in nature. This coincides with a shift Wenzel had observed about changes in the discussion of *acedia*. Until the twelfth century, it had shown up almost exclusively in discussions of monastic life, but soon it appears in advice for lay conduct.[142] At this point, *acedia* metamorphoses from being the sort of spiritual malaise and lack of interest in the contemplative life into the more recognizable laziness and lethargy while also picking up a physiological cause. It would eventually become associated with an excess of melancholy rather than demonic suggestion.

Thinking of confession as a cure for emotional ills seems to take us rather far afield from the science of physiognomy. Pietro d'Abano certainly does not cite confessional manuals in his works. But just as the academic fields of theology and medicine were distinct yet overlapping, so too the care of emotional problems occupied the interests of two kinds of people, physicians and confessors. As a physician, Pietro was forced to limit himself to the care of the body. The passions presented a strange problem. Unlike beliefs, which clearly fell under the disciplinary authority of priests, or obvious physical ailments from flesh wounds to fevers which belonged to the physicians,

[142] Wenzel, 35.

emotional sins and emotional ailments bridged body and soul. In general, it was taken for granted that priests had disciplinary jurisdiction in psychological matters. No one questioned their right and responsibility to treat emotional problems. Physicians, on the other hand, generally had to struggle and make arguments and excuses to be allowed to address such problems.[143] But unlike their counterparts in the faculty of arts, where strict limitations were laid down on what sort of topics they were allowed to discuss or what sort of problems they might try to solve, the physicians accepted the rules passed down by the theologians. Mindful of the religious oversight of their academic output, thirteenth-century medical authors were routinely careful to acknowledge the dependence of medical efficacy on divine grace.[144]

We can trace the debate over just when and how physicians could involve themselves in psychology by considering the discussion of the role of physicians and priests in finding cures or remedies for emotional problems. Haly Rodoan (Ali ibn-Ridwan, d. 1061) provided medieval European physicians with a relatively restricted place in the care of emotions. Emotions were only the concern of physicians with respect to illness, how they affected the health of the body, and not themselves the direct concern of those physicians. Taddeo Alderotti (c. 1215-1295) challenged Haly's limits. While Taddeo agreed that only insofar as emotions were physical concerns did the passions become the responsibility of physicians, and maintained that those with only medical expertise did not have the authority to remedy the spiritual aspects of emotional problems, nevertheless he expanded the role of physicians in healing emotional ailments. Such Italian medical authors of the fourteenth and fifteenth centuries as Ugo Benzi and Michele Savonarola continued to expand the role of physicians in providing cures for

[143] Na'ama Cohen-Hanegbi, "Accidents of the Soul: Physicians and Confessors on the Conception and Treatment of Emotions in Italy and Spain, Late 12th-15th Centuries" (Ph.D. Diss, Jerusalem: Hebrew University, 2011), 236.

[144] Klemm, 49-51.

emotional ailments.[145] Consensus about the nature of emotions and who was responsible for their care continued to be difficult to reach in future centuries. Thus the ways in which sixteenth-century Spanish humanists advised varied considerably, from the highly cognitive advice of Miguel Sabuco de Nantes, who focused on "the power of words to persuade the will," to Juan Luis Vives, quite possibly the most significant proto-psychologist of the Renaissance. Vives would go so far as to challenge Plato and Aristotle directly, arguing that emotions cannot be controlled at all and that their study belongs to the study of psychology rather than ethics.[146]

Pietro's *Expositio* gives no advice on care, although perhaps this is not particularly unexpected since it is a philosophical text in both content and style. It may be a bit more remarkable that there is no concern for treating emotional problems in the *LCP*; while it is completely practical in its orientation, the *LCP* is only about interpreting someone's appearance, not about using those results to do anything about his or her emotional state. As we shall see in Chapter IV, the goal of pre-medieval physiognomical texts was usually social rather than medical. If we think of Pietro writing in a physiognomical tradition, his lack of interest in patient care is not at all surprising; if we think of Pietro as a practicing physician, it is.

Pietro was clearly unusual in the extent to which he gave physiological, medical accounts of the emotions. He does so most explicitly in his *Expositio*, even though the text has no care instructions; both the *LCP* and *Conciliator* provide additional evidence of Pietro's naturalism. While we might say that Pietro was ahead of his time in talking about the biological causes of emotion, in some ways his time was actually ahead of early modern and even modern theories. Aristotle had created a place for the body in the understanding of the passions, and Albertus Magnus and Thomas Aquinas, drawing on

[145] Klemm, 241-247.

[146] Flynn, 875, 879.

the physiological explanations presented by Nemesius, had developed nuanced explanations for feelings that blamed not only the will but also bodily states and habit for negative affect. In discussing the sinful nature of emotional states, these authors made allowances for the body influencing the mind. Pietro may have gone several steps further in the medicalization of emotions and refusal to label them as sins, but the chasm between his views and those of his scholastic predecessors was not vast. Renaissance intellectuals after Pietro continued to challenge the idea of direct, willful control of the passions and encourage a more compassionate treatment of affective sins or reprehensible actions committed under overwhelming emotional influence. However, early modern thinkers rebuilt the wall between the mind and body, and questions about the exact nature of the passions—how much control we actually have over them, whether they qualify as virtues, vices, or ailments, and other concerns—continue to engage us today.

CHAPTER III

PERMANENT TRAITS: PERSONALITY AND MENTAL CAPACITIES

It is clear throughout the *Liber compilationis phisonomie* that, despite what Pietro claims is his goal, the real end of physiognomy is not to read the transitory passions of the soul but its inclinations. Emotions are brief experiences, sometimes lasting only a few minutes. On the other hand, the tendency towards certain emotions is an enduring, possibly even permanent, trait in an individual. It is the difference between a person who is angry and an angry person. None of the authors discussed here, from Aristotle to Pietro d'Abano, really address the issue of duration when they talk about *passiones animae*. Indeed we encountered this problem in the previous chapter, when Pietro's use of emotion words actually described people who tended towards feeling specific emotions rather than people who were feeling those emotions in a given moment. Despite the ambiguity in some cases, a close reading of the *LCP* reveals that Pietro is far more concerned with enduring character traits which guide the passions of the soul than the fleeting versions of the passions themselves.

This chapter is devoted to the enduring states of an individual's character and abilities: his or her personality and mental capacities. These are traits which, while subject to gradual change over time, are far more stable than the transitory passions which buffet the soul. The possibility for personality and mental capacities to change was something both medieval and modern psychologists recognize, although both then and now they dispute how dramatically and quickly such traits can be altered. Multiple generations of laboratory mice have shown how certain personality traits can be selected for, giving us insights into how human personality traits evolved. In different circumstances, traits like daring or timidity would have advantages for survival, leading

to varieties of personality types in the human population.[147] It has also been found that some traits are more subject to change than others within individuals. For example, conscientiousness tends to increase and openness to new experiences decrease as one ages. However, conscious efforts to alter ones' own personality tend to meet with minimal success, although pharmacological treatments can indeed change how a person behaves and exhibits tendencies towards specific emotions.[148] As we shall see, such findings would have been difficult for many ancient and medieval thinkers to accept, given their great faith in the power of education and habitual action to reshape personality—yet others of a more medical inclination, like Pietro d'Abano himself, may well have felt vindicated by recent developments in neuroscience. On the other hand, academic psychology and popular opinion through much of the twentieth century have held that mental capacities are fixed traits. It is only quite recently that studies by psychologists such as Carol Dweck have shown that people are capable of increasing their intelligence—not through the hard work and training which medieval scholastics might have prescribed but through positive outlook and self-confidence.[149]

This chapter will examine ancient and medieval theories of personality and mental capacity from Aristotle through Pietro d'Abano. It will investigate how ideas about the validity of physiognomy in general and Pietro's *Liber compilationis phisonomie* in particular reflect assumptions of the fixity and biological determinism of these traits. However, such assumptions were not necessarily shared by the philosophers

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[147] For an accessible summary of recent developments in how modern neuroscience explains personality and the evolutionary psychology behind the appearance of different personality types, see Hannah Holmes, *Quirk: How Brain Science Makes Sense of Your Peculiar Personality* (Random House, 2011). Holmes's account focuses especially on studies of personality traits in mice and how such traits can be deliberately selected for.

[148] For an explanation of the major personality traits, see P.T. Costa and R.R. McCraea, "Trait theories of personality," in *Advanced Personality*, ed. D.F. Barone, M. Hersen, and V.B. Van Hasselt (New York: Plenum 1998), 103-121; for investigations of how pharmacological treatments can alter personality, see P. Kramer, *Listening to Prozac* (New York: Penguin Books, 1993).

[149] For the mutability of intelligence, see Carol Dweck, *Mindset: The New Psychology of Success* (Random House, 2006).

and theologians. Two major tensions run through medieval discussions of these problems: one is the role of the soul in relation to the body in determining a person's personality and abilities, the other the more abstract problem of whether such traits are the product of a single main source (the soul alone, a single humor like blood or melancholy, the level of vital heat in a body) or of a system or matrix of causes (the four humors acting together). Ultimately, the problem of the origins of personality becomes an ethical one, just as was the case with emotions—can a person be held accountable for the kind of person he or she is? And how does this determine the extent to which we can praise or blame that person for his or her actions? Pietro's *LCP* does not answer these questions directly. However, his discussion of human generation and the *spiritus materiali* at the end of the work hints at the biological determinism he would develop in later works like the *Conciliator* and the *Expositio Problematum Aristotelis*, an emphasis on the materiality of human nature which was at odds with the views of his contemporaries.

The Philosophical Groundwork: Aristotle and Dispositions of the Soul

Aristotle did not produce a single, stable definition of "personality." His understanding of what we would think of as personality consisted of an interplay between dispositions and temperaments, the former being characteristics of the soul and the latter characteristics of the body. Aristotle, like other Greek thinkers, defined the soul as immaterial. According to him, its dispositions are formed by habit and repeated action and have nothing to do with the matter of which it is made, because it is not made of any sort of matter. Following his teacher Plato, Aristotle divided the soul into three parts. The first, the vegetative soul, was responsible for growth and nutrition. As the name suggests, even plants have such a soul, as do all higher beings. The middle level of the soul is the sensitive soul, responsible for both sensation and movement. Both human and non-human animals possess such a soul. The highest level, the rational soul, belongs

only to humans. It is this soul which enables us to think rationally and which can be habituated to moral virtues or vices. In modern parlance, we would say that consciousness resides in the rational soul. Plato had provided evidence for the division between the sensitive and rational souls in his *Republic*, claiming that a person may seem to be of two minds, desiring two contradictory ends—one of these being an emotional desire and thus the wrong path to follow, according to Plato, and the other a course of action arrived at through reason.[150] While thirteenth-century scholastics did not have direct access to Plato's *Republic*, in the case of the divisions of the soul Aristotle would follow Plato and the medieval scholars would in turn follow Aristotle.

According to Aristotle, the ultimate goal of philosophy was the achievement of happiness. To him this consisted of a well-lived life, in which one's behaviors and activities accord with his doctrine of the mean. A virtuous, and consequently happy, man would be able to find a balance between the extremes of cowardice and rashness, between stinginess and prodigality, between irascibility and lack of spirit. All of those above nouns seem to be describing personality traits—and Aristotle calls them dispositions of the soul. This indicates that for Aristotle, what we today call "personality" was a disposition of the rational soul. Or, at the very least, what for Aristotle were the most important parts of personality, what could be judged as virtues and vices, were part of the rational soul and to some extent under conscious control. These dispositions are not what Aristotle calls "natural," meaning in this case that individuals are not born with pre-existing dispositions:

> None of the moral virtues is engendered in us by nature, since nothing that is what it is by nature can be made to behave differently by habituation...The moral virtues, then, are engendered in us neither *by* nor *contrary* to nature; we are constituted by nature to receive them, but their full development in us is due to habit.[151]

[150] Plato, *Republic*, 4.439e-440a, trans. G.M.A. Grube (Indianapolis: Hackett Publishing Company, Inc., 1992).

[151] Aristotle, *Nicomachean Ethics*, 1103a19-27, trans. J.K.A. Thomson (Penguin: 1953, 1976, 2004).

Thus it would seem that our dispositions have almost nothing to do with our bodies. They can only be controlled by repeated action, not by changing our physical circumstances, nor are they immutable traits which we possess from birth.

But Aristotle's conception of the soul proves to be more complex than that. Although to him the soul was immaterial, it was capable of movement and also had some sort of physical existence. This is evident from his discussion of the relationship between dispositions and passions, or as we today might say, between personality and emotions. Both dispositions and passions fall under the category of "modifications" to the soul. Even though emotions are part of the sensitive soul, while the dispositions are part of the rational soul, dispositions influence how we experience those feelings: "we have, for instance, a bad disposition towards anger if our tendency is too strong or too weak, and a good one if our tendency is moderate."[152] Aristotle concludes that the virtues and vices are dispositions rather than feelings or faculties because we cannot be praised or blamed for feelings or faculties, yet we can be praised or blamed for our dispositions—for our tendencies toward extremes of feeling.

In his works on ethical matters, Aristotle is dismissive of the role the body can have on the dispositions of the soul. He hints that we may be born more or less receptive to certain dispositions, but on the whole his understanding of the dispositions is that they are immaterial and removed from the body—at least in his *Nicomachean Ethics, Rhetoric,* and *De anima*. But Aristotle also wrote prolifically on strictly biological topics, works which came to be known as the *libri naturales* to medieval scholastics. These present a picture of personality which, while not directly contradictory to his account grounded in dispositions of the soul, does present a rather different understanding of the role of the body. His works on animals, like the *Historia animalium*, analogize human biology and psychology with those of animals and give a much more physiological

[152] *Nicomachean Ethics*, 1105b.

understanding of the human mind and brain than his works devoted exclusively to human behavior and society. Other works about human psychological topics, like those on memory (*De memoria et reminiscentia*) and sensation (*De sensu et sensato*), while not specifically devoted to personality, nevertheless include comments which show that Aristotle actually did believe in the strong influence bodies could have upon personality—even upon the dispositions of the immaterial soul.

For example, in *De memoria et reminscentia*, Aristotle asserts that recollection is not under the control of the will, and that people with moist memories have particular trouble with this because moisture provides a sort of momentum to thoughts. It is harder for a person with a particularly moist biological make-up to change the direction of his or her thoughts, call up a new thought, or let an existing thought go. He then proceeds to explain that

> for a similar reason bursts of anger or fits of terror, when once they have excited such motions, are not at once allayed, even though the angry or terrified persons set up counter motions, but the passions continue to move them on, in the same direction as at first, in opposition to such counter motions.[153]

This seems like it should be a disposition. It is, after all, how a person responds to feeling, a movement of the soul inspired by some external stimulus. Yet in this case the "disposition" is purely physical. The moisture of the brain seems to increase the inertia of the soul. This is not something which practice or habit could influence, only some physical alteration.

Aristotle's works on animals also emphasize the importance of the body in establishing character. Although he does not often explicitly say that what is true of animals is also true of humans, the connection is strongly implied. Animals are capable of certain character traits, like courage or cowardice. For example, the quality of an animal's blood can say a lot about its abilities and behavior: "Best of all are those animals

[153] *De memoria et reminscentia,* 453a 25-30. In *De sensu and De memoria*, trans. G.R.T. Ross (Cambridge: Cambridge University Press, 1906).

whose blood is hot and also thin and clear; they stand well for both courage and for intelligence."[154] Animals, while lacking intellectual souls, are nevertheless capable of exhibiting personality traits, or dispositions—even ones which in a human might count as virtues or vices (although in animals they do not qualify as such, since animals cannot possess virtues). This further shows that there is more to personality than habits of the soul. However, in the case of animals, these traits are characteristic of species of animals rather than individuals. For humans, on the other hand, physical traits are indicative of *individual* difference in character.

Aristotle's theory of the dispositions played a key role in subsequent moral philosophy. Thomas Aquinas would later develop it extensively in his *Summa Theologica*, but Aristotle's theories did not arrive unmediated in the hands of the scholastics. On the contrary, as Vivian Boland demonstrates, Thomas's ideas about dispositions are heavily influenced by Simplicius as well as Aristotle. Simplicius was a sixth-century Neoplatonic philosopher belonging to the Alexandrian school, a faction of Neoplatonists who were nevertheless particularly fond of commenting on Aristotle and believed it was possible to reconcile the apparent contradictions between Plato and Aristotle. Boland shows how Thomas uses Simplicius in the attempt to clarify the mind-body relations left ambiguous in Aristotle. Unfortunately, neither Simplicius nor Thomas is able to really explain how Aristotle's ideas about habits and dispositions bridge body and soul. Ultimately, Boland is able to conclude that reading Thomas's understanding of dispositions with an eye to Thomas's use of Simplicius "is a reminder that Thomas's 'Aristotle' was still quite different to the one we can study...still heavily mediated

[154] *On the Parts of Animals* 2.2, 648a2-13. In *The Philosophy of the Commentators, 200-400 AD: A Sourcebook. Volume 1: Psychology (with Ethics and Religion)*, ed. Richard Sorabji (Ithaca: Cornell University Press, 2005), 186.

through traditions of commentary and translation that sometimes changed significantly what Aristotle thought."[155]

Boland concludes his study of this topic with the question of whether or not Thomas can be said to be doing philosophy when he talks about dispositions. This particular distinction is one which historians of medieval thought, especially those who have focused their attention on the work of Thomas Aquinas, spend a great deal of energy parsing. To some extent the philosophy/theology divide is authentic in that there was an actual divide between the faculties of philosophy and theology in the Middle Ages. But the distinction is not natural, intrinsic, or necessary in the way that scholars often treat it. Thomas Aquinas was a theologian, and in a theological work he discusses a question which was also explored by a pagan philosopher who was doing philosophy, not theology. So which was Thomas doing? For him the answer to the philosophical question also has some theological implications—ethical behavior is not just about doing good but about doing the good that God wants. Although he himself came from a time that *did* see an important distinction between the two fields as fields, he does not seem to think it important enough to spell out which one he is practicing here when he talks about habits and dispositions, which makes the effort spent by historians figuring out which discipline Thomas is participating in at that moment seem more about the historians' desires to categorize Thomas than reaching a sincere understanding of how Thomas saw the world.

Far more ink has been spilled distinguishing theology from philosophy than has been distinguishing moral philosophy from natural—and yet for the purpose of this study, it seems reasonable to group moral philosophy and theology together, and set that pairing up in contrast with a combination of natural philosophy and medicine. I will thus often refer to the theological/philosophical approach as a single unit. Almost all of the non-

[155] Vivian Boland, "Aquinas and Simplicius on Dispositions—A Question in Fundamental Moral Theory," *New Blackfriars*, vol. 82, issue 968 (Oct. 2001), 474.

medical authors cited here were theologians addressing these topics in *both* theological and philosophical genres (*Sentences* commentaries and quodlibetal questions on the one hand, commentaries on Aristotle on the other), using *both* theological and philosophical sources. On matters of emotion, personality, and mental capacity, the theology/philosophy distinction is not nearly as large as the distinction between those disciplines focused on the immaterial soul and those focused on the material body. Nor is the theology/philosophy distinction as great as the contrast between the ways in which scholars coming from a joint theological/philosophical background addressed psychological questions as those from those coming from a biological/medical background—especially when it comes to asking whether our virtue lies in our own hands or whether there is some sort of biological determinism involved in our behaviors.

Organizing Personalities: Temperaments and Humors

Aristotle and Thomas Aquinas were both compulsive categorizers, and historians who discuss them tend to be compulsive about categories as well (just not necessarily the same categories which preoccupied the earlier thinkers). The desire to organize the world around us appears in all different disciplines, from chemistry to psychology to history. People who have studied the nature of personality, from antiquity to the present, are no exception. The prevailing modern theory of personality is known as the "Big Five" model. According to this organizational system, there are five distinct axes on which each individual's personality can be measured: agreeableness, conscientiousness, openness (to new experiences), extraversion/introversion, and neuroticism.[156] In both academic papers and popular works, descriptions of individuals avoid quantitative descriptions of where they fall on the axes; individuals are simply described as "more"

[156] See modern psychological works cited in fn. 1, but especially Holmes, *Quirk Brain Science Makes Sense of Your Peculiar Personality*; the work is organized to reflect the "Big Five" model, with one chapter devoted to each axis of personality.

neurotic or "less" open. Another popular personality matrix is the Meyers-Briggs test, which ranks people on how they perceive and respond to the world: extraverted vs. introverted, intuiting vs. sensing, thinking vs. feeling, and judging vs. perceiving. Academic psychologists prefer the five-factor model, but Meyers-Briggs is extremely popular among fields like business and career psychology.

Why on earth would we think that our personalities can be organized and categorized in such a way? I would propose three answers to this question. One possibility is that these categories reflect reality—that there are actually distinct types of personality or distinct axes on which personality factors exist. Perhaps the five-factor model accurately pins them down, or perhaps it is just a step towards a complete way of talking about personality. Two, this compulsion to categorize when talking about both nature and psychology may in fact be a psychological phenomenon hardwired into our own brains. There might have been some evolutionary advantage to explaining the fundamental constituents of reality as monads, seeing all the world around us as either a manifestation of some single underlying substance or principle, or breaking reality down into neat and significant groups of three, four, or five. Finally, it may be a cultural phenomenon. Modern western systems of categorizing emotions may be the offspring of ancient and medieval ones—not a necessary part of our psychology but a culturally contingent way of processing the world.

This project is entirely ill-equipped to answer the question of why we make these categories, chiefly when addressing the first two alternatives, but it will demonstrate that categorizing personality types, as well as moods and emotions, has a long history. In fact, some of the modern personality categories relate very closely to the personality traits associated with the humors—agreeableness corresponds fairly closely with sanguinity, and neuroticism could easily be blamed on melancholy (which at different periods in history was held as much responsible for timidity, irritability, and lack of confidence as it was for sadness and depression, those feelings with which we tend to associate it most

today). In many other fields of scientific inquiry, the ancient love of neatly numbered packages has not exactly played out in our modern understanding of the physical world. We still talk about "elements," but now we have over one hundred of them instead of Aristotle's four terrestrial and one celestial. It is interesting to consider that the five-factor model of personality has a great deal more in common with humoral theory than the modern periodic table does with the elements of Plato and Aristotle.

Even texts which did not give mechanisms for explaining personality types still exhibited a compulsion for categorizing them. An example would be the *Characters* of Theophrastus, Aristotle's most prominent student. Theophrastus's works were widely read and, in comparison with other philosophical texts, highly accessible. The *Characters* is not a scientific or philosophical work. Like many works on physiognomy, as we shall see in Chapter 4, it has a more social function, giving its readers instructions on how to interact rather than investigating underlying causes of human character. It explains different personality types and advises the reader on how to deal with such people but does not explain the source of these personalities, nor does it give physiognomical instructions on how to recognize these people without first interacting with them. What is the most pertinent to the discussion here is that the *Characters* shows, even without providing a philosophical explanation, an assumption that different traits are linked (a person who behaves in X manner will also behave in Y manner) in discrete personality types—one of the inevitable consequences of categorizing personalities. Also, personality traits are accepted to be consistent and to manifest in regular ways across different circumstances. The tactless man is equally inappropriate at weddings and public whippings of slaves; the country bumpkin both wears his robes wrong and makes advances on the baking girl.[157] There is certainly an element of humor to the *Characters* and we may not wish to take literally all of Theophrastus's judgments.

[157] Theophrastus, *Characters*, ed. and trans. James Diggle (Cambridge: Cambridge University Press, 2004), 75, 103.

Nevertheless, the work reveals a general assumption among the followers of Aristotle of there being stable and discrete types of characters.

Theophrastus did not give any numerically significant breakdown of his characters—it was enough to present personality types that were finite and distinct. However, other Greek thinkers before and after Theophrastus showed much more interest in organizing personality into neat groups of smaller number, like the personality types of today. If there is an ancient genesis point for the obsession with clean, small numbers in Western natural philosophy, it lies with the Pythagoreans. They venerated pure number, and their fondness for the number four became the source of the four humors, four elements, and four seasons, although they did not invent the idea of the humors themselves. It took the Hippocratics to completely develop the idea of the humors as bodily fluids which maintained health or caused illness and to link these fluids with the elements and the seasons.[158] The whole idea of fourness, this great tetrad, comes across as forced and awkward in medical writings. Dissonance in humoral theory is explored at length by Raymond Klibansky, Erwin Panofsky, and Fritz Saxl in a thorough study of melancholy. In their *Saturn and Melancholy*, the protagonist is melancholy itself. The scholars trace its role in ancient and medieval philosophy and medicine, culminating in analysis of melancholy and the figure of the melancholic genius in Renaissance art and culture—specifically the artwork of Albrecht Dürer. However, their emphasis on melancholy somewhat overshadows a larger tension between the impulse to attribute personalities to a single factor, whatever that factor may be, or to a tidy multifactorial system. We see a similar tension in ancient, medieval, and even early modern philosophies of matter. Is all matter fundamentally one substance, just in different shapes or intensities or configurations, or are there a small but finite number of distinct elements? Klibansky, Panofsky, and Saxl allude to this broader tension, but they

[158] Raymond Klibansky, Erwin Panofsky, and Fritz Saxl, *Saturn and Melancholy* (New York: Basic Books, Inc., 1964), 4-10.

emphasize the shifting role of melancholy itself, rather than exploring the larger dynamic of balancing a monad with a multifactorial explanation of psychology.

Melancholy is not the only candidate for the major deciding personality factor in ancient and medieval thought. According to the Hippocratic system, there were four humors, but not all were created equal—blood was a clear outlier. Yellow bile, black bile, and phlegm caused disease by their surplus and really did nothing to further health, whereas blood was "the noblest and most essential part of the body."[159] Furthermore, in terms of therapy, blood was actually the only one which surgeons could regulate. How, then, could the theory of the humors translate into any sort of practical therapeutic application? Blood, the exceptional humor, provided the answer. Blood was not pure blood. Real, physical blood contained not only the humor of blood but a mixture of all four humors. If an illness was caused by an excess of phlegm or black bile, then bloodletting might be used because all of the humors were actually mixed in with the physical substance of blood, so by removing blood the offending excess humor would also be removed. By the time we reach the Middle Ages, the regulation of the four humors through the regulation of a single fluid, blood, was used more for preventative medicine than for cures.[160] Since blood was the only humor that could be easily regulated by evacuation, other treatments focused on intake. Dietary regimens, the most famous being the *Regiman sanitatis Salernitanum*, gave instructions on how to regulate the humors through eating food of the appropriate composition in order to obtain a healthy balance.

While blood was the most important humor to the Hippocratics, melancholy became central to the Peripatetics who followed Aristotle. Aristotle himself does not go

[159] Klibansky, Panofsky, and Saxl, 13.

[160] For a discussion of the uses of bloodletting, particularly as a hygienic and preventative practice rather than a curative method, see Sarah Matthews, "The Red Monks: Bloodletting in Monastic Customaries" (paper presented at International Congress on Medieval Studies, Western Michigan University, Kalamazoo, MI, May 2010). The customaries of Cluny, Marbach, Tegernsee, Chartreause, and Rodenses all give instructions for regular bloodlettings, not just in times of illness.

into an extensive discussion of melancholy, even in the *libri naturales*, but Problem 30.1 of the pseudo-Aristotelian *Problemata* deals thoroughly with the topic. The *Problemata* was probably written by a Hellenistic follower of Aristotle several centuries after Aristotle's death, around the first or second century CE, but in the Middle Ages it was believed to be a genuine Aristotelian text. It is also worth noting that Pietro d'Abano wrote the first medieval commentary on this work—a massive volume which draws heavily on other texts both philosophical and medical in genre.[161] In their story of melancholy, Klibansky, Panofsky, and Saxl often note that Pietro is something of an exception to the general trends in medieval thought in his treatment of melancholy and in his emphasis on the role of astrology in the determination of personality; Pietro's emphasis on the physical origins of personality is more characteristic of Renaissance thought.[162]

Problem 30.1 of the pseudo-Aristotelian *Problemata* credits melancholy with a great deal of power over an individual's personality, but it also presents the reader with a picture of a very inconsistent and capricious humor. The text would not be of much use to a physician—such a vast array of character traits and behaviors can be attributed to melancholy that a practical medical course of action appears impossible. The author regularly draws parallels between the action of melancholy and of wine, which can likewise produce a variety of responses in the drinker depending on other aspects of his or her temperament. The main quality that determines how both wine and melancholy act on a person is his level of heat.

> Wine in large quantity manifestly produces in men the same characteristics which we attribute to the melancholic, and as it is being drunk it fashions various characters, for instance irritable, benevolent, compassionate or reckless ones.... To sum up: The action of black bile being variable, melancholics are variable, for the

[161] Joan Cadden, "Preliminary Observations on the Place of the *Problemata* in Medieval Learning," in *Aristotle's* Problemata *in Different Times and Tongues*, ed. Pieter de Leemans and Michèle Goyens (Leuven: Leuven University Press, 2006), 1-6.

[162] Klibansky Panofsky, and Saxl, 68, 72, 95.

> black bile becomes very hot and very cold. And as it determines the character (for heat and cold are the factors in our bodies most important for determining our character): like wine introduced in a larger or smaller quantity into the body, it makes us persons of such and such a character.[163]

While it is naturally cold itself, melancholy is capable of becoming extremely hot—like iron or stone. In its normal, cold state, melancholy produces despondency, reticence, and neuroticism; when heated, it can make a person loquacious and outgoing. Hot melancholics also have an inclination towards licentiousness and fits of frenzy.[164] Melancholy is here presented as an intermediate cause of personality. The level of vital heat is "most important for determining our character," but heat does this by acting upon melancholy.

Some elements of Problem 30.1 are clearly Aristotelian. This text emphasizes the importance of achieving virtue and the significance of finding a "mean" between two extremes when one is pursuing that virtue. It also emphasizes the importance of heat in determining just how the powers of melancholy manifest in an individual's personality, physical traits, and health. However, while Aristotle himself had focused more on the pathology of melancholy, that is, how it was responsible for diseases, the author of Problem 30.1 gives it credit for a range of positive outcomes as well. Rather than distracting a person from study or achievements in politics or the arts, it can on the contrary endow unusual energy, focus, and inspiration. While this does not directly contradict anything Aristotle himself said, it certainly casts melancholy in a far more positive light than is characteristic of genuine works by Aristotle.[165]

Problem 30.1 puts the entire burden of personality production on melancholy. Other humors—blood, red or yellow bile, and phlegm—do not play into the discussion.

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[163] Pseudo-Aristotle, Problem 30.1, trans. in Klibansky Panofsky, and Saxl, 19-29.

[164] Pseudo-Aristotle, Problem 30.1 trans. in Klibansky Panofsky, and Saxl, 24.

[165] For a full discussion of the Aristotelian characteristics of Problem 30.1, particularly how it echoes his theories presented in *De somno et vigilia* and *De memoria et reminiscentia*, see Klibansky, Panofsky, and Saxl, 33-37.

This is in disparity with other systems in which the black bile of melancholy is not even its own humor but rather a corruption of yellow bile, yellow bile which had been "burned" and become something deviant and pathological. It was Galenic medicine which returned the system of four to the forefront, as the Pythagoreans had once done. Blood and melancholy both get downgraded and pushed aside to make room for phlegm and yellow bile. In Galenic medicine, the power of the physical humors over the immaterial soul also increased. The humors went from *influencing* personality, inclining a person's behavior in particular directions, towards actually receiving full responsibility for *producing* these traits.[166] Furthermore, while Galenic medicine did put a great deal of emphasis on the physiology of the humors and their role in creating personality types, "[Galen] really reckoned not [the humors] but the simple qualities of warm, cold, dry, and moist, as the authentic principles of division in his doctrine of the different constitutions,"[167] as shown by Klibansky, Panofsky, and Saxl. Tension between a genuine fourfold system and a monocausal one remained, especially when discussing pathology instead of theory of healthy bodies and minds. Melancholy remained most often the culprit as far as illness was concerned. Both physical and psychological diseases could be traced more to an excess or corruption of black bile than to any of the other humors. Yet as far as their role in producing personality or physical traits, the four humors had reached more equal footing. Medieval scholastic physicians like Pietro were ultimately presented with a system which privileged blood as far as therapy was concerned—blood was the only bodily humor which they could actually regulate through evacuation—and highlighted the dangers of bad melancholy over others when dealing with pathological questions. This system also emphasized the balanced matrix created by

[166] Galen's theories of the humors, the temperaments, the qualities, and how all of these relate to personality, are laid out in a number of his works, particularly *On the Temperaments* and *On the Natural Faculties*. There has been considerable work done on Galen's theory of the humors. See, for example, Klibansky Panofsky, and Saxl, 59-66; and Rudolph E. Siegel, *Galen on Psychology, Psychopathology, and Function and Diseases of the Nervous System* (Basel: S. Karger, 1973), 173-219.

[167] Klibansky, Panofsky, and Saxl, 64.

the numerically significant four humors, each of which corresponded with specific qualities, seasons, phases of life, and stellar configurations.

Other Physiological Factors: Vital Heat and Discrete Organs

In the *Liber compilationis phisonomie*, Pietro discusses the humors relatively little and does not actually use them as a framework for organizing his discussion of personalities. He does not divide people into four distinct types based on the humors and does not even describe the humors as being the mechanisms responsible for personality traits. Rather, a given feature is often a sign of both a personality trait *and* a humor. For example, "turned back" (*rursus*) hair of intense color shows madness, anger, *and* an abundance of cholera.[168] The angle of a facial wrinkle can designate thought *and* melancholy.[169] This manner of description does not imply that Pietro did not see the humors as mechanisms but that they do not form a central framework for his explanation of personalities. Personality words which do not necessarily relate to the humors, like *iracundia* or *timiditas*, occur with far greater frequency. However, Pietro has a great deal to say about the blood—blood as an actual bodily fluid, not pure blood as a humor. Blood is often the proximate cause of a visible feature, like bloody eyes being signs of anger[170] rather than sanguinity being the more fundamental cause of a personality trait.

If there is one single quality that is most responsible for personality traits in Pietro's formulation, it is the level of heat. While the level of heat never takes a visible role in the labeling of personality types, it often appears to be the mechanism responsible for controlling the function of the humors and changing the way in which the qualities manifested in a person's actual behavior. It was really the heat acting on the melancholy

[168] "Rursus capillorum quoque color intensus signum est insidiarum amentie multeque ire cum coleram abundare ostendat," *LCP*, fol. 6r.

[169] "Habentes rugas superius frontis in rectum retractas et maxime ad angulum narium existentes cogitativi hi et melancolici designantur," *LCP*, fol. 15r.

[170] "oculi quoque sanguinei iracundum adeo vehementer ostendunt. ut et insaniam incurrant," *LCP*, fol. 6r.

that gave melancholy its power over a person's health and personality in Problem 30.1. However, it is hard tell whether Pietro would have been using Problem 30.1 at this point, since his commentary on the text was not completed until well over a decade after the *LCP*. In the *LCP*, heat and cold are responsible for hardness or softness in the body, which in turn influence both the appearance of physical features and character.[171] For him, while the humors are a consideration, it is primarily the Galenic qualities of heat and cold, dryness and humidity, which play the most important causal role in establishing both appearance and personality.[172] Features may be *signs* of an abundance of certain humors, but at least in this work the humors do not seem to be essential for creating or categorizing personalities.

Up to this point, we have been discussing the body as an undifferentiated mass, but of course that is not an accurate picture. People (and animals) have distinct organs, and ancient and medieval thinkers were fully aware that there was a differentiation of bodily functions between these organs. Galen's work *De usu partium* lays out his theories of how everything from the eyes to the abdomen worked. Might we think of different organs as playing distinct roles in the production of personality as well? According to Aristotle, the soul existed throughout the body. However, the heart was the most important organ, the seat of reason in humans and the noblest organ in other animals, "for the heart or its analogue is the first principle of a natural body, while the lower part is a mere addition for the sake of it."[173] For Aristotle, the heart ruled the entire body. Galen, on the other hand, taught that numerous organs had unique functions and governed certain important principles. For psychology, the heart, brain, and liver were

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[171] "calidas seu frigidas molicies vel duricies corporis ex advenienti extrinsico causata," *LCP*, fol. 2r.

[172] "Ultra namque mensuram aut subtilis existit substantie vel grosse ante turbide obscure ventose aut levis motus venementis seu gravis quietis admixte aut qualitatis erit excellentis primarie simpliciter vel conmixte ut aut excellentis caliditatis frigiditatis scilicet vel humiditatis ante caliditatis simul et siccitatis caliditatis et humiditatis frigiditatis et humiditatis, frigiditatis et siccitatis," *LCP*, 46v.

[173] *On the Generation of Animals*, 738b.19.

the most important, with the stomach and genitals also playing their own vital roles. Medieval physicians embraced Galen's anatomy. This is one unusual case in which philosophers and theologians followed the physicians rather than Aristotle, accepting that the brain rather than the heart was the seat of rational thought, and the organs thus came to play a crucial role in both the philosophical and medical conceptualizations of personality.

Galen ultimately located the major cognitive functions in the brain but saw the brain matter as housing or enclosing the internal senses (which processed and responded to external information) rather than being the substrate of those senses and processes. The material *spiritus* moved not through the matter of the brain itself but through empty spaces called ventricles. Nemesius, who, as explained in Chapter 2, embraced a physiological and Galenic explanation for emotions, helped to transmit and elucidate Galenic neuroanatomy to medieval scholastics. Arab thinkers like Hunayn ibn Ishaq also borrowed from Galen and explained mental faculties as "psychic pneuma" moving through the open ventricles in the brain.[174] Ancient and medieval thinkers wrestled long and hard with the question of how information gets from the outside world into the mind. Following Aristotle, they identified five external senses (vision, hearing, taste, touch, and smell) which remain familiar to us today. They also understood the mind to have a number of internal senses, including the common sense (which draws together input from the five external senses to make a coherent picture of an object), imagination (the ability to hold a sensory experience in the mind in the absence of a stimulus), fantasy (which is able to construct new images), and sense memory.[175]

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[174] There are in fact ventricles in the brain, but medieval people struggled to map them directly onto those spaces described by Galen. For the transmission of Galenic neuroanatomy theories, and the ways in which the verbal rather than visual transmission of these theories led to confusion among medieval thinkers, see Katherine Tachau, "Seeing as Action and Passion in the 13th-14th Centuries," in *The Mind's Eye: Art and Theological Argument in the Middle Ages*, ed. Jeffrey F. Hamburger and Anne-Marie Bouché (Princeton: Princeton University Press, 2005), 341-343.

[175] Katherine Tachau, *Vision and Certitude in the Age of Ockham: Optics, Epistemology, and the Foundations of Semantics, 1250-1345* (Leiden: Brill, 1988), 10-11.

Galen's ideas did not reach medieval thinkers in their pure and intended forms, just as Aristotle's dispositional theories only arrived distorted by the process of translation and highly mediated by interpretations of intermediate thinkers like Simplicius. An encyclopedic work on philosophy by the German Carthusian monk Gregor Reisch, composed in the late fifteenth century and printed in 1503 in Freiburg-im-Breisgau, demonstrates this actuality. Reisch's discussion of how the mind receives and processes information is accompanied by an illustration of where different "internal senses" are located in the head—an image which in fact *disagrees* with the description in Reisch's text. This work, *Margarita philosophica* (*Philosophical Pearl*), not only conveys medieval ideas about cognition but also reveals that the printing and assembly of such books presented readers with conflicting psychological theories which were not present in the author's original text.[176] While the *Margarita philosophica* was written substantially later than the period under consideration here, it provides further evidence for the difficulty in finding clean lines of transmission of ideas. The main, overarching themes of Galenic theories are carried through—particularly his ideas that different faculties occupy different ventricles in the brain—but the details have become warped.

Pietro d'Abano organizes the first large part of his *LCP* anatomically, starting at the top of the head and working his way down. He devotes sections to physiognomizing by the hair, the tongue, the neck, and other body parts. He conveys little interest in internal organs, and he does not differentiate between the functions of different organs. When he addresses the stomach (*venter*), it is not the organ of the stomach but rather the outer appearance of a belly—perhaps protruding or covered with hair—which gives some indication of character.[177] Pietro does not claim to weigh the predictive power of

[176] Katherine Tachau, "Pearls and Perspectives: Lighting the Inner Senses in late-Medieval University Books," (paper presented at the Symposium on Universities in Medieval Society, German Historical Institute, Washington, D.C., Sept. 19, 1997).

[177] For example, a hairy stomach can be a sign of lust and desire: "Multitudo pilorum in ventralibus reperta luxuriosos instabiles et voraces natura denunciant qui volatilibus referuntur," *LCP*, fol. 8r-8v.

something like the eyes, which became very important to early modern physiognomy, over parts which seem less important like the feet, although he does include many more examples of information one can learn from the eyes. The anatomical discussion is all external and he omits references to the relationship between internal organs and personality. That is not to say that he rejects an association but simply that it does not play a part in his understanding of physiognomy.

While the fourfold system of the humors played an important role in theories of both medicine and psychology, they were actually not as crucial to either of the medieval organizations of personality as the modern popular understanding of medieval medicine suggests. The *LCP* and other works of Pietro and his fellow physicians show their understanding that while the humors did play a peripheral role in determining physical and mental characteristics, they did not form the fundamental organizing principle of personality types. Their system is actually anchored by personality words derived from emotion terms and ultimately based on the system of categorizing emotions described in Chapter II, such as *timiditas* and *iracundia*. Furthermore, the humors were not the primary driving mechanisms for regulating how these physical and mental traits manifested. If there were one main physical cause of personality, it would be heat acting upon the humors and not the humors themselves. Despite the official embrace of a balanced system of humors, inherited from Galen, the unique roles of blood—a Hippocratic idea—and of melancholy—as expressed Problem 30.1 of the *Problemata*—continued in medieval medicine. The roles assigned to a multiplicity of organs further complicates the picture. Thus, despite their compulsion to categorize traits neatly, in many ways the medieval understanding of the physical causes of personality was even more elaborate and varied than what we have today.

Mental Capacities

Physiognomy was used not only to read a person's personality but also his or her level of intelligence. The casual ways in which words like "stupid" and "smart" are used today are evidence of general misunderstanding of their multiplicity of meanings—but then again, as we shall see, Pietro d'Abano commits a similar offense by using such words as *stultus* and *prudens* broadly, not always fully in accord with their more technical definitions used by his contemporaries in theological and philosophical faculties. The conception of "intelligence" is a convoluted one which has evolved through debates over thousands of years. There are many abilities which are incorporated in the modern lay usage of words like "smart" or "intelligent" and which ancient and medieval thinkers subdivided into different qualities. They thought about features like swiftness of thought, memory, judgment, levels of seriousness and focus for intellectual pursuits, and genius as all distinct. The "intellect" in an Aristotelian sense was not something one had in degrees, with a person of greater intellect being smarter—the term referred to the intellectual part of the soul, the part which gave a human reason. While particular individual characteristics might interfere with the action of the intellect, "intellect" was not what made a person more or less intelligent. On the other hand, one could possess different traits, which Aristotle described as different intellectual virtues and which we today combine into intelligence, in different degrees.

In the section of the *Ethics* dealing with the intellectual virtues, Aristotle describes multiple forms of intelligence, a vast array of categories of knowledge or character traits which we could refer to as "being smart." The main five are scientific knowledge, art, prudence, *nous*, and wisdom. The first two refer to having knowledge, the next two are types of personal characteristics, the final brings knowledge and innate capacity together. Thus for Aristotle, having an intellectual virtue could involve either knowing information in a correct way (science being knowledge about permanent things, art about creating things well) or possessing specific characteristics. Prudence he defines

as the ability to "deliberate rightly about what is good and advantageous...what is conducive to the good life generally."[178] *Nous* is often defined as "intelligence," but this is misleading because it is more specific than the modern idea of intelligence. It is more precisely the ability to understand "the first principles of scientific truths [which] cannot be grasped either by science or art or by prudence."[179] It is not so much knowledge of these principles—those must be learned through correctly executed scientific inquiry—but rather the native ability to grasp those principles, even possession of a preexisting understanding of the way in which the world works that makes one receptive to the information provided by scientific knowledge. In that respect, the term *nous* is also sometimes translated as "intuition" rather than "intelligence." Wisdom, on the other hand, *cannot* be attained without experience. It includes both an ability to understand as well as the accumulation of actual knowledge, which requires time and learning.[180] The virtues of prudence, good judgment, and *nous* are at least to some extent "endowed by nature." However, while saying that they come from nature, Aristotle does not make explicit whether they come naturally from the body or the soul.[181]

After promising his readers only five kinds of intellectual virtues, Aristotle goes on to complicate his picture with a few more. One is "resourcefulness," which is a practical sort of deliberation that leads a person to a "good" or "correct" conclusion.[182] Another is "cleverness." This, while it may be a useful trait, is not a virtue. The intellectual virtues must be concerned with the good. Cleverness, while it may be put to good use, may also be used for unscrupulous ends. Thus it is not in itself virtuous, as

[178] *Nicomachean Ethics*, 1140a.25-29.

[179] *Nicomachean Ethics*, 1140b. 33-35.

[180] *Nicomachean Ethics*, 1141a-1141b.

[181] *Nicomachean Ethics*, 1143b.

[182] *Nicomachean Ethics*, 1142b.

prudence is, "Prudence is not identical with this faculty, but implies it"—prudence must always, by definition, have good ends.[183]

Quite distinct from the idea of intellectual virtue is the notion of genius. This is another way in which the modern conceptualizations have broken with the past, as we have now linked genius quite simply to an IQ test score. But the geniuses we praise most highly combine processing ability with creativity or imagination. In the Middle Ages and Renaissance, the "genius" was not necessarily the one who excelled in respect to prudence but who was always exceptional. Klibansky, Panofsky, and Saxl trace the link between melancholy and genius, demonstrating that throughout the Middle Ages melancholy was seen as capable of producing unusual or extraordinary mental capacities, but that these were not necessarily regarded as positive. It would take until the Renaissance for the idea of the "melancholic genius"—solitary, deeply creative, unpredictable, intellectually superior—as a desirable state to truly develop. Yet Klibansky, Panofsky, and Saxl note that the works of Pietro, along with those of Michael Scot and Arnald of Villanova, lay the groundwork for the Renaissance figure of the melancholic genius by both giving increasing credit to melancholy for producing positive characteristics and in linking the humors with astrological forces.[184]

If it were neither raw, unbridled creativity nor the kind of verbal and mathematical processing tested by IQ tests that ancient and medieval people saw as the most laudable forms of "intelligence," what intellectual virtues did they prize most highly? For Aristotle, prudence came first, though he also speaks very highly of wisdom. For medieval society, prudence was also predominant for its role in helping produce and guide the moral virtues, but they also put a great deal of emphasis on one intellectual trait that did not even make Aristotle's list was also emphasized. Historian Mary Carruthers

[183] *Nicomachean Ethics*, 1144a

[184] Klibansky, Panofsky, and Saxl, 95.

argues that one of the most important ingredients for the medieval understandings of "genius" (in the sense of highly prized mental capacities, not in the Renaissance sense of an exceptional but sometimes detrimental collection of both personality traits and intellectual abilities) was in fact memory. In a thorough study of medieval memory culture, she explains how memory lay underneath all other intellectual achievements. Strong memory not only enabled medieval scholars to have a wide array of texts readily accessible, it actually enabled creative output. Consider, for example, the case of Thomas Aquinas, who was said to be able to compose multiple commentaries simultaneously, jumping back and forth between his own original works (two or three at a time, already fully composed and stored in his mind) as he dictated them to scribes.[185] Creativity required a strong memory because the thinker had to remember and access his own ideas, and truly valuable and respected creativity required an even stronger one because original conclusions had to rest upon a thorough understanding of the ideas of others.

The tripartite division of the brain as laid out by Galen also influenced how medieval people conceptualized mental capacities. Memory was located in the rear ventricle of the brain. The physicality of thought and memory was emphasized in ancient writings, early medieval Arabic thought, and on through the scholastics. Aristotle had explained that dwarves have poor memories "because they have too great a weight pressing upon the organ of consciousness." Children also have poor memories because they are "dwarf-like in type up to a considerably advanced time in their life."[186] Physicians often recommended dietary methods for improving memory—for example, Mattheolus of Perugia advises against the consumption of too much wine, because the heat has a negative impact on the brain's ability to refrigerate and preserve memories.

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[185] Mary Carruthers, *The Book of Memory: A Study of Memory in Medieval Culture* (Cambridge: Cambridge University Press, 1990), 1-15.

[186] *De memoria et remniscentia*, 453b.1-8.

Again, as with personality, heat plays a critical role in how mental characteristics are exhibited. Philosophers and theologians often used physical images to explain how memory worked, the most popular being the analogy of a seal pressed in wax.[187] There were actually two kinds of memory, sense memory, or memories of sensory experiences, and intellectual memory, the memory of abstract ideas. While animals could have the former, only humans could have the latter. The sense memory is unambiguously physical, animals lacking the immaterial rational soul.[188] The intellectual memory was not supposed to have a physical component, yet in the works of physicians like Pietro or in *regimen sanitatis* literature the two are not distinguished. For physicians a cooler brain is better at holding any kind of memory, whether it be of an abstract concept or of a sensory experience.

Medieval thinkers tended to take for granted that it was possible to read a person's mental capacities in his or her appearance. The question of whether or not physiognomical judgments of intelligence are valid does not appear to even cross our scholastic thinkers' minds. Rather than asking whether or not some judgment is true, they jump straight to asking *why* something which they already assume is true. Albertus Magnus, in his commentary on Aristotle's work on animals, asks why a large forehead is a sign of "a slow person, prone to foolishness" and provides an answer which seems entirely counterintuitive to a modern person: that a larger quantity of brain matter actually slows down thoughts.

> The forehead is near to the brain, and this is why the size of the forehead is an indicator of the brain's size. Now the brain is moist and cold and phlegmatic, and as a result there is a heaviness there, because [the cold] thickens the spirits and greatly blocks the heat, which is the instrument of agility. And this is why a large forehead indicates slowness.[189]

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[187] Carruthers, 50-55.

[188] See Aristotle, *De memoria et reminsicentia,* 449b, and Thomas Aquinas, *Summa Theologica*, I.I.79.

[189] Albertus Magnus, *Questions Concerning* On Animals, Book 1 Q. 25, trans. Irvin M. Resnick (Baltimore: Catholic University of America Press, 2008), 53.

It is ironic that centuries later the argument was made that women were less intelligent than men because their brains were smaller. The relatively smaller skulls of women were given as evidence that they were more childlike and less fully intellectually developed than men.[190] Both perspectives show understanding that thought takes place in the brain but reveal two different misunderstandings of the relationship between the material of the brain and the material of the mind.

A near contemporary of Pietro, the Franciscan Richard of Middleton (c. 1249-1303),[191] uses the theory of the four humors, the significance of internal heat, and the idea that thoughts are physical substances which interact with the material of the brain to explain mental acuity. Richard was a theologian, not a physician or philosopher, and his discussion appears in a response to the rather silly-sounding quodlibetal question "Whether dwarves or giants, and the short or the tall, are better disposed towards science."[192] He finds the physical proportions of the individual markedly important. He also asserts that, in order to answer the question, one must recognize that material and heat are *bene* (well) rather than *male* (badly) extended in all directions.[193] He argues then that cholerics make the best scholars, followed by sanguine individuals, next melancholics, and last of all phlegmatics.[194] This is because the coarse matter of the

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[190] Londa Schiebinger, *The Mind Has No Sex? Women in the Origins of Modern Science* (Cambridge, MA: Harvard University Press, 1989), 206-209.

[191] Richard's surviving quodlibetal questions all come from the 1280s; he also produced a commentary on the Sentences and some disputed questions. For a brief biography of Richard of Middleton and explanation of his major contributions, see Richard Cross, "Richard of Middleton," in *A Companion to Philosophy in the Middle Ages*, ed. Jorge J.E. Gracia and Timothy B. Noone (Malden, MA: Blackwell Publishing, 2002), 573-578.

[192] "Utrum melius sint dispositi ad scientiam nani quam gigantes, et parvi quam magni," Richard of Middleton, *Quodlibeta*, Quaestio 28, (Brixia, 1591), 57.

[193] "Cum ergo est aliqua materia bene extensibilis secundum longitudinem tantum, et calidum bene extendens, causatur magnitudo secundum longitudinem tantum, magis, quam secondum dimensiones alias secundum proportionem," Richard of Middleton, 58.

[194] "Ad cuius intelligentiam sciendum est, quod cholerici per se maxime sunt dispositi ad scientiam,deinde sanguinei. Indispositi autem ad scientiam per se in respectu praedictorum sunt flegmatici, et melancholici," Richard of Middleton, 59.

latter two complexions "aggravates" the soul. Explicitly citing Constabulus, (better known by his Arabic name, Qusta ibn Luca), Richard suggests that the matter of the spirit in the middle ventricle of the brain is the most important to influencing a person's mental agility. Because this spirit is the most fine and rare (*tenuis et rara*) in cholerics, it least impairs and aggravates the workings of their souls. When he moves on to contrasting the abilities of phlegmatics and melancholics, Richard claims that heat is ultimately more important than coarseness or thickness of matter in determining how aggravating matter is to the soul, although coarseness does play a role. While cold, dry melancholics have their dense, harsh matter working against them, their dry cold does less to blunt and deaden heat than the humid cold of phlegmatics. This combination of extreme lack of heat along with their fairly coarse, thick matter aggravates and impairs the spirits of phlegmatics the most of any temperament.[195]

This is a rather unusual conclusion. As we have seen above, melancholy was often associated with genius. Richard is aware of the exceptional place melancholy was understood to occupy in determining one's personality and mental capacities and devotes particular attention to analyzing it. Citing Aristotle's *De memoria et reminiscentia,* he concedes that melancholy does indeed dispose one to deep thought and reflection, which are important characteristics of a scholar.[196] However, he ultimately concludes that the way in which the matter of the melancholic's brain impedes the action of the internal senses still makes such individuals ill-suited to science.[197] Working from very familiar

[195] "In flegmaticis autem quamvis non sit materia per se ita grossa, sicut in melancholis: tamen, quia in flegmaticis est humiditas multa, et grossa, et talis humiditas hebetat calorem, idea in flegmaticis magis obtusus est calor, et hebetatus, quam in melancholis, quis sunt sici" Richard of Middleton, 58.

[196] "quia melancholica complexio reddit hominem cogitativum, hoc est inquisitivum, et frequentis, et profundae cogitationis, et ista sunt, quae multum valet ad acquisitionem scientiae: quia profunda, et inquisitiva cogitatio disposunt ad intelligentiam, sicut dicit philosofo. in libro de memoria et reminiscentia," Richard of Middleton, 59.

[197] "De istis autem non nego, quia sint multi apti ad scientiam, sed intellexi hoc de melancholicis naturaliter, si non discordat complexio, quam habent in organis virium sensitivarum interiorum ab illa corporis complexione. Illi enim sunt minime apti per se ad scientiam," Richard of Middleton, 60.

premises about the nature of the different humors, their qualities and how those qualities behave, and using only widely-read sources, Richard reaches an unconventional result. What is principally significant to draw from the works of both Albertus Magnus and Richard of Middleton is that they took for granted the *materiality* of thought, a completely Galenic doctrine. Thoughts were actual, physical entities, moving through the spaces in the brain. This gives us a slightly different notion of intelligence that does not quite fit with Aristotle's prudence, understanding, or wisdom, nor with the power of memory or creativity. The emphasis for both these thinkers is on speed and acuity of mental processes. The matter of the brain can blunt or slow down the thoughts because the thoughts themselves are material, and this is what makes a person foolish or ill-suited to serious study.

Pietro's *LCP* is full of examples of how physiognomy can lead us to an assessment of an individual's intellect—both good and bad. Hair receding from the forehead, for example, shows a cold nature and general distortion of intellect.[198] Meanwhile, hands which are gentle, delicate, and of "sufficient" length (as is true throughout the work, Pietro does not give any quantitative measure here) are indicators of good intellect.[199] In some ways Pietro's interpretation might appear to contradict the Aristotelian picture of the intellectual virtues. Characteristics like wisdom, which according to Aristotle are acquired through experience and are not just natural qualities, can still be read in physical features according to the *LCP*. Pietro's assertion that features like hair can be signs not only of intellectual capacity but acquired wisdom suggests either a rejection or simply a choice to ignore Aristotle's definition. But whereas in his later works, most notably the *Expositio*, he openly acknowledges points where he disagrees with Aristotle,[200] in the *LCP* any of Pietro's disagreement with Aristotle seems

[198] "Si enim econtra a fronte recedat callidum et parvi intellectus hominem demonstrat," *LCP*, fol. 7v.

[199] "Manus lenes subtiles sufficienter protense sapientiam et bonum designant intellectum," *LCP*, fol. 28v.

[200] For explanation of Pietro's disagreement with Aristotle on psychology, see Dag Nikolaus Hasse, "Pietro d'Abano's 'Conciliator' and the Theory of the Soul in Paris," in *Nach der Verurteilung von 1277:*

to be inadvertent. Here he cites Aristotle (most often falsely as the author of the *Secretum secretorum*, a text which will be discussed in the next chapter) uncritically.

The *LCP* is for the most part just a list of "A means B" statements; Richard of Middleton's analysis of the relationship between humors, physical appearance, and mental capacities, despite being extremely repetitive, is far more thoughtful and thorough than Pietro's explanations in the *LCP*. Some are so obvious that they are almost laughable; for example, as noted in the previous chapter, sad eyes denoting sadness. Others are so counterintuitive that they are equally laughable, especially when Pietro just presents the statement and gives absolutely no explanation, like a small head being a sign of shamelessness.[201] With his discussion of mental capacities as with personality traits, the closest Pietro ever comes to providing a physical mechanism is by making references to Galenic qualities of heat, cold, dryness, and humidity.

Pietro does not only tell his readers how to identify people in possession of intellectual virtues, he also provides numerous traits of people who suffer a deficiency of intelligence. There are many markers of stupidity, according to Pietro, but no explanation is given for why these features have the meanings they do. Just as there are many types of intelligence, so the philosophers and theologians would say that there can be many types of stupidity, among them poor judgment, poor memory, and general slowness, but Pietro does not differentiate these in this work. He uses the term *stultus*, which he never actually defines, for stupidity in general. It is unclear in exactly what way the poor person whose features indicate *stulticia* is deficient. However, the general impression the reader can take from his work is that excessive heat causes stupidity. Sometimes, a feature is a sign of *both* heat and stupidity. Other times, stupidity is linked with characteristics which also derive from heat, such as voracity, irritability, drinking

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Philosophie und Theologie an der Universität von Paris im letzten Viertel des 13. Jahrhunderts. Studien und Texte. Ed. Jan. A. Aertsen, Kent Emery, Jr., and Andreas Speer (Berlin, 2001), 635-653.

[201] "Caput pineatum inverecundiam denotat," *LCP*, fol. 14r.

problems, garrulousness, and lust.[202] On the one hand, this association is in accord with the ancient and medieval understanding of memory. In general, colder brains store memories better. However, this seems contrary to the view of the brain presented by Albertus Magnus and Richard of Middleton, in which colder matter slows and blunts thoughts. It is unclear if Pietro is aware of the difference between his view and others, since he never directly acknowledges these differences.

As the work of an author who would get in trouble for suggesting the materiality of the soul, someone who would be revolutionary in bringing together philosophical and medical explanations of psychology, the majority of the *LCP* is thus a little pedestrian. However, when Pietro diverges from the topic of conventional physiognomy his discussion becomes more nuanced, and he begins to consider the relationship between body and soul in a more thoughtful and subtle way. This transition occurs as he examines human reproduction.[203] Here he discusses the physicality of the vital spirit and the role of the soul's "virtue" in shaping the body, connecting the two through the idea of heat.[204] In the last few pages of the *LCP*, Pietro discusses human reproduction and the development of the vital spirit, and he gives an explanation of why physiognomy is valid

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[202] "Quando pili palpebrarum curvantur inferius (8r) vel ad unam contorquentur partem natura mendacem callidum stultumque designant," *LCP*, 7v-8r; "Et cum superciliorum pili fuerint ad frontem reflexi animosum iracundum atque stultum denunciant," fol. 7v; "Oculi velut bonuum sursum conversi pessium stultum voracem venereum ostendunt et ebriosum," fol. 18v; Aures vehementer magne et proeminentes stultitiam garrulitatem et imprudentiam testantur...parve autem valde testantur stulticiam etiam letum et luxuriosum ostendere," fol. 22v.

[203] It is not unusual to include such content in a work on physiognomy—reproduction also plays an important part in Michael Scot's *Physiognomy*. For more discussion see Ch. 4 below and also Danielle Jacquart, "La Physiognomie à l'Époque de Frédéric II: le Traité de Michel Scot," *Micrologus* 2 (1994), 19-37.

[204] "Et iste quod spiritus primitus complantatus seu cognatum calidum spirituoso semini inmixtus duplici est calido affectus quorum alterum vivificum et celeste quod generationi facit speranta naturam habens proportionalem astrorum ordinationi Reliquum vero est calidum ellementare igneum consumptum per quod dictum est ab Aristoteles nullum aliud generari. Si itaque re divina intelligentia vocata fuerit spiritus substentata perfecto duplici calido ut determinatis utitur organis altero ipsius vivifico et principii quo intellectus vocati operatio astrorum operationi secundum quid reddere filiis donec partium principalior facta vitam deinde susceperit propriam quare et gratiose dictum fuit hic scilicet vocatum intellectus quod est virtus informantia principium fore a corpore separatum cum eius actus non perficiatur organo corporali," *LCP*, fol. 44v.

in general. In this section, Pietro draws heavily on Galen and Avicenna. However, he does not explain why specific physiognomical judgments are valid, just why the system as a whole functions. Here he emphasizes the role of heat in determining both bodily complexion and the nature of the *spiritus materiali*.[205] Pietro's analysis foreshadows his more thorough explanation of the virtues of the soul and the physicality of the spirit seen in his *Conciliator*.[206]

We come next to the question of where the intellectual virtues originate, the soul or the body. In general, medieval thinkers were convinced that the body can raise impediments to intelligence, as Albertus Magnus and Richard of Middleton show, but not that it is capable of producing intelligence. Only in the case of memory does it seem that the body can have an active, positive impact on someone's intellectual abilities, by preserving memories. This leaves us with the sense that in a disembodied state, all would be equal as far as mental capacities are concerned. Dante Alighieri, a near-contemporary of Pietro who spent some of his time in exile from Florence in Padua, although not while Pietro was also in residence, explores the problem of angelic memory in his *Paradiso*. He argues that angels have no bodies in which to store their memories, but they are capable of "continuous understanding." The poor wretches in the Inferno, on the other hand, lacking material bodies, are unable to form new memories, although they are able to hold memories of their past lives in the intellect.[207] Pietro d'Abano does not challenge such a view of memory production in the *LCP*. He is writing in an earlier tradition of physiognomical texts which, as we shall see in the next chapter, was not overly concerned with providing scientific explanations for why certain conclusions worked, simply giving the reader advice on how to read a person's face and body. While Pietro

[205] *LCP*, fol. 44r-49v.

[206] See especially *Conciliator*, Differentia 57.

[207] Dante, *Paradiso*, 29, 76-81; also Thomas Aquinas, *Summa Theologica*, I.79.6; for further explanation of Dante and Thomas's discussions of memory, see Carruthers 57-58.

predominantly approaches the question of interpreting mental capacities in a fairly superficial way, uncritically repeating the assertions of his sources, there is evidence that he is starting to work through a more philosophically complex understanding of the soul-body relationship which will ultimately challenge the widely accepted views. In his later works, his ultimate conclusion that vital spirits and thoughts themselves are material, physical entities is not new—far from being a challenge to the orthodox view, it merely echoes the perspectives of such relatively uncontroversial thinkers as Albertus Magnus and Richard of Middleton. What *is* new, and what will cause him difficulty, is his hinting at the materiality of the soul, because that brings him into the dangerous questions of morality, individual responsibility, and ultimately free will and salvation itself.

Moral Virtue and the Biological Self

Chapter II discussed the moral and ethical dimensions of the passions, and this chapter has already noted that ancient and medieval thinkers saw moral and ethical dimensions to different personality types as well as intellectual capacities. In some ways it is problematic to separate the morality of emotion and personality. We might think of personality in some ways as our susceptibility to certain emotions, or how we respond to emotions. Is a timid person someone who is more likely than others to feel fear? Or is he or she just more likely than others to respond to fear in a way which the world judges as timid? For both the ancients, so concerned with the ethical life, and for medieval thinkers, so concerned with the questions of sin and salvation, the issues of praise and blame were intimately tied in with theories of the nature of personality. All thinkers, from the ancients through Pietro and beyond, thought of certain types of people as inherently better than others. But can people be blamed for being melancholic or praised for being sanguine?

In general, blaming bad personality on bad humors was a means of taking away individual blame and naturalizing, rather than moralizing, personality. Galen had argued

that the body plays a key role in determining a person's personality and mental capacities to the extent that individuals had an ethical responsibility to manipulate their bodies.

> So now at least let those come to their senses who don't like the idea that food can make people more sensible or more licentious, more in command or less in command of themselves, bold or cowardly, mild and gentle or contentious and competitive. Let them come to me to learn what they should eat and what drink. For they will be greatly helped towards ethical philosophy and in addition they will progress towards excellence in the capacities of the rational part, by improving their intelligence and memory.[208]

This gives the individual control over his or her personality in a different way. Galen suggests that people are not in direct, willful, cognitive control of whether or not they are ethical, but by making the decision to eat foods which will give them better personalities, they may prime themselves for ethical behavior. This is a way of holding a very material conception of human nature but also saving free will. Medieval thinkers did not adopt the idea that the right diet can make a person more ethical, but Galen's theory does share some similarities with Thomas's idea of *habitus* in that we have the choice to shape our souls by repeated action but do not necessarily have control of our thoughts or actions in a given moment of crisis.

Some thinkers went in the opposite direction. Rather than physiologizing morality, they tried to theologize the humors themselves. Bad temperaments became the product of man's fallen state rather than accidental results of nature in some formulations. Hildegard of Bingen, for example, explains in her *Causae et curae* how melancholy "was born in the first fruit of Adam's seed out of the breath of the serpent when Adam followed its advice."[209] The sanguine temperament, on the other hand, was widely accepted as the most virtuous and, while not perfect, the closest to what Adam would have been like in his pre-lapsarian state. In this case, melancholy was itself a sin, and it

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[208] Galen, *Quod animi mores* 67, 2-16 (*scripta minora* 2), in *The Philosophy of the Commentators, 200-400 AD: A Sourcebook. Volume 1: Psychology (with Ethics and Religion)*, ed. Richard Sorabji (Ithaca: Cornell University Press, 2005), 189.

[209] Hildegard of Bingen, *Causae et curae*, ed. P. Kaiser, p. 38, 27. Translation in Klibansky, Panofsky, and Saxl, 79.

became even more incumbent upon the individual will to fight against its temptations. Rather than being a morally neutral, natural state to which the individual could be forgiven for succumbing, it was in its very physicality a matter of profound spiritual significance. However, the emphasis on melancholy as a consequence of the fall was not a strong theme in the writings of either scholastic theologians or physicians, and the general trend among thirteenth-century thinkers seems to be of the separation of melancholy from any spiritual value judgments.

Although melancholy might be linked with man's fallen state and sinful nature, medieval thinkers did not argue that an individual could be justly held responsible for his or her biological temperament. For Thomas Aquinas, negative emotions and personality vices are not the direct consequences of biology, but material factors like the humors and heat could influence them. Other earlier scholastics, like William of Auvergne and John of Wales, focus on melancholy as a natural and spiritually neutral substance which may merely influence virtue and vice. Thomas's contemporary Bonaventure also argues for a link between the physical condition of melancholy and the emotional sin of acedia, but Thomas does not draw this particular connection between acedia and melancholy.[210] However, he does explain how melancholy can impact personalities and the way in which the soul responds to the passions. Thomas notes that a melancholic person experiences the passions more violently and intensely than others; a choleric person, on the other hand, experiences them more quickly.[211] In his commentary on Aristotle's *De Anima*, Thomas suggests that the body can actually trick the soul, causing movements when there is no external sensory stimulus to inspire those movements:

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[210] For William of Auvergne and John of Wales's analyses, see Wenzel, *Sin of Sloth*, 59; for Bonaventure's discussion of acedia and melancholy, see Rainer Jehl, *Melancholie und Acedia: ein Beitrag zu Ethik und Anthropologie Bonaventuras* (Paderborn: F. Schöningh, 1984).

[211] "Impetus autem passionis provenire potest vel ex velocitate, sicut in cholericis; vel ex vehementia, sicut in melancholicis, qui propter terrestrem complexionem vehementissime inflammantur." Thomas Aquinas, *Summa Theologica,* II.II.168.1.

> For we see that even if no danger is imminent, some people are put in states like these states that involve soul. Thus the melancholy, for instance, [even] if there is no imminent danger, are often made fearful as a result of their imbalanced constitution. Therefore because that is how things are, namely, that our constitution takes part in states of this sort, it is clear that states of this sort are defining natures (*rationes*) in matter—i.e., that they have their existence in matter.[212]

Thus a melancholy nature can cause a soul to respond fearfully for no reason at all—and in this case it is clear that Thomas links melancholy first and foremost with fear rather than with sorrow or depression.

However strong an influence biology might have, people were still expected to try to override those temperaments. Yet even the formation of a good disposition through habits, as discussed by Aristotle and Aquinas, could not be the sole responsibility of the individual. Outside information was necessary to guide a person towards the correct means of overcoming natural temperamental inclinations. The major ancient champions of "correct" education were the Stoics, and while medieval thinkers did not have much direct access to the words of the Stoics themselves, they did receive Stoic doctrine as mediated through such thinkers as St. Augustine. In his analysis of ancient theories of physiognomy, George Boys-Stones argues that the Stoic authors differed from Aristotle and Hellenistic Peripatetics by giving the body far less credit for determining an individual's personality. While it is possible to interpret some Stoic passages as hinting that the body *does* play an important role in creating a person's nature and establishing how virtuous they will be in Stoic discussions of why children come to resemble their parents both physically and psychologically, ultimately Boys-Stones argues that the Stoics would have rejected a sort of deterministic physiognomy. The Stoics reasoned that a person's features cannot *necessarily* tell you anything about their character because a good education of the soul can override a person's natural inclinations as determined physically.

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[212] Thomas Aquinas, *Commentary on Aristotle's* De Anima, 403A16-27.

> In the 'normal' case, i.e. the case in which everything happens as it ought, and one grows up with right reason, the Stoics argue that there is no room at all for the development of vice...But now suppose something goes wrong: that a person is subject to, for example, a bad education which leads him or her away from the insight that virtue alone is good...In general, what such people in their pre-rational lives co-perceived (rightly) as harmful and beneficial with respect to their physical constitution will become in their mistaken view of things 'good' and 'evil' respectively. This will explain the diverse range of moral characters that manifest themselves even among groups of people whose educational influences have been broadly identical.[213]

Thus physiognomy could suggest what a person *would* be like if he or she did not have an adequate education to override those natural inclinations—but it cannot actually tell the observer what the person *is* like because they might in fact be virtuous and have mastered their material natures, which could not be read in their physical features.

Despite the fact that medieval scholars would have had only heavily mediated access to the Stoic writings cited by Boys-Stones, the general idea that a well-formed soul can override biological inclinations played a strong role in the moral philosophy of followers of a wide variety of schools. Education and training of the soul had been important to Aristotle's understanding of ethics and played a key role for scholastics like Thomas Aquinas as well. The two main differences between the Aristotelian and Stoic approaches to this issue are that Aristotle and his scholastic followers do seem to credit the body with more power than the Stoics, and that the Stoics place more of the burden of shaping the soul more upon educators, whereas those like Aristotle and Aquinas emphasize the responsibility of the individual himself to train the soul to good habits and dispositions.

The intellectual virtues had moral dimensions just as the temperaments did, since correct knowledge and understanding was important for the creation of virtue. Thomas Aquinas explores the relationship between moral and intellectual virtues in his *Summa*

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[213] George Boys-Stones, "Physiognomy and Ancient Psychological Theory," in *Seeing the Face, Seeing the Soul: Polemon's* Physiognomy *from Classical Antiquity to Medieval Islam*, ed. Simon Swain (Oxford: Oxford University Press, 2007), 87.

Theologica, inquiring into whether they are actually distinct categories and whether a person can have one without the other. Here, he defines moral virtue as finding a mean between the extremes of the passions, a definition which intimately links virtue and emotion. As noted in the previous chapter, the experience of emotions in themselves did not qualify as sins, but for Thomas and his followers true virtue lay in training one's soul to regulate the passions and, most importantly, having appropriate desires and emotional responses—for moral virtue lay in the appetitive power of the soul, the power responsible for desiring objects or ends. Since he ultimately concludes that the sensitive appetite may move the soul, it is also the responsibility of the rational soul to train the appetite to desire right things.[214] In Thomas's analysis, the truly unique intellectual virtue is prudence—good judgment to good ends. This is the one intellectual virtue which might seem to break down the barriers between the two kinds of virtue, but he ultimately settles on defining it as strictly intellectual even though it guides the moral virtues. It appears that his solution rises as much from his obsession with neat categories and respect for Aristotle's authority as from any sort of logical necessity.[215] Thomas also concludes that prudence is the only one of Aristotle's five intellectual virtues necessary for moral virtue. Similarly, a person may possess the other intellectual virtues without moral virtue, but not prudence.[216]

According to medieval thinkers generally, even memory had moral dimensions. This further illustrates memory's central position in medieval theories of intelligence. Mary Carruthers shows that the accounts of the lives of such saints as Anthony of Padua and Thomas Aquinas praised these men's strong memories not only because strong memory is useful but because it increases moral virtue—that "a person without memory,

[214] Thomas Aquinas, *Summa Theologica,* I.II.77.1 on the power of the sensitive appetite to move the soul; *Summa Theologica*, I.II.49 on the habits.

[215] Thomas Aquinas, *Summa Theologica*, I.II.58.2-3.

[216] Thomas Aquinas, *Summa Theologica*, I.II.58.4-5.

if such a thing could be, would be a person without moral character and, in a basic sense, without humanity."[217] Even lacking a good memory, while not a vice in and of itself, was assumed to be more morally dangerous by medieval thinkers than it would be today. The work of the Renaissance surgeon Antonio Benivieni (1443-1502) demonstrates both assumptions about the neuroanatomy of memory and memory's critical role in guiding moral behavior. Benivieni, a Florentine surgeon noted for the number of autopsies he performed, was actively searching for a physiological explanation for the behavior of criminals, particularly repeat offenders. He seemed to find just what he was looking for when he noted that the rear parts of their brains appeared undeveloped. This was where memory was believed to be located, so Benivieni was able to conclude that such criminals struggled with remembering the consequences of their crimes and thus would commit them again.[218] This, like the writings of many scholastics on physiognomy, is a prime example of philosophical conclusions driving scientific inquiry. Benivieni took for granted the accuracy of the Galenic model of the brain and was looking for evidence to support it. Ultimately we can tie this fallacy back to the sort of *post hoc* reasoning which drove the explanations for the mechanisms behind physiognomical judgments as well.

As noted above, many sins were emotional in nature—anger, acedia, lust, etc. While being an angry, morose, or lustful person was not necessarily a sin, those traits were often labeled as vices, with their opposites being held as virtues. Indeed, the moral virtues were most definitely *not* emotions but in fact more enduring traits—justice, temperance, fortitude, and prudence. As was true in discussions of emotions, the theological/philosophical approach to biology's role in negative personality traits and

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[217] Carruthers, 12-13.

[218] LynnThorndike, *A History of Magic and Experimental Science*, vol. 4 (New York: Columbia University Press, 1934), 589. Thorndike gives a highly unfavorable account of Benivieni's accomplishments overall, saying that he is falsely praised as the founder of pathological anatomy but actually, despite the large number of autopsies he performed, his analyses and conclusions were plagued by superstition, and he inclined towards supernatural and superstitious explanations of his findings rather than seeking out natural ones.

mental capacities was ambiguous. Thinkers like Albertus Magnus and Thomas Aquinas accepted that there was some role of the body in producing personality traits that were vices, like lust, irritability, and excessive daring, but they tended to see virtue as more intimately linked with the actions of the soul than the body. Vices were defined more as deviations from virtues than things in themselves. For example, fortitude existed *qua* fortitude as a virtue, but both Albert and Thomas spend considerable energy in laying out what vices exist in opposition to virtue. They conclude that audacity and timidity, different as they are, both are vices in opposition to fortitude.[219] In their interpretations of the Aristotelian doctrine of the mean, instead of placing the virtue as a point between two vices, virtue is the stable center and vices are the dramatic deviations from it.

Pietro also talks about virtues and vices as personality traits and mental capacities. After he completes physiognomizing by anatomy, working from head to toe, he goes over his material again, this time giving specific instructions for recognizing different qualities. Some are virtues and vices commonly discussed in philosophical literature, such as being timid (*timidus*), angry (*iracundus*), and shameless (*inverecundus*). Others are more unusual, like the signs of a person who is gentle (*mansuetu*), or servile (*servilis*), or cynical and mocking (*derisor*).[220] While Pietro generally allows his readers to make moral judgments themselves, at one point he does give instructions for appraising a person with "bad morals" (*hominis malorum morum*), including a thin, dry body, wrinkles, black spots, and black hair.[221]

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[219] "Audacia enim non opponitur fortitudini in actu, sed in modo, timiditas vero in actu opponitur et propter hoc magis opponitur," Albertus Magnus, *De Bono*,75, 65 ; Thomas Aquinas, *Summa Theologica*, II.II.126-127.

[220] *LCP*, fol. 32v-35r.

[221] "Decisio quinta in phisonomia hominis malorum morum. Facius ipsius est feda infernus similis cutis faciei et totius corporis sicca macies omnis corporis frons rugosa longa stricta in acutum conducta oculorum motus tardus habens maculas nigras capilorum nigredo et asperitas quae omnia cum effectu in quodam sociorum notavi," *LCP*, fol. 34r.

None of what Pietro says in the *LCP* directly challenges the idea that people can be praised and blamed for their virtues and vices, a position so important to the theologians and philosophers. He stays neutral in most of his explanations, not labeling traits as good or bad. Nor does he advise his reader on how to deal with people with different traits, as Theophrastus had done. While Pietro does not lay out arguments for a material justification of virtue and vice explicitly in the *LCP*, his work on physiognomy hints that he was open to such an explanation. In later works he developed this idea more fully, and in the *Expositio* and *Conciliator* assigned material causes to vices to an extent which was unacceptable to his contemporaries.[222]

Physiognomy seemed to offer powerful insights into the link between body and mind, and yet Pietro was also rather unusual for his day in the explicit attention he paid to it. Many offhand comments in theological, philosophical, and literary works betray a general assumption of the validity of physiognomy, but as a field of serious inquiry it gained recognition only in the Renaissance. The past two chapters have explored how the intellectual elite of medieval universities, especially Paris and Padua, thought about the relationship between body and soul, and how this relationship was expressed in emotions, personality traits, and mental capacities. These chapters have also addressed why emotions, personality, and intelligence were so important to medieval thinkers; they tied in with larger questions of virtue and vice, of sin and salvation, and, for physicians in particular, of suffering and care. Most physiognomical works were actually concerned with none of these. While they reveal assumptions about the nature of body/soul interactions, their functions were as much social as scientific. In the next chapter, I will broaden my lens beyond the faculties of theology, philosophy, and medicine, to investigate the practice and results of science of physiognomy—how it was studied, the ancient and Arabic sources used and their transmission, and how the science of

[222] Klemm, 132-133.

physiognomy and the foundational assumptions about its validity and mechanisms impacted culture and society in Pietro's world.

CHAPTER IV

TRANSMISSION, CULTURE, AND THE SCIENCE OF PHYSIOGNOMY

In Umberto Eco's classic medieval mystery novel *The Name of the Rose*, the narrator Adso, a young monk recording a series of bizarre events at an Italian monastery he is visiting in the early fourteenth century, says that

> In the following pages I shall not indulge in a description of persons—except when a facial expression, or a gesture, appears as a sign of a mute but eloquent language—because, as Boethius says, nothing is more fleeting than external form, which withers and alters like the flowers of the field at the appearance of autumn; and what would be the point of saying today that the abbot Ado had a stern eye and pale cheeks, when by now he and those around him are dust and their bodies have the mortal grayness of dust (only their souls, God grant, shining with a light that will never be extinguished)?[223]

But Adso goes on to contradict his own assertion that a description of the fleeting and transitory body gives no insight into the more enduring features of the soul as he begs the reader's indulgence while explaining the appearance of his mentor and novel's protagonist, Franciscan friar William of Baskerville. It is clearly evident from Adso's description that elements of William's appearance—from actual features to bodily carriage and movements—give us insight into his character and moods. We learn that "His eyes were sharp and penetrating" and that "His chin also denoted a firm will."[224] These descriptions suggest that, while the body may be a fleeting and transitory entity, it is not entirely separate from the immortal soul, and a physical description of an individual is not necessarily irrelevant to the knowledge of that person's character. This resonates with what has been shown in Chapters 2 and 3 above. To the medieval mind, the human being was not dualistic—comprised of two distinct and often warring ingredients, the body and soul—but rather hylomorphic, a view in which the body and soul are sympathetically intertwined.

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[223] Umberto Eco, *The Name of the Rose* (Warner Books: New York, 1984), 7.

[224] Ibid. 8

The science of physiognomy concerns the art of reading a person's character, transitory emotional states, personality, and mental capacities in his or her physical features. As such, it is something which everyone does instinctively. On the most basic level, we trust facial cues to tell us if someone is angry, sad, happy, etc. Phrases like "cruel mouth" and "kind eyes" abound in literature. In fact, recent studies have shown that our instinctive reactions are indeed often in response to real information about the biology of the person being observed—for example, facial features, bodily dimensions, and even pitch of voice revealing high levels of sex hormones tend to make an individual more attractive to the opposite sex. Our inclination to extrapolate from physical traits to intellect or character, however, tends to be culturally conditioned rather than resulting from a conscious understanding of a genuine scientific mechanism. Most judgments are so hidden that we are not even aware that we are making them, but many ancient and medieval thinkers recognized their own tendencies to draw conclusions based on physical features. Trusting that a mechanism connecting personality with physical features was there, but not trusting most people's untrained ability to interpret those features accurately, they then tried to set down rules for making physiognomical judgments.

Medieval physiognomy is a slippery discipline. For its connections with divinatory practices like astrology and chiromancy, it seems to fall under the category of magic. It is also relevant to studies of medieval medicine, science, and even social dynamics, since physiognomical texts were often directed at helping people identify friends and enemies. Acceptance of the science of physiognomy reveals a physiological basis for medieval psychology, a blending of mind and body in the understanding of the self. The scientific study of physiognomy began in antiquity and continued in the Islamic world, but the relevant texts did not reach Europe until the great translating efforts of the twelfth century. Physiognomy was never a highly popular topic among scholastic authors, not in the way commentaries on certain Aristotelian texts or Lombard's *Sentences* would be, but it did generate some academic interest in the thirteenth century.

It also bridged learned and popular culture and had significant social consequences for how people judged and treated one another, offering excuses for gender and ethnic biases. This chapter begins with examining the canon of ancient and medieval sources used by Pietro in the *Liber compilationis phisonomie* and examines how ideas about physiognomy were transmitted. It also investigates physiognomy's impact on society more broadly, particularly in justifying a culture of prejudice, and it ends with a consideration of the disciplinary designation of physiognomy and how the subject spanned fields of science, magic, and medicine. Ultimately, this chapter will show how Pietro d'Abano's *Liber compilationis phisonomie* fits into this broader intellectual and social history of medieval physiognomy.

Pietro's Sources: Ancient, Islamic, and Medieval European

While the Aristotelian hylomorphic model of the human left plenty of space for physiognomy by providing mechanisms for body and soul to influence one another, Aristotle himself did not actually discuss human physiognomy directly. He did discuss animals, however, and how the quality of the blood could determine both physical characteristics and reveal qualities of the animal's character, especially courage and intelligence, as discussed in Chapter 2. Pietro d'Abano and other writers on physiognomy used Aristotle's *libri naturales* to some extent to justify their science, but they relied more heavily on a text which they believed to be Aristotelian but is now known to be spurious. This is the *Physiognomy* of pseudo-Aristotle (*PA Phys*).[225] While not authored by Aristotle himself, scholars today accept that this text was part of the peripatetic tradition and created by followers of Aristotle. The text focuses not on the philosophical basis of physiognomy but on its practical applications, although the authors

[225] The texts discussed in this section almost all go by the same title: *Physiognomy*. I will refer to them in abbreviated form which indicates the authorship. Hence, the *Physiognomy* of pseudo-Aristotle is *PA Phys*, the anonymous Latin *Physiognomy* is *AL Phys*, Polemon's *Physiognomy* is *Pol. Phys*, and Michael Scot's is *Scot Phys*.

do suggest an Aristotelian understanding of the nature of the relationship between body and soul. Scholars have also long accepted that the *PA Phys* is in fact the work of two separate authors.[226] George Boys-Stones asserts that these two authors actually have different interpretations of the mind-body relationship. One seems to assert that the body actually has control over elements of character, whereas the other claims that the body merely reflects the preexisting characteristics of the soul. Boys-Stones is, however, cautious in his assertions, acknowledging that this account of their philosophical justifications for physiognomy are derived from just a few casual phrases in the text and are not laid out fully or explicitly by either author.[227]

Another one of Pietro's sources, the anonymous Latin *Physiognomy* (*AL Phys*), brings together the pseudo-Aristotelian *Physiognomy* with the writings of Loxus. Very little is known about Loxus's identity except that he was a fourth-century BCE physician. Scholars have been particularly keen on determining the exact nature of his relationship to Aristotle's thought. Geneva Misener, writing in 1923, notes the similarity between Loxus's views on the blood and those held by Empedocles, and on this basis she argues that Loxus actually preceded Aristotle.[228] However, Boys-Stones argues that "To judge by the evidence supplied by Anon. [the author of *AL Phys*] Loxus stands every bit as close to the Aristotle of the biological works as the Aristotelian authors of the [pseudo-Aristotelian] *Physiognomy*...[he] is a writer of clear Peripatetic affiliation."[229] Loxus went beyond the traditional Aristotelian argument that blood formed the bridge between the body and certain faculties of the soul to claim that the blood was itself the seat of the soul (recall that Aristotle had said the soul's seat was the heart, while Galen had divided

[226] Geneva Misener, "Loxus, Physician and Physiognomer," *Classical Philology* 18.1 (Jan. 1923), 1-22. Misener also cites earlier scholarship on physiognomy, particularly the work of Forster and Rose.

[227] George Boys-Stones, "Physiognomy and Ancient Psychological Theory," in *Seeing the Face, Seeing the Soul: Polemon's* Physiognomy *from Classical Antiquity to Medieval Islam*, ed. Simon Swain (Oxford: Oxford University Press, 2007)58.

[228] Misener, 10.

[229] Boys-Stones, 59.

the powers of the soul between different internal organs).[230] What we know of Loxus is how his views were summarized by the author of *AL Phys*. Boys-Stones argues that the author of that text, believing *PA Phys.* to actually be the work of Aristotle, was unaware of the contrasting views presented by its two authors and overemphasized the contrast between Loxus and Aristotle. He finds that in fact all three authors (Loxus and the two voices behind the *AL Phys*) can be classified as Aristotelian and that Loxus's emphasis on the importance of the blood is not enough to argue that he should not be classified as a follower of the Peripatetic school of thought.[231]

There was relatively little interest in physiognomy in the other, non-Aristotelian ancient philosophical traditions. Plato and his followers had not discussed physiognomy nor laid out a mind-body relationship that would invite a physiognomical understanding of the human being. The Epicureans would create a picture of man as being made of atoms, distinct particles of matter, of which the soul was also composed. Lucretius explains that "the mind and spirit are both composed of matter" and that the ability of the mind to move the body and experience its pain is evidence of the material nature of the mind's material nature.[232] While Lucretius does make some mention of the importance of temperament as a link between body and character, he does not say anything about the origin of a person's physical appearance, a critical ingredient in physiognomy. The Stoics likewise did not produce texts devoted to the study of physiognomy, although they did engage in discussions of links between physiology and character. However, as discussed in Chapter 3, they insisted on the power of the well-educated and well-disciplined soul to overcome any bodily inclinations towards character traits.[233] In the case of both the Epicureans and the Stoics, it is evident that their understanding of human

[230] Martin Porter, *Windows of the Soul: Physiognomy in European Culture 1470-1780* (Oxford: Clarendon Press, 2005), 52.

[231] Boys-Stones, 63-64.

[232] Lucretius, *On the Nature of Things*, 71.

[233] Boys-Stones, 78-93.

nature does not necessarily preclude physiognomy. Each of these philosophies would require a little "massaging" to make them into a systems in which a person's true character could be read in his or her face—but deriving such a justification from the physics of these philosophies is not impossible. We can imagine a form of Epicureanism in which body atoms buffet and direct soul atoms in certain ways, for example. They were not engaged in a deliberate rejection of physiognomy. Physiognomy merely used a manner of looking at human nature and the relationship between body and character which these two philosophical schools did not explicitly address.

The *Physiognomy* (*Pol. Phys*) by the Roman sophist Polemon (c. 90-144 CE) was also an important source of Pietro's *LCP* and medieval physiognomy in general. It exists in two versions, a fourth-century Greek translation by Adamantius and a single Arabic manuscript known to scholars as "the Leiden."[234] Polemon was no natural philosopher, and his work on physiognomy does not make any pretensions of being scientific. Its goals are purely social and moral. Simon Swain argues that this text reflects the "culture of mutual inspection and evaluation" which was characteristic of the late Hellenistic world in which it was produced. Its purpose is to help the reader navigate a complex web of rules and mores. For example, Polemon devotes considerable attention to helping his reader predict what will happen at a wedding, using facial and bodily cues of the guests. Swain explains the great political and economic significance of weddings in Polemon's world and the "performative moral terminology" Polemon uses, with advice on identifying people who are deceiving, plotting, betraying, etc.[235] The work is about how to survive in the dangerous social environment of second-century Rome, not the abstract theory of how the mind and body are related.

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[234] For the Leiden, see Robert Hoyland, "A New Edition and Translation of the Leiden Polemon," in *Seeing the Face, Seeing the Soul: Polemon's* Physiognomy *from Classical Antiquity to Medieval Islam*, ed. Simon Swain. Oxford: Oxford University Press, 2007), 329-463; for Adamantius's version, see Ian Repath, "The *Physiognomy* of Adamantius the Sophist," in *Seeing the Face, Seeing the Soul*, 487-554.

[235] Simon Swain, "Polemon's *Physiognomy*," in *Seeing, the Face, Seeing the Soul*, 131-132.

There were also two major Arabic contributions to the Western physiognomical tradition which appear among Pietro's sources: the *Liber ad regem Almansorem* by Rhazes and the pseudo-Aristotelian *Secretum secretorum*. Like so many medieval thinkers from both the Arabic and Latin intellectual traditions, Rhazes wrote on a wide range of topics, including medicine, alchemy, and physical sciences. Rhazes's physiognomy was heavily influenced by the *PA Phys*, but he "presented his physiognomy in the much more simplistic form of a list of physiognomical aphorisms or 'signs' without any discussion of their philosophical or logical assumptions," as Martin Porter explains. It is also "unambiguously medical" and "contributed to furthering the process of the medicalization of physiognomy." It was one of many works translated from Arabic by Gerard of Cremona (d. 1187).[236] Given Rhazes's reputation among Western physicians, it is no surprise to find his work among those utilized by Pietro d'Abano.

The second influential Arabic work which Pietro uses and which had an impact on European physiognomy is also one of the most famous and widespread pseudo-Aristotelian texts of the Middle Ages. The *Secretum secretorum* was believed to have been written by Aristotle for Alexander the Great to offer the latter advice on a wide array of topics—first and foremost politics and statecraft (it is an example of the "Mirror of Princes" genre), but also other matters including astrology, health, and hygiene. In truth the only certain fact about its origin is that it *wasn't* written by Aristotle, although it incorporates some Aristotelian ideas along with Hellenistic ones. It was allegedly translated by Yahya ibn al-Bitriq (fl. ca. 815). But this too relies on claims made within the prologue itself, and Yahya's actual involvement with the text remains doubtful. In his work on the *Secretum secretorum*, Steven Williams identifies the original author/compiler as "Pseudo-Yahya" and demonstrates that the earliest version of the *Secretum secretorum* that would have looked anything like version to which Pietro would

[236] Porter, 63.

have had access was probably assembled in the latter part of the ninth century. Even after that, Arabic readers and scribes continued to add to and alter the text.[237]

The *Secretum secretorum* was vastly popular once it reached Europe, and there are more surviving Latin manuscripts of the *Secretum secretorum* than any other pseudo-Aristotelian or even genuine Aristotelian text. It was even "translated into far more vernacular languages than any other Aristotelian work" and "can claim an influence far greater than many of the most influential genuine Aristotelian works," according to C.B. Schmitt.[238] Steven Williams has identified over one hundred and thirty Latin manuscripts dating from the early fourteenth century and earlier.[239] Counting translations and later manuscripts, the number rises to over six hundred, more than double the two hundred and eighty manuscripts of Thomas Aquinas's *Summa Theologica*.[240] Shortly after its translation into Latin by Philip of Tripoli in the early 1230s, it made its way to Europe, where it was not only widely copied but also frequently altered, with sections excised or added. In fact, several modern scholars have even argued that its dramatic restructuring may have been the result of a systematic Church-sponsored attempt to control and censor the text, although Williams has more recently shown that this was not the case.[241] Rather, the *Secretum secretorum* seems to have been the victim of, or (to put a less value-laden term on it) simply the product of medieval practicality and preferences. People copied the sections which they found the most interesting or useful and omitted ones with which they didn't want to trouble themselves. The text lends itself to this kind of treatment. Unlike religious texts or genuine Aristotelian works on philosophy, the *Secretum*

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[237] Steven J. Williams, *The* Secret of Secrets*: The Scholarly Career of a Pseudo-Aristotelian Text in the Latin Middle Ages* (Ann Arbor: University of Michigan Press, 2003), 29.

[238] Charles B. Schmitt, "Pseudo-Aristotle in the Latin Middle Ages," in *Pseudo-Aristotle in the Middle Ages*. Edited by Jill Kraye, W.F. Ryan, and C.B. Schmitt. London: Warburg Institute, 1986), 5.

[239] Williams, 1.

[240] Hubert Steincke, "Giotto und die Physiognomik," in *Zeitschrift für Kunstgeschichte* 59.4 (1996), 528.

[241] Williams, 147-159.

secretorum is first and foremost a practical text full of practical advice, to be studied not for its profound insights but for its utility.

Despite its wide spread and influence, the *Secretum secretorum* did not occupy the same place in the scholarly world as other Aristotelian texts. It was probably never included as part of the "ordinary" lectures, the standard curriculum at Paris and Oxford, although it is possible that scholars lectured on it as an "extraordinary" text, essentially an elective for university students.[242] Also, the most significant Aristotelian texts tended to be commented on extensively by university professors. We have numerous commentaries on such works as the *Physics, Metaphysics, De anima, Nicomachaean Ethics,* etc., yet only one commentary seems to have been written on the *Secretum secretorum* by none other than the pugnacious and unconventional Roger Bacon.[243] In fact, it was Roger Bacon's favorite book.[244] Pietro d'Abano never refers to the *Secretum secretorum* by its title, but he does mention several times what "Aristoteles dixit Alexandro," or similar constructions with other verbs,[245] which can safely be understood as referring to the *Secretum secretorum*. He never displays any doubt that the *Secretum secretorum*, or the *PA Phys*, reflects the real positions of Aristotle.

Pietro's interest in physiognomy and his use of these texts, both spurious and genuine, was part of a larger trend in the medieval scholastic world of presenting physiognomy as a rational science. The first major medieval work on physiognomy was produced by Michael Scot (1175-1232), mathematician and court astrologer of the volatile and erudite Emperor Frederick II. The work relies heavily on the *Liber ad Almansorem* of Rhazes and makes reference to the *Secretum secretorum*. Michael also appears to use the *PA Phys*, even though the earliest Latin translation we have of that text

[242] Williams, 189.

[243] Schmitt, 9.

[244] Williams, 282.

[245] *LCP*, fols. 5v, 11r, 13r, 17v, 28r, 30v, 34r.

was made by Bartholomew of Messina for King Manfred. Based on references made by Albertus Magnus, this translation can be dated to shortly before 1262—much later than Michael Scot's *Physiognomy* (*Scot Phys*). While Michael Scot does not use Pseudo-Aristotle extensively and relies much more on Rhazes's *Liber ad Almansorem*, Danielle Jacquart argues that passages of Michael Scot's work parallel Pseudo-Aristotle's closely enough to suggest that Michael Scot had access to the *PA Phys*. It is possible that there was a Latin translation in circulation before Bartholomew of Messina's, perhaps even ordered by Michael Scot himself. Finally, Michael draws on a number of medical texts, particularly the *De coitu* of Constantine the African and works from the Salernitan tradition, especially Urso. There is no proof that he used Avicenna's *Canon*.[246] *Scot Phys* saw a surge in popularity during the Renaissance. It was printed in 1477, not long after the publication of Michele de Savonarola's work on physiognomy. The popularity of *Scot Phys* in the fifteenth and sixteenth centuries attests to the wider popularity of physiognomy in the Renaissance than the subject had enjoyed in Michael Scot's own day.[247]

Pietro d'Abano does not cite Michael Scot, and his array of sources overlaps with but does not match Michael's. *Scot Phys* also deals extensively with topics on which Pietro's hardly touches—a great deal of the earlier work is devoted to the discussion of reproduction and relies very heavily on Constantine the African's *De coitu*, a text which Pietro never cites. This may have to do with Michael Scot's objectives in writing his treatise, which were quite different from Pietro's. Whereas Pietro was working as an academic and presumably composed his work at least in part out of his own interest in the topic, Michael was employed in the imperial court, and his patron, Frederick II, had specific uses for the court astrologer's talents. Like the *Secretum secretorum*, Michael

[246] For a full discussion of Michael Scot's sources, see Danielle Jacquart, "La Physiognomie à l'Époque de Frédéric II: le Traité de Michel Scot," in *Micrologus* 2 (1994), 22-25.

[247] Jacquart, "Michael Scot," 19-20.

Scot's *Physiognomy* was intended to have practical uses for a political leader—but unlike the earlier text, it was not focused on identifying friends and enemies. In Michael's case, Frederick used information from the text to make early claims about the emperor's wife's pregnancy and the sex (male) of the child.[248]

The vast majority of medieval people were unable to read the Latin texts discussed here. However, they had other means of accessing physiognomical ideas. One was through texts which were translated into the vernacular, like the *Secretum secretorum*. More thorough studies of the reception and use of that text beyond the learned context, to complement Williams's study of the text's scholastic presence, would be necessary to understand its "crossover" role. There is also literary evidence of physiognomical practices and beliefs in Western Europe even before the more scientific writings of individuals like Michael Scot and Pietro d'Abano. For example, Wolfram von Eschenbach's (c. 1170-c. 1220) *Parzival* was composed at the height of the era of translation of Greek and Arabic texts into Latin. A description of the character of Feirefiz provides us with evidence that Wolfram shared some assumptions with learned physiognomical theories. When Feirefiz first meets the grail maiden Repanse de Schoye, "Love's power and Joy's weakness made him turn pale in the white parts of his complexion."[249] This idea that powerful love causes pallor would be repeated by Pietro almost one hundred years later in the *LCP*.[250] Even in the absence of a clear physiological mechanism, the connection between appearance and movements of the soul was taken as a given. It is also important to note that, at least in this case, the physical change is the same in both the literary and scientific texts—pallor caused by love—which is not necessarily an automatic consequence of feeling love. In more recent literature, for

[248] Jacquart, "Michael Scot," 35.

[249] Wolfram von Eschebach, *Parzival*, trans. Helen M. Mustard and Charles E. Passage (New York: Vintage Books, 1961), 422.

[250] "Color autem pallore obductus imbecillem timidumque declarat et amore femelle detentum.," *LCP*, fol. 5v.

example, we are more likely to see love causing blushing than pallor. At this point it would be hard to say which tradition has primacy. Do scholastic texts provide rationalizations for views spread in literary works, do literary works repeat conclusions reached in a more learned environment, or do they both draw on wider beliefs that persisted in oral rather than textual tradition? While it would require a separate project carefully comparing a large number of texts from both genres to fully explore these questions, it is at least significant to note that learned and literary traditions were in agreement on many physiognomical judgments.

Physiognomy is ultimately about visual observation, and this study would be remiss if it did not make some mention of the visual arts in a study of sources on physiognomy. Scholars who investigate the history of physiognomy, in eras ranging from antiquity through the nineteenth century, frequently use the term "physiognomical gaze" to refer to cultures which take for granted the validity of physiognomical judgments whether or not scientists or scholars within those cultures offer any scientific mechanisms to support such judgments.[251] Visual arts provide us evidence of this "physiognomical gaze" even when theoretical texts are absent. Painting and sculpture use depictions of the human face and form to convey not only the emotion of a subject but also his or her more enduring traits, and understanding a culture's "physiongomical gaze" is useful to interpreting these visual media.[252]

Sculpture, especially statues on churches and cathedrals, was far more widely accessible to the population than academic texts on passions and physiognomy, and we can perhaps get a better sense of how people tried to read each other's appearances by considering such artwork. In this case, the popular art and learned texts are in general agreement. There is a shift in the depiction of faces in medieval sculpture beginning

[251] The idea of a "physiognomical gaze" is central to Martin Porter's analysis of the textual culture of physiognomy in the early modern era. Porter, *Windows of the Soul*, 2005.

[252] See, for example, Jas Elsner, "Physiognomics: Art and Text," in *Seeing the Face, Seeing the Soul*, 203-224.

around the twelfth century, just as Greek and Arabic texts on psychology and physiognomy were making their way into Western Europe. In the early Middle Ages, sculptures tended to show saintly visages as impassive and emotionless and sinful and demonic faces contorted by overwhelming passions. Willibald Sauerländer observes that

> passionate physiognomy was regarded simply as sinful, and in the realm of sin there can be no order...Ironically it was this very absence of any system of physiognomy [in the early Middle Ages], and a concomitant fear of the passions, that gave rise...to the veritable explosion of distorted and inflamed heads, faces, and masks as appears in no other period of Western art.[253]

Later Gothic art of the thirteenth century, however, showed more realistic and subdued faces, showing emotions in sculpture as they actually appear on the human face. Furthermore, saints and angels began to be depicted with smiles rather than flat and passionless faces. In depicting realistic emotions, Sauerländer argues, late Gothic artists began to use sculpture as theater was used during the same period—to move viewers to compassion, rather than to exhort them to forgo passion altogether (as earlier visual depictions had done).[254] I would furthermore suggest that this shift in the depiction of emotion on faces mirrors the increasingly natural, biological, and compassionate approach to emotional experiences, particularly emotional ailments, that we see in medical and philosophical literature as discussed in Chapter 2.

One of the most important painters of the later Middle Ages, Giotto di Bondone (d. 1337), was active in Padua just as Pietro was returning there from Paris. Giotto is particularly noteworthy for the care he took with human faces and expressions and his use of shading and modeling to create the appearance of three-dimensionality. While the general uniformity of faces in artwork throughout much of the thirteenth century makes them opaque to a physiognomical gaze, Giotto's figures have enough individuality to open them up to physiognomical study. German scholar Hubert Steinke analyzes the

[253] Willibald Sauerländer, "The Fate of the Face in Medieval Art," in *Set in Stone: The Face in Medieval Sculpture*, ed. Charles T. Little (New Haven: Yale University Press, 2006), 4.

[254] Ibid., 10-11.

images of several characters, such as Caiphas and Judas, in the scenes Giotto painted in the Scrovegni Chapel in Padua (1306), then carefully pairs them with passages from the *LCP*. Features of the figures correspond with the sorts of personal qualities we would expect them to have if reading them following the guidelines given in the *LCP*. Steinke also applies this analysis to the figures of the virtues and the vices in the Scrovegni chapel. The identification of vices and virtues was, as has been discussed above, particularly important for the practical applications of physiognomy, and Steinke shows that Giotto was presenting his figures of vices like *Ira* and *Invidia* just as described in the *LCP*. He furthermore concludes that Giotto's work on the Palazzo della Ragione in Padua constitutes "an artistic translation of the Pietro's scientific theories."[255]

Ultimately, Steinke demonstrates that Giotto was probably quite familiar with Pietro's theories and with learned, scientific physiognomy in general, and that he applied these theories to his visual art.[256] Such paintings would have reached a very different audience from Pietro's writings—although not necessarily a much wider audience, for the Scrovegni Chapel was not for use by the population at large. While the visual depictions are open to more fluid interpretations than the text, they also serve a didactic function and help to illuminate places of ambiguity in the written descriptions. They thus complement and reinforce a physiognomical mentality, even if they are unable to provide any of the theoretical scholastic rationales for linking physical appearance with passions or mental traits.

Physiognomy and Prejudice

We have a number of statements in the modern world that challenge us to reject a physiognomical reading of individuals—"don't judge a book by its cover," "beauty is

[255] "Giotto realisierte also hier [Palazzo de Ragione], nur wenige Jahre nach der Ausmalung der Cappella degli Scrovengi, eine künsterliche Umsetzung von Pietros wissenschaftlichen Theorien," Steinke, 544.

[256] Steinke, 546.

only skin deep." Such sentiments would have been very alien to a medieval thinker. As has been seen throughout this study, writings on physiognomy never trouble to ask whether or not it is valid to judge a person's personality and intellect by his or her appearance. They assume that such correlations are true and merely list the correspondences and sometimes supply the mechanisms. These assumptions about the connection between physical features and character traits can have significant social consequences. Studies of the development of scientific justifications for prejudicial systems such sexism and racism have grown in recent years, and physiognomy, by connecting appearance with virtues and abilities, certainly belongs to the larger mental systems which justify these kinds of prejudices. The selfsame materialist understanding of human nature which could lead to a more compassionate treatment of emotional health as discussed in Chapter 2, in which painful emotions might be treated as ailments rather than vices or sins, could also have the socially corrosive consequence of legitimizing judgment passed on people or groups of people based merely on their appearances.

One way in which a physiognomical understanding of human nature can legitimize prejudice in society is by emphasizing the physiological differences between male and female and providing an explanation which connects those physical differences with mental ones. Medieval discussions of sex differences have been the subject of considerable scholarly work, particularly by Joan Cadden. She explains that in medieval medical and biological discourse, vital heat emerges as the main cause of physical differences between men and women. This is entirely consistent with what this study has shown about the role of heat in production of individual differences in texts from the pseudo-Aristotelian *Problems* to Richard of Middleton's quodlibetal question to the *LCP*. The difference in vital heat leads to an assortment of superficial differences, such as causing male flesh to be hairier and more porous. However, heat was also seen as causing more substantial differences which were then used to justify women's inferior roles in society—being colder was thought to make them physically weaker, less

intelligent, and more susceptible to the passions. The difference in vital heat also leads to a difference between men and women's roles in reproduction. Men become the source of the vital principle in reproduction because they have enough heat.[257] Pietro explains the role of the father's heat in human generation in the *LCP* as well, citing Galen and Avicenna.[258] This also helped to justify the view that men were the superior sex.

Cadden examines how physiognomical works helped to reinforce this gender hierarchy, but her portrayal of Pietro's approach to sex difference in the *LCP* is somewhat misleading. First, she claims that Pietro's main source is the *Physiognomy* of pseudo-Aristotle, and she contrasts Pietro's structure and approach to sex difference with that one source. While it is true that Pietro uses this text, the *LCP* is not just a theme and variations upon that one source, as discussed above. Pietro actively engages with a variety of authors, including Polemon, Galen, Avicenna, as well as that other pseudo-Aristotelian work, the *Secretum secretorum*. The *LCP* is intended to be a project of reconciliation as Pietro's later *Conciliator* would be. Cadden also notes that "whereas his source [*PA Phys*] had led with the female and presented the male as her opposite, Peter led with the male—adding a number of behavioral traits—and presented the female in comparison to the male and less fully." My reading of the *LCP* agrees with this. Pietro mentions women explicitly only to note where they deviate from a rule he has given, leading to Cadden's conclusion that men are the norm and "the standard against which the female is measured."[259] Yet Cadden's characterization of the *LCP* suggests that sex differences play an even more explicit role than they in fact do. For most of the text, it is impossible to tell whether Pietro is talking only about men or giving rules that should apply to everyone. Very seldom does he give these examples of women deviating from the male norm.

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[257] Joan Cadden, *Meanings of Sex Difference in the Middle Ages: Medicine, Science, and Culture*. Cambridge: Cambridge University Press, 1993), *passim* but especially Ch. 4.

[258] *LCP*, fol. 44r-46r.

[259] Cadden, *Sex Difference*, 187-188.

In a discussion of sex difference in the *LCP*, I would contend that what was significant was not the difference between men and women but between femininity and masculinity. This concerns Pietro far more than distinguishing male from female. According to the *LCP*, femininity (*effeminatus*) in men is a negative trait. Femininity tends to be linked by Pietro with other undesirable characteristics, such as timidity and bad morals.[260] While the implication is that women are inferior to men because they have these traits, Pietro is not engaged in a polemic against women. He is not trying to prove that femininity is inferior but seems so convinced of it that he feels he need not bother. It is through his associations of femininity with negative traits that he both reveals and reaffirms his belief in the biological inferiority of women. Yet as discussed in Chapter 3, throughout the *LCP* Pietro actually associates high levels of heat with a deficiency in mental capacities. Features which indicate a high level of heat also tend to be associated with traits like *stulticia* and *imprudens*. This might seem to imply that colder, wetter women have superior mental capacities to men—but Pietro does not state this explicitly. While it is clear that he regards women as inferior to men in terms of moral virtue, he does not necessarily form the same link between gender and intelligence as was widely accepted at this time. However, I make this observation only tentatively and would not argue that Pietro is deliberately or consciously making any claim about women's intelligence.

There is another way in which one might rationalize judging a person based on their appearance which is almost the converse of the biological mechanisms discussed above, and that originates from the assumption that appearance is the result of choice. Studies today show that levels of discrimination based on weight are close to reported rates of race and gender discrimination. We see also employment discrimination in favor

[260] "Molis vocibus citis atque disruptis loquens timidus et effeminatus iudicatur ," *LCP*, fol. 12v; "Cum videris cervicis fluxum cum aliqua labiorum contractione risui rudam atestante et oculorum extra ordinem girationem aliasque in constantiam in sedendo et in stando et vocem audieris tremulam constanter hunc effeminatum et malorum morum denuncia," *LCP*, fol. 27r.

of individuals—especially women—who meet certain societal standards of "beauty."[261] There are many possible reasons for this, one of them being the widespread belief today that weight is under a person's control and that the mechanism connecting choice and weight is relatively simple, hence providing a justification for judging a person's willpower, conscientiousness, and even intelligence from his or her weight. But medieval people did not hold such beliefs, and the writings of physiognomers show little evidence that anything about weight or other aspects of appearance was a matter of choice. Pietro does not suggest that weight is under one's control. I examined the *LCP* for uses of the terms *pinguis* (fat), *macer* (thin), and *grossus* (fat or large). While he does pass judgment on individuals because of weight, there is no evidence that it is because he believes that they have control over it. Rather, as with everything from eye color to finger length, the mental and physical characteristics are treated as rising from a common natural, internal cause. Pietro also does not make any allowances for how cosmetics might interfere with a physiognomer's ability to judge. His chapter on hair contains no suggestion that a person might have chosen to change the color or curliness of his or hair—cosmetic changes we know medieval people could and did make, from the hair extensions sported by twelfth-century ladies to the careful curls of Chaucer's squire.[262]

For medieval physiognomers, the ideal person was *mediocritas*, or moderate, in all physical characteristics. This was understood to be how both Adam and Christ looked, with everything from weight to head size to height somewhere in the middle of two extremes. But what constitutes "middle" is never defined in any quantitative way, by Pietro or others.[263] We see the desirability of *mediocritas* largely in the later sections in

[261] K.S. O'Brien, J.D. Latner, D. Ebneter, and J.A. Hunter, "Obesity discirmination: the role of physical appearance, personal ideology, and anti-fat prejudice," in *International Journal of Obesity* 37 (2013), 455–460; R. Puhl, R. and K.D. Brownell, "Bias, Discrimination, and Obesity," in *Obesity Research*, 9 (2001),788–805; L.A. Jackson, "Gender, Physical Attractiveness, and Sex Role in Occupational Treatment Discrimination: The Influence of Trait and Role Assumptions," in *Journal of Applied Social Psychology*, 13 (1983), 443–458.

[262] LCP, 6v-7v.

[263] Ziegler, "Proto-racism," 183-184.

the *LCP*, when Pietro moves from physiognomizing by feature to explaining the sets of features which correspond with certain interior qualities or with people born under different signs of the zodiac. For example, a person of "good intellect and nature" would be neither fat nor thin, not too fleshy in either the back or the front, of average height, and his coloring would be between red and white.[264]

In medieval thought in general, the *mediocritas* of most features, as described above, was the standard of beauty. This continued to be the case in early modern physiognomy. But it is worth noting that while ugliness was seen as being a sign of vice, rather than being caused by vice, beauty was more often defined as being a consequence of virtue. That is, a person's features exhibited balance and moderation, which in turn was evidence of a moderate or temperate nature, which was virtuous, which was *consequently* beautiful, rather than the moderate or temperate nature causing the beauty directly. Beauty is distinct from attractiveness or seductiveness in these texts. The former is a result of virtue and moderation, the latter two are traits of which the physiognomer must be wary.[265] Pietro does not go into nearly the level of detail in explaining any sort of doctrine of beauty as later early modern physiognomers would. When he uses the term *pulcher*, its meaning is extremely vague. He uses it primarily in his section on the zodiac. Those born under the signs of Taurus, Leo, Libra, and Aquarius are beautiful in form, body, or face, and other signs or planets confer beauty of more specific features.[266] As later physiognomical literature would make clearer, the implication in the *LCP* is that balance and moderation set the standard of beauty and that a person who possesses those features also has moral and intellectual virtues.

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[264] "Decisio tertia in phisonomia signorum boni intellectus et nature. Cuius caro lenis est et mollis cum paucitate inter crassiciem et macredinem tendens...Venter et dorsum non carnosi. Extrema decenter extensa. Statura media. mitis aspectu. Eius color inter album et rubeum medius tener lucidus clarus subtilis cutis capili medii et ei sunt oculi ante dicti," *LCP*, fol. 33v.

[265] Porter, 184-187.

[266] *LCP*, fol. 38r-40r.

Racism is another form of prejudice which has many theoretical links with physiognomy. For much of recent history scientific racism, or racism with a theoretical justification provided by the scientific community, was believed to be the product of the nineteenth century, but more current studies have argued that it has origins that reach back much further. The articles in the recent volume *The Origins of Racism in the West* (2009) explore the ways in which ancient and medieval texts provided seemingly scientific rationalizations for judgments passed on entire groups. The editors argue that prejudice expressed in ancient texts was not merely cultural or ethnic but distinctly proto-racist. They define racism as a clear-cut phenomenon which differs from other forms of prejudice not in intensity but in certain suppositions unique to racist thought. "Racism" applies judgments to all members of a given group, holds racial traits—mental and moral as well as physical—to be immutable, assigns values to those traits, and "entails a justification of the abuser/aggressor."[267] In general, the contributing scholars argue that ancient Greece and Rome did foster racism along these lines, but medieval texts, while providing justification for inaccurate and often corrosive prejudicial judgments, do not give evidence of the same kind of racist mindset that was present in earlier or later western society.

Physiognomy, in rationalizing judgments of mental traits based on physical traits, certainly builds off of some of the same premises as scientific racism. Individuals of certain ethnic groups were often depicted in art as having particularly unattractive appearances which viewers would have linked with undesirable moral qualities. This is especially the case of art showing Jews, frequently portrayed with exaggerated hooked noses which make them look not entirely human.[268] Certainly the link between appearance, ethnicity, and character was widespread in the medieval mental universe, but

[267] Introduction to *The Origins of Racism in the West*, ed. Miriam Eliav-Feldon, Benjamin Isaac, and Joseph Ziegler (Cambridge: Cambridge University Press, 2009), 10-11.

[268] Sauerländer, "The Fate of the Face in Medieval Art," 13-15, is just one of many studies addressing the negative depiction of Jews and other minorities in medieval artwork.

it does not necessarily correspond with racism in the modern sense of the term. Joseph Ziegler argues that medieval physiognomic thought was directly opposed to racist thinking for a number of reasons. First, it emphasized individual differences rather than categories—instead of giving a few signs to help the observer categorize the observed individuals, medieval scholars focused on linking individual physical features with individual personality traits. He claims that "medieval and early renaissance physiognomy was so individualistic that questions of parental transmission of traits and of heredity were relegated to a marginal position in the physiognomic discourse and practice."[269] This is consistent with what I have observed in the *LCP*. As noted above, Pietro does not try to create categories of personalities, let alone racial categories. He does not even associate physical traits with one another (for example, skin and hair color)[270] but keeps his traits distinct.

Ziegler also claims that for a system to truly qualify as racist, it must insist upon the heritability and immutability of the traits in question.[271] In the Middle Ages, the discussions of the heritability of traits were more linked with class than with race or geographic origin; in fact, it was in the context of questions about the heritability of nobility that the term "race" was first coined.[272] What might be described in the nineteenth century as "racial" traits were seen in the Middle Ages as being determined by climate and even subject to change. While he does not mention such changes in the *LCP,* in his later works, the *Conciliator* and the *Expositio Problematum Aristotelis*, Pietro explains how physical and mental traits can be altered. In his commentary on Problem 30.1 of the pseudo-Aristotelian *Problemata*, the problem concerned with melancholy,

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[269] Ziegler, "Proto-racism," 199.

[270] Later physiognomers would find ways to explain how physical traits were linked, as skin and eye color in Rolandus Scriptoris's *Reductorium phisonomie* (composed around 1430); see Ziegler, "Skin and Character in Medieval and Early Renaissance Physiognomy," in *Micrologus* 13 (2005), 515.

[271] Ziegler, "Proto-racism," 188.

[272] Charles de Miramon, "Noble dogs, noble blood: the invention of the concept of race in the late Middle Ages," in *Origins of Racism*, 200-203.

Pietro asserts that one's innate complexion can, in fact, change, although the changes must be small and gradual. He also addresses the issue of complexional change in Differentia 22 of his *Conciliator*, concluding that changes in geography and climate can lead to a change of internal complexion. This would impact not only a person's physical health but also his mental traits. Pietro supports this with a botanical example, saying that poisonous mushrooms become edible if moved to other regions.[273] If we accept as part of the definition of racism that it must include a hereditary component and that the traits must be immutable, this is certainly evidence that medieval theories of the relationship between the body and mind are not racist. On the other hand, returning to Wolfram von Eschenbach's *Parzival*, we have evidence that Pietro's insistence on climactic causes of skin color may have set him at odds with a more popular belief in the heritability of color. Wolfram's character of Feirefiz, with a European father and "Moorish" mother, is born with black and white patches and resembles a magpie. Wolfram also describes Feirefiz's piebald appearance as a "marvel."[274] While Feirefiz's appearance suggests that Wolfram believes that parentage does impact one's skin color, it is unclear exactly what Feirefiz would have looked like if the black and white patches were marvelous and not natural.

Pietro's work on physiognomy is opposed to racist thinking in yet another way not noted by Ziegler. Pietro advises his readers to take geographical origin into account because geography can actually *negate* what would seem to be sound physiognomical judgments of an individual's characteristics. According to the *LCP*, making assessments based on a person's coloring is dangerous because color can mean so many things—we have already seen how color could show transitory emotions, like love or shame, and this makes it hard to tell a person's permanent personality traits. Likewise, what would show

[273] *Expositio* 30.1; *Conc*. Diff. 22; I was directed to these passages by Ziegler, "Proto-racism."

[274] Wolfram von Eschenbach, *Parzival*, 32-33.

such traits in a person of one geographical origin might in a person from somewhere else be a "racial" trait which therefore has no bearing on his or her character or abilities. For example, dark coloring could be a very negative sign, showing timidity, weakness, and sneakiness. On the other hand, darkness could also show that a person comes from a hot region like India. The implication in the *LCP* is that in the person from India the coloring does *not* come along with the undesirable traits.[275] For that person, such a color is just evidence of geographical origin. Pietro does not explore or develop this point, he simply assumes that race is not linked with physiognomical judgments, or perhaps that different physiognomical rules apply to people of different origins. The general trend in medieval ethnographic writings was to use heat as an explanation for how climate and geography produced certain mental and physical traits. For example, northerners were taller, thicker, and more courageous than southerners because the coldness of their bodies forced them to retain vital heat. Such views were widely expressed in the writings of prominent scholastics.[276] While Pietro does not directly challenge this view, he suggests a contrary perspective. He claims that an awareness of a person's geographic origin should mitigate rather than reinforce the physiognomical judgments.

In these cases, physiognomy might seem an utterly useless discipline for someone hoping to obtain practical knowledge—a single trait may be a sign of a person's emotions OR her geographical origin OR her mental traits. In order to help his readers keep matters straight, Pietro advises them to rely on the speech of the individuals they are observing, again suggesting that racial judgments based on appearance are not particularly reliable.[277] Beyond this, he gives very little advice on how to distinguish between a racial feature and a feature that has physiognomical relevance. The viewer

[275] "Color niger valde levis timidum versutum atque imbecillem hominem denunciat. referturque ad eos qui meridiei calidiora cohabitant ut indi," *LCP*, fol. 5r.

[276] Biller, "Proto-racial thought,"165-177.

[277] "Convenit itaque prophetizari per ipsos suam loquelam ut ad mauros romanos et scotos si quidem et in cunctis aliis expediat individualiter magis astringere," *LCP*, fol. 5v.

must use additional outside knowledge to decide whether someone's pallor shows that she is phlegmatic or just Scottish. Yet even if medieval physiognomical thought was not technically proto-racist, it was still prejudicial, and in connecting physical appearance to character traits through biological mechanisms it still helped to provide "scientific" rationalizations for passing the kinds of judgments which would become a part of later racist thought.

Disciplinary Neighbors: Chiromancy and Astrology

As a scientific discipline, physiognomy only generated moderate interest in the medieval scholastic world, although I have found no evidence that its validity came under direct attack during the Middle Ages. It has also played a minor part in the modern scholarship on the history of science, medicine, and magic. However, as this chapter has shown, it had perhaps a larger cultural presence than its role in the learned academic community would suggest. Joan Cadden effectively expresses why physiognomy has been largely omitted from the study of medieval intellectual history:

> It does not fit neatly into the dominant framework of systematic natural philosophy or theoretical medicine with their representation of causes and their shared principles such as qualities and opposites. Nor does it correspond to or represent the origin of any recognized branch of modern science. To make matters worse, it has all the markings of a pseudoscience and does not even have the virtue, as does astrology, of having important empirical content, sophisticated mathematical procedures, or coherent theoretical underpinnings.[278]

Yet physiognomy has also been excluded from the recent increase in scholarly interest in medieval magic, a subject explored more fully in the next chapter. Like Pietro himself, the study of physiognomy challenges the standard medieval disciplinary categories, so it would be appropriate to say the same of physiognomy as Matthew Klemm argues of Pietro; that modern scholars' inability to categorize him has made him a more

[278] Cadden, *Sex Difference*, 186.

challenging figure to study than many of his contemporaries.[279] In an attempt to appreciate where physiognomy fits in medieval organizations of knowledge and scholarship, it is important to consider what other fields it was associated with. We see this in both the transmission of texts—how they were organized and bound in codices, for example—and also in how authors explicitly discuss the relationships between different disciplines.

There is almost a sense of contagion in how disciplinary relationships are described in medieval texts, when an author tries to associate or disassociate his subject from a savory or unsavory field of study. Physiognomy and the related discipline of chiromancy, or palmistry, are examples of such liminal disciplines whose supporters and attackers both used the arguments of association to try and defend or condemn their respective practices. Physiognomy might seem to be scientific by virtue of its association with medicine and Aristotelian biology, whereas chiromancy was dragged down towards "magic" because it was often associated with other forms of divination—geomancy, hydromancy, pyromancy, and aeromancy.[280] While these other mantic disciplines had been condemned by Isidore of Seville, John of Salisbury appears to have been the first to add chiromancy to the list of wicked divinatory practices. Chiromancy is condemned again in the *Speculum astronomiae* of pseudo-Albertus Magnus.[281] However, chiromancy's practitioners made claims of scientific legitimacy because of its connection to physiognomy. The most significant works on chiromancy in the Middle Ages, like many of the works on physiognomy, were falsely ascribed to Aristotle. Aristotle was also not the only one whose name was used to give authority to texts on chiromancy—a treatise was ascribed to Michael Scot, another to Albertus Magnus, and Pietro himself

[279] Klemm, 1.

[280] Thorndike, vol. II, 701-702.

[281] Pack, "Pseudo-Aristoteles: Chiromantia," 290-292.

was believed to have written on the subject, although that text has not survived.[282] One pseudo-Aristotelian text on chiromancy defines the subject as "the art demonstrating the natural habits and inclinations of a person through sensible signs of his hands." What sort of habits and inclinations? Like physiognomy, chiromancy makes grand claims of being able to ascertain a person's emotions and personality, particularly those traits identified as virtues and vices. From joy and sorrow to generosity and avarice to health and sickness, all can be found in the lines on the palm of the hand.[283] The pseudo-Aristotelian text insists that chiromancy is natural, not supernatural. It can only reveal a person's predispositions, not future events, which would require stepping into the dangerous realm of magic and interfere with the Christian doctrine of individual free will.

Another pseudo-Aristotelian work on chiromancy more directly confronts the association of chiromancy with illicit mantic disciplines, those disciplines which use spirits or demons to predict the future. The author asserts that chiromancy is "licit" because it is unlike subjects like pyromancy and geomancy, which rely on fire and stones. Rather, chiromancy is natural because it uses the human body to make its predictions. Its association with physiognomy, a field which the author clearly expects his reader to accept as licit, gives it legitimacy, and the author also clearly expects the reflected glow of Aristotle's writings on physiognomy to benefit the reader's perception of physiognomy as well.[284] In the *LCP*, Pietro only makes a passing mention of chiromancy

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[282] Thorndike, vol. II, 331, 575, 890; Naudé, 180.

[283] "Cyromancia est ars demonstrans mores et inclinaciones hominum naturales per signa sensibilia ipsius manus, mores autem communiter sumendo et inclinaciones ad talia que per hanc artem possunt cognosci, ut sunt gaudium tristicia amor odium, largitas avaricia, sanitas egritudo, fortitudo debilitas, in aliquibus fortunium infortunium..." pseudo-Aristotle, in "A Pseudo-Aristotelian Chiromancy," 205.

[284] "Primo videndum est utrum ista ars sit licita. dicendum est quod quidam dicunt eam esse illicitam hac racione, quia omnis divinacio est illicita secundum legem Dei, unde in lege preceptum fuit a Deo: esse videntur qui de futuris eventibus se intromittunt predicendo per signa reperta in manibus, unde videtur esse illicata, sicut piromancia, que est de divinacione que fit in igne, et sicut geomancia... alii dicunt eam non esse illicitam, quia Aristotiles tradidit artem phisonomie per quam docet iudicare de homine vel muliere, qualis sit in moribus, per lineamenta in facie reperta et figuram faciei: com igitur illa sit sine peccato," pseudo-Aristotle, *Ars chiromantiae*, in "Pseudo-Aristotles: Chiromantia," ed. R.A. Pack, 308.

(*ceromantici*) in his section on the palms. He explains many features of the palms, then states that chiromancy deals at length with the nature of the lines on the palms, the implication being that the reader should find a text on that subject if they want to learn more about the lines.[285] In this brief mention, Pietro neither attacks nor defends the validity of chiromancy, although he does affirm its connection with the field of physiognomy.

Astrology was another field which, like physiognomy, occupied a space between science and magic. Like physiognomy, many of astrology's claims to legitimacy rested in the physical mechanism its supporters supplied to explain exactly how it functioned. Unlike physiognomy, it had been under persistent attack from authoritative religious voices like St. Augustine for centuries. As so many scholars from Thorndike on have noted, Pietro's *LCP* departs from earlier physiognomical texts in the emphasis it places on astrology. Danielle Jacquart draws attention to this as another main distinction between Michael Scot and Pietro's texts on physiognomy. In Michael Scot's case, this is particularly surprising—he was actually employed as an astrologer in Frederick's court and wrote a great deal on the subject. Nevertheless, by comparison Michael gives it far less attention in his work on physiognomy than the *LCP* does, wherein Pietro details the characteristics of each zodiac sign.[286]

It might appear that Pietro is trying to make physiognomy seem more scientific by including this astrological section, a claim put forth by Hubert Steinke.[287] However, I disagree with both Steinke and Cadden in their suggestion that astrology was regarded as more scientific than physiognomy and that physiognomy benefited from its association with astrology. The effort devoted to producing what Cadden calls the "coherent

[285] "Dicit Aristoteles quorum manus fuerint palme intrinsecus sectione notabili plurima per totum sectate longevum existere. inquibus ceromantici longum traxere sermonem." *LCP*, 28v-29r.

[286] Jacquart, "Michael Scot," 27.

[287] Steinke, 526.

theoretical underpinnings" of astrology was defensive—it was an attempt, never fully successful, of establishing astrology as science rather than magic. We do not see these fervent defenses of physiognomy, which would hint that it was not regarded as unnatural or magical, even if it was not considered rigorously scientific. Even though its scholastic defenders had been building up mechanisms to legitimize astrological predictions for a long time before Pietro wrote the *LCP*, and even though Pietro himself believed deeply in the naturalness and scientific basis of astrology, it seems that physiognomy had no need of such a defense. I would suggest that it is actually Pietro himself who pushes physiognomy into the science/magic fray by drawing this association. Pietro's defense of the scientific basis of physiognomy comes not in his section on the zodiac but at the very end of the *LCP*, and here he does not make an explicit effort to dissociate it from divinatory practices.[288] He relies on the theories presented in Galenic medicine, not the optical theories which were used to justify astrology.[289] It is possible that by inserting the substantial section on astrology into a work about physiognomy, Pietro actually contributed to transforming physiognomy from a social tool whose validity was widely accepted and which had, until his day, required minimal medical justifications, into the realm of divination and magic.

Defining the broader category into which a specific discipline might fall, especially whether a discipline is licit or illicit in the eyes of religious authorities, was a significant part of the medieval discourse on magic and science. Pietro himself apparently never felt it necessary to defend physiognomy from such accusations, but he did devote considerable energy to defending other practices like astrology, incantations, and fascination. It is not just the association between fields which could reinforce or

[288] For example, "Decisio secunda in assignatione causarum phisonomizatarum assumptarum ex spiritu innato vel calido," LCP, 46v; "Decisio .3. in assignatione causarum phisonomizatarum ex spiritu materiali secundo," *LCP*, 48v.

[289] See Chapter 5 below for a discussion of optics and the multiplication of species which provided a physical mechanism explaining the validity of astrology.

undermine a subject's legitimacy. The attribution of texts to famous, respected authors also played an important role in shaping the survival and spread of different works and in how people viewed distinct fields of study. Even Pietro was depicted in the Renaissance not as a scholastic philosopher and physician but as a magician. It is to the phenomenon of the false attribution of texts, the crafting and reshaping of the memory of authority figures, and the role such false authority played in medieval and Renaissance discourse about religion, science, and magic, that this study now turns.

CHAPTER V

INVENTING THE MAGUS

For centuries, Pietro d'Abano was remembered not for his textual projects or his attempts to translate and reconcile earlier authorities but for his study of natural magic—subjects such as astrology, geomancy, and poisons. By the late fifteenth century, Pietro had a reputation as a necromancer. Such important intellectual figures as the sixteenth-century German alchemist Heinrich Cornelius Agrippa and the seventeenth-century French scholar and biographer Gabriel Naudé believed him to be the author of a grimoire known as the *Heptameron*. This chapter will investigate how someone like Pietro d'Abano, a man firmly convinced that he was doing science, philosophy, and medicine, and adamantly opposed to any practice regarded as superstitious, came to be remembered as a magician. To understand this, it is necessary to examine Pietro's case in particular—what he actually wrote that might have associated him with so-called magic—as well as the larger tradition of false attribution of magical or pseudo-scientific texts. It is also worthwhile examining broader conceptions of magic and heresy in Pietro's day and in the Renaissance. In a field like physiognomy, which was on the fringe of serious philosophical pursuit and which edged suspiciously close to disciplines like astrology and chiromancy, textual authority is particularly important to establish.

An inflated reputation seems to invite continued embellishment. Nowadays, we associate intellectual dishonesty with plagiarism—claiming someone else's work as our own. But putting someone else's name on our own work is usually not seen as particularly problematic. Witness the large number of books "by" famous people who actually owe the words to teams of ghostwriters. This trick of putting a famous name on a work by a less famous author to garner readership goes back millennia and, far from being an innocent means of upping sales, has had a profound influence on history and the development of science and philosophy in Western society. For example, the *Problemata*

written by pseudo-Aristotle would probably not have attracted Pietro d'Abano's attention if he had not believed it to be genuinely Aristotle's.

This project began as an investigation of medieval notions of alchemy, medicine, mental health, and the nature of emotions and personality. The objective was to understand what people genuinely believed and how their ideas were transmitted. But history is not just about truth. History is about myths—the stories a society or group within a society tells itself to give meaning. Sometimes myths align with an objective external reality, but often they do not. In exploring the world of medieval learned magic, both ritual magic and the natural magic that we also call pseudo-science, we find many such myths. Here "myths" means not the inaccurate medieval conceptions of the way the universe works, such as the idea that stars can influence events on earth. Rather, myths are the kinds of stories and characters which lay behind the ideas. The history of ideas is not only about normative notions themselves but also why people believed those ideas, about why they thought them worth trying out or investigating more deeply or passing on to other readers. A large part of that has to do with what people believed about the authority behind the theory rather than the theory's own merits.

This chapter investigates the creation of the image of the learned magus both *by* medieval thinkers and *about* medieval thinkers. I will begin by looking at the tendency of medieval people to ascribe texts of magic to ancient authorities, especially the biblical King Solomon and the Egyptian alchemist Hermes Trismegistis, thus creating the persona of an ancient magus which distorted the legacy of those same authorities. I will discuss the different categories into which historians have placed medieval magic and the physical mechanisms by which some magical phenomena were believed to function. I will then move on to the Renaissance image of Pietro d'Abano and how his materialist conception of the cosmos, his positive fame as a scientist and physician, and his notoriety as a possible heretic may all have contributed to his magical reputation.

Ultimately, the reshaping of the memory of both mythical and historical men served multiple purposes. It was part of the natural psychological process of simplifying the details of the past into broader, more comprehensible categories, and it was also a way to give credibility to practices like ritual magic, alchemy, astrology, and other forms of natural magic, which straddled the dangerous line between valid scholarship and attempts to manipulate the world through spiritually suspect means. By not only invoking authority but actually *creating* authority—whether consciously or not—students of learned magic were finding ways to make their pursuits seem legitimate.

The Medieval Invention of the Ancient Magus

One problem facing historians of medieval magic is how to define their material—not entirely unlike the problem facing historians of medieval science. It is generally difficult to define magic independently of science or of religion. Richard Kieckhefer's notion of magic as a "crossroads" between science and religion and between popular and elite practice has been well-received among historians, but while useful it does not provide us with a fully satisfactory definition of any of these categories.[290] Must we have a clear conception of religion and science before we can think about magic? The earliest writings describing "magicians" are Greek accounts of Persian priests who claimed to be able to perform manipulations from weather magic to mystical healings. The Greeks were highly critical of these magi (*μαγοι*), challenging both the validity of their claims to power and the moral acceptability of the sources of that alleged power; that is, the Greeks thought that the magi were probably invoking evil spirits, whether the spells worked or not. On the other hand, Greek accounts also reveal that Greeks had a relatively poor understanding of what the Persian priests were actually doing and certainly what these practitioners believed.

[290] Richard Kieckhefer, *Magic in the Middle Ages* (Cambridge: Cambridge University Press, 1989, 2000), 1-17.

If this were the only way the term "magic" was ever used, it would be easy enough to define. "Magic" would be the deviant religious practice of an alien culture, always defined by the author of a text as the practice of an outsider (*we* do religion, but *they* do magic). But when activities going on inside a culture are called "magic," like Roman curse tablets or astrology in medieval Christian courts, definitions become more difficult, and generalizations are almost always problematic. In distinguishing magic from religion, we could say that the latter is more about supplication to a supernatural power, the former about coercing supernatural power—but there is nothing to keep magicians from claiming that they, too, are merely asking and not compelling those forces. The line between magic and science is also difficult to draw. Most scholars contend that magic involves manipulating the world while science studies the world, yet those who condemn astrology, which only entails obtaining knowledge, consider the practice magical.[291] It is fairly safe to say, though, that magic is rarely sanctioned by authorities. Once a practice receives approval from spiritual, political, and legal authorities, it ceases to be magic. It thus fell to those self-consciously engaged in practices labeled as "magic" to defend their activities, either by trying to prove that their activities were something other than magic or that magic in and of itself was good. Here my concern is primarily to examine how attitudes towards magic led authors to manipulate their depictions of historical and mythical *people* to either attack or defend magical practices.

An imaginary, stereotyped magician figure was used on both sides of the debate about whether certain practices qualified as magic. While those wishing to defend specific rituals, invocations, or experiments created an image of the original source of those practices as wise and even holy, individuals seeking to condemn created or

[291] The introduction to Richard Kieckhefer's *Magic in the Middle Ages* (pp. 1-18) does an excellent and concise job of laying out the problems of defining magic. See also Bert Hansen, "Science and Magic," in *Science in the Middle Ages*, ed. David C. Lindberg (Chicago: University of Chicago Press, 1978), 484-489.

embellished stories of the magician as an evil figure who engaged in assorted depraved activities. In his classic study *The Magician, the Witch, and the Law*, Edward Peters examines texts produced in a learned, clerical context, all with a proscriptive agenda, and how the rhetoric of these texts shaped understandings of heresy and magic as well as legal codes and persecutions. He argues that eleventh- and twelfth-century authors including Anselm of Besate, William of Malmesbury, Ralph of Coggeshall, and Walter Map, who wrote about the despicable actions and wicked magic performed by heretics, all were engaged in the practice of inventing the heretical magician. While they may have genuinely believed that their described characters may have been capable of magic, their goal "was not to inform accurately, but to arouse within the pious reader the appropriate revulsion against the object being condemned."[292] They were not concerned so much in giving faithful accounts of actual events, as arousing useful feelings—feelings of fear and disgust, for the ultimate goal of protecting a good Christian society. Peters demonstrates this process of magic-framing most effectively by pointing out the literary tropes used by these authors in their stories, such as the attempted seduction at the start of Ralph of Coggeshall's story of the Witch of Rheims. This particular anecdote, in which a young woman's refusal to yield to a cleric's advances gives the cleric evidence of the woman's heretical beliefs, is a *locus classicus* in analyses of the relationship between heresy and magic. Peters goes on to argue that as we move into the thirteenth century, enforcers of orthodoxy started writing more accurate accounts of the activities and beliefs of heretics, but these early rhetorical inventions were interpreted as true accounts of the kinds of activities in which witches and magicians engaged.[293] Even into the period of the witch trials, after the Middle Ages themselves, writers drew on these early texts and took the rhetorical constructions as faithful representations of the activities of witches and magicians which they could apply to magic in their own day.

[292] Edward Peters, *The Magician, the Witch, and the Law* (University of Pennsylvania Press, 1978), 39.

[293] Peters, 47-57.

The construction of a magical archetype or persona was just as useful for those who wished to defend magic as for those who sought to weed it out. By attributing magical works to ancient authorities who were already respected, particularly ones attracting prior spiritual sanction, an author could sidestep accusations. It might look like magic, but if so-and-so said it, it must be true! The *Heptameron* of pseudo-Pietro d'Abano is an example of just such a grimoire, a book of magical invocations. It falls into a specific subcategory of magic which historians dub "ritual magic," "ceremonial magic," or "image magic," and into the broader category of "learned magic," performed by highly educated elites, as opposed to the "popular magic" of ordinary people. In *Conjuring Spirits*, a relatively recent volume (1998) demonstrating the surge of scholarly interest in this particular form of medieval magic, Claire Fanger explains what makes ritual magic unique. First of all, she notes that, while ritual magic draws on ancient sources (or at least claims to), it is a late medieval phenomenon, with no texts dating from before the thirteenth century. Ritual magic is to be distinguished from popular magic in part because it is more thoroughly Christian, without reference to Germanic pagan deities; in part because its rituals are longer and more complex; and in part because literacy was a necessary prerequisite for its performance.[294] Of course, the line between popular and learned is hard to draw, especially as the spread of vernacular texts in the later Middle Ages produced a kind of intermediate level of literacy for those who could read in their own languages but could not engage in the more thoroughly Latin high culture.[295] Regardless, image magic of Pietro's time was written by and for a highly educated set of practitioners. But recent historians distinguish it from the other form of learned magic, "natural magic," or magic which practitioners claimed used natural forces

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[294] Claire Fanger, Introduction to *Conjuring Spirits: Texts and Traditions of Medieval Ritual Magic*, ed. Claire Fanger (University Park: The University of Pennsylvania Press, 1998), vii-ix.

[295] This intermediate, vernacular literacy and the magical texts produced in this culture is described by Richard Kieckhefer in *Forbidden Rights: A Necromancer's Manual of the Fifteenth Century* (University Park, PA: The Pennsylvania State University Press, 1997). See further discussion below, p.

rather than spirits. As we shall see below, the line between these two categories could become blurry as well, especially when talking about "celestial intelligences" guiding the stars—astral image magic might be seen as invoking actively good or evil forces, but many of its defenders like Pietro d'Abano would claim that the celestial forces were entirely natural and hence not condemnable.

Scholars can quibble about the edges of the definitions of these categories, but some works occupy a clear space securely within these boundaries. Texts which can be easily grouped together as examples of "image magic" were written in Latin, include images, instruct the practitioner to reproduce those images, and actively invoke the names of angels or demons. A common but not necessary characteristic of this image magic was appeal to one of two major ancient magical authorities, the biblical King Solomon or the legendary pagan Egyptian mage Hermes Trismegistis. The two genres of Solomonic and Hermetic magic are similar in their uses of images, of names of spirits (usually identified as angels or benevolent spirits of the air), and complex rituals. They differ primarily in the specific authorities to which they appealed and the demands placed on the magi. Solomonic magic, more prevalent in the Middle Ages, was highly intellectually demanding and required complicated purification rituals, but it was more academic in nature than Hermetic magic.[296] The latter required a stronger spiritual commitment on the part of the practitioner than the former—Solomonic magic was an engaging pursuit, but Hermeticism came to be a lifestyle and a philosophy as well. While inklings of Hermeticism appeared in the Middle Ages, it did not truly experience its height of popularity until the Renaissance. The grand historical moment in the ascent of Hermetic magic came when the humanist Marsilio Ficino (1433-1499), at the order of his

[296] For a description of the contents of Solomonic texts, see Michael Camille, and E.M. Butler, Ritual Magic, pp. 47-99; a vast literature has been devoted to the study of Hermeticism in the Renaissance, one of the pioneering works being D.P. Walker, *Spiritual and Demonic Magic from Ficino to Campanella* (University Park, PA: Pennsylvania State University Press, 2000, reprint, Warburg Institute: London, 1958).

patron Cosimo de Medici, translated a series of works ascribed to the ancient magician.[297] Although not Christian himself, Hermes was often depicted as a prophet of Christianity. His texts took Ficino away from a translation of Plato on which he had been working—because Hermes was thought to antedate Plato, Cosimo decided that the Egyptian magus was a higher priority than the Greek philosopher.

Frances Yates's magisterial work on magic has provided a vast scholarly reassessment of the role of Hermeticism in the history of science. She argued that many elements of Hermetic thought and Renaissance magic were critical to the development of modern science. Yates explained Hermeticism's "operative" nature, the emphasis on the magus as manipulator of nature as opposed to the abstract reasoning characteristic of scholastic science.[298] Many aspects of this "Yates thesis" have come under criticism from historians and it continues to be adjusted and refined, but the broad claim that Renaissance magic did play a role in the growth of what we regard as modern science has been largely accepted.[299]

There had been hints of Hermeticism before Ficino. Thorndike describes a number of Hermetic texts in circulation during the Middle Ages, although these were not widely popular.[300] Historian George Molland also argues that Roger Bacon's works reveal hints of Hermeticism. Bacon wrote aggressively against magic, as Molland acknowledges, but Molland insists that Bacon's interests and intellectual values have links with Hermetic thought. His main argument for Bacon's Hermeticism rests on Bacon's respect for *prisca auctoritas*, or ancient authority. Molland challenges Charles B. Schmitt's claim that this almost worshipful reverence for ancient authority, including

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[297] Walker, *Spiritual and Demonic Magic*, 62.

[298] Francis Yates, *Giordano Bruno and the Hermetic Tradition* (Chicago: University of Chicago Press, 1964), 1-19.

[299] For a discussion of the Yates thesis and challenges to it, see Brian P. Copenhaver, "Natural Magic, Hermeticism, and Occultism in Early Modern Science," in *Reappraisals of the Scientific Revolution*, ed. David C. Lindberg and Robert S. Westman (Cambridge: Cambridge University Press, 1990), 261-266.

[300] Thorndike, vol. 2, 214-228.

pre-Christian authority, *prisca saecula*, to which Hermes Trismegistis belonged—was characteristic of the Renaissance and wishes to push it back into the Middle Ages.[301] However, I contend that this is an insufficient reason to identify Bacon with Hermeticism. While respect for *prisca auctoritas* is characteristic of Hermetic magic, it is not the only magical practice which used reverence for the constructed reputation of an ancient figure to obtain credibility. In fact, Bacon's list of his favorite thinkers consisted of Solomon, Aristotle, and Avicenna. These were men who, according to Bacon, resisted the inevitable decline of man's understanding since the Fall.[302] Why, then, would we not call Bacon Solomonic rather than Hermetic? Molland's discussion throughout most of the article focuses on Bacon's *perspectiva* and his use of al-Kindi, neither of which shows evidence of the English scholastic's connection to the Hermetic tradition. Love of *prisca auctoritas* was certainly present in the Middle Ages and not only the Renaissance, but it was more evident in the Solomonic tradition than the Hermetic.

An eastern flavor served to give texts of ritual magic legitimacy in the eyes of their practitioners. As discussed above, the earliest sort of "invented magician" we have in written records is the Persian magus described by Greek writers, and throughout antiquity and the Middle Ages ritual magic continued to have an association with the east. This was in contrast with what medieval thinkers would have regarded as the primitive and superstitious but somewhat less threatening Germanic pagan practices in Western Europe. The words and names used in magical texts reveal this appeal to the authority of an Eastern origin. In his study of the different cultural origins of divine names used in texts of ritual magic (Papyri Graecae Magicae, Picatrix, and Munich Handbook), David Porreca expresses some frustration with the modifications—even inventions—of such names. It does make it more difficult to identify the genuine cultural

[301] George Molland, "Roger Bacon and the Hermetic Tradition in Medieval Science," *Vivarium* 31.1 (1993): 141.

[302] Molland, 144.

origins of the names. However, if you are not concerned with actual cultural exchange but rather with what sorts of cultural origins medieval practitioners thought were important, then it does not matter that the names were made up at a later date. As Porreca acknowledges

> If a name was still worthy of being invoked more than once after several centuries, some power must have been attributed to it, even if it had merely been a random collection of syllables originally. Its presence and use at a later time helps to confirm the angel's power and existence, at least in the mind of the practitioner using the name.[303]

For Porreca's own project on tracing actual cultural transmissions, such invention of words is frustrating. For this project's analysis of how textual authority is established, invented words are every bit as useful as real ones, for they show the lengths to which people will go to give credibility to their texts. Porreca also observes that "creativity in the generation of divine names is particularly remarkable in the use of *verba ignota* in the *Ars notoria*."[304] Like the image of Solomon himself, the allure of the East helped to make the texts of image magic appear more credible, at least to the practitioners (Persian, Greek, or Hebrew words certainly would not have helped a text look any less dangerous to an Inquisitor). This discussion thus returns us also to the matter of *prisca auctoritas*, because the key was that people believed these terms to come from the *ancient* East. Old and exotic terms seemed more valid and gave the text authority.

The Ars Notoria and the Authority of Solomon

The biblical King Solomon was a larger-than-life figure long before medieval magical practitioners got their hands on him. Across the centuries, his image had been expanded and embroidered by different cultures, in different languages. A discussion of the legend of Solomon is provided by Elizabeth Butler in her work 1948 *The Myth of the*

[303] David Porreca, "Divine Names: A Cross-Cultural Comparison (Papyri Graecae Magicae, Picatrix, Munich Handbook)," in *Magic, Ritual, and Witchcraft*, Volume 5, Number 1 (Summer 2010), 21.

[304] Porreca, "Divine Names," 20.

Magus.[305] Butler discusses the magus as a literary and mythical figure whose legend develops following a standard trajectory—from ancient religious leaders like Zoroaster and even Christ up through the early modern mythical Faust. Solomon is a key representative of the magus legend and Butler explains how his biblical portrayal was expanded and reworked in works intended as both fiction and nonfiction over time.[306] This study is not concerned with an historical King Solomon or the King Solomon of the the Hebrew Bible, but rather with what medieval people believed about King Solomon, why they believed it, and how they used the fabricated version. To medieval magical practitioners, Solomon represented the pinnacle of wisdom. Yet Solomon's was a wisdom not acquired through laborious study, scrunched over wrinkled parchment, worrying over the translation of a tricky Greek or Arabic term, working in a cold and decidedly unglamorous rented student's room with only a tallow candle for light. No, for the tired and downtrodden scholar of the Middle Ages, Solomon represented a far more exciting world and a far more enticing way of acquiring knowledge. He would have pictured a Solomon who lived in a gold and jeweled palace in the warm and exotic east, and whose knowledge came directly from God without the drudgery of his own daily pursuits. The glamor, the exoticism, the apparent ease—these contributed to the appeal of Solomonic magic to its practitioners but also to the distaste it inspired in those who would condemn it. Is it not too easy, too flashy, to be altogether lawful? Must there not be some sort of demonic involvement?

The *Heptameron*, while attributed directly to Pietro d'Abano, is also an example of a Solomonic text, since it appeals to Solomon's authority. The nature of its spells is

[305] Elizabeth Butler, a British scholar best known for her work on German language and literature, also delved into thorough investigations of the Faust legend later in her career. While she gave a thorough analysis of ancient magical texts, however, her studies only include a brief acknowlegement of medieval magical figures—the entirely mythical Merlin, the fourteenth-century Bohemian court magician Zyto, and Joan of Arc; Elizabeth M. Butler, *The Myth of the Magus* (Cambridge: Cambridge University Press, 1948), 104-120.

[306] Butler, *The Myth of the Magus*, 2-5, 35-43.

very similar to those of the Ars Notoria. Both require that the practitioner be purified through fasting, chastity, and abstinence. Both require the reproduction of images, both invoke a complex series of angels and "spirits of the air," and both have very finicky astrological instructions about the timing of the rituals. The Ars Notoria is more clearly functional in its instructions—it is structured more around the ends of the magician, obtaining knowledge. The *Heptameron*, on the other hand, represents a more abstract and spiritual approach. It focuses on calling and communing with the spirits. In this respect, while it directly appeals to the authority of Solomon, its character is more strongly in line with the aims of Renaissance Hermeticism. While the services which the spirits might perform are listed, the work is structured around the timing of the rituals and the hierarchy of the spirits themselves rather than the objectives of the magician.[307] As this study has demonstrated, the mystical nature of the *Heptameron* shows it to be out of character for Pietro d'Abano. He accepted that astral magic might be efficacious, but this was because he believed in a physical mechanism acting to connect the stars to the image. The attribution of a later work to him, and the use of his authority to promote it, reflects a misunderstanding on the part of Renaissance magi like Ficino and Agrippa of Pietro's thoughts and legacy, who embraced the image of Pietro as a defender of magical processes without grasping that, for him, what made these procedures work was not magic but a material, physical mechanism.

A substantial number of magical texts alleged to be authored by Solomon circulated during the Middle Ages. In her work *Ritual Magic*, building on her earlier work in *The Myth of the Magus*, Butler provides a rich and lavish explanation of the transmission and content of many of the major Solomonic texts which vividly illustrated the romantic appeal of the image of Solomon the wise king—as well as the horrors which

[307] Pseudo-Pietro d'Abano, *Heptameron,* in Heinrich Cornelius Agrippa von Nettesheim, *Henrici Cornelii Agrippae liber qvartvs De occvlta philosophia, seu de cerimonijs magicis* (Marburg: Impressum, 1565), *passim*.

invoked demons were capable of performing. Indeed, Butler's own colorful rhetoric, a style of academic writing which is often scorned today, makes her own point as well as any clear and logical argument might. She depicts angels and demons, as well as Solomon himself and the people who wrote about him, as vital entities with personalities and wills. This creates a picture of a world of ritual magic that is engaging and demonstrates how such a constructed world might have also held appeal to a medieval practitioner of learned magic. Butler focuses most heavily on the Solomonic *Clavicles*, texts of ritual magic which, like the Hermetic works, were more central to Renaissance than medieval magic.[308]

Butler nonetheless omits one of the most important and widespread examples of Solomonic magic in the Middle Ages, the Ars Notoria, or "notary art." The art was so called because of its *notae*, the elaborate diagrams contained within the text which served to aid the practitioner. However, while the texts themselves have different objectives and content, the observations Butler makes about the portrayal of Solomon in the *Clavicles* apply to the Ars Notoria and other texts in the Solomonic tradition. The main objective of the Ars Notoria was for the practitioner to gain knowledge of the liberal arts and of languages and also to improve his overall mental acuity. The information within the Ars Notoria was allegedly of divine origin, having been revealed to King Solomon by an angel. Modern scholars agree that the Ars Notoria is in fact a medieval composition dating from the twelfth century.[309] It has also been attributed to Apollonius of Tyana under the title of the *Golden Flowers* (*Flores Aurei*). Although described by Lynn Thorndike, the Ars Notoria received relatively little scholarly attention thereafter until quite recently, as exhibited in its absence from Butler's study. A surge in interest in

[308] Elizabeth M. Butler, *Ritual Magic* (University Park, PA: The Pennsylvania State University Press: 1949, 1998), 47-99.

[309] Julien Véronèse, Introduction to *L'Ars Notoria au Moyen Age: Introduction et Édition Critique*, ed. Julien Véronèse (Florence: SISMEL edizioni del Galluzzo, 2007); see also *Conjuring Spirits*, ed. Fanger.

medieval magic since the 1990s has led to thorough, in-depth studies of the Ars Notoria, including a critical edition of the text by Julien Véronèse.

Like so many texts of medieval magic, the physical object of the work itself had important powers. It was not enough for the reader to know the contents; in order to make the rituals work, one had to gaze at the actual image. The images in the Ars Notoria are elaborate and complex, but given their importance to the practice of the rituals it is surprising to note that they vary widely in appearance. The earliest known manuscript of the Ars Notoria dates from the thirteenth century and is kept in the Beinecke Library at Yale University. This manuscript begins with nine folia written in both red and black ink, followed by seventeen diagrams drawn in red with black text. The proportion of text to diagram decreases as the work progresses, and the diagrams become increasingly ornate. The version of the Ars Notoria held in Munich (CLM 276) is not as precise or elaborate as the Beinecke version, and it is executed entirely in black ink. Some versions of the Ars Notoria are particularly beautiful and lavish, like Paris, Bibliotheque Nationale MS lat. 9336 and Turin, Biblioteca Nazionale MS E.V. 13. These codices both include images of people supplementing diagrams—figures absent from most manuscripts of the Ars Notoria.[310] As Butler observes of other Solomonic texts, the aesthetic appeal of manuscripts of ritual magic is important. Perhaps it is not as important to either their practitioners or opponents as the names or invocations, but nevertheless it is an element of the culture of magic which cannot be overlooked. In describing the *Legemeton*, yet another work of Solomonic magic which may have also been fabricated in the Renaissance, Butler says that

> The monstrous therioform shapes which almost all of [the demons] wear, at least upon their first appearance, point back to Babylon; and one can readily understand the stern commands to come in a fair human form without deformity or terror...The seals or characters given beside their names are more fantastic than

[310] Michael Camille, "Visual Art in Two Manuscripts of the Ars Notoria," in *Conjuring Spirits*, 110-139. See especially figures pp. 118, 120-121, 125, 127-131.

> beautiful, having little on the whole of that decorative charm which is characteristic in the main of the lettering, figures, inscription and pentacles scattered so profusely throughout the literature of ceremonial magic.[311]

The appearance of the text of image magic can attract the practitioner both by its beauty and by the horror it inspires. The diagrams of the Ars Notoria are simultaneously beautiful and disconcerting, ornate but mysterious in the way they hint at actual objects, like feathers, plants, and swords, without clearly reproducing them.

The text of the Ars Notoria itself suggests that Solomon is not a figure of authority only by virtue of his learning. Rather, he is a figure of authority by virtue of his relationship to God; his learning is in fact the product of his unique spiritual status. This is in keeping with the humble, supplicatory tone of the Ars Notoria and stands in evidence against the fault of pride, of which the practitioners' enemies accused them. The practitioners credit their power to their faith rather than their own abilities. For many, this was a reverent, prayerful, redemptive spiritual practice. While its ends might have been intellectual improvement, Solomonic magic was ultimately a mystical rather than intellectual venture.[312] The mystical, spiritual aspect of Renaissance Hermetic magic has long been recognized and was articulated in D.P. Walker's 1958 study *Spiritual and Demonic Magic from Ficino to Campanella*.[313] In contrast, medieval magic has long been thought of as being practical and utilitarian (follow these steps to get either demons or occult forces to achieve a practical end). For the Renaissance magus, magic involved a communing with God, angels, spirits, or profound forces in order to achieve an understanding of nature. To some extent, we might think of medieval philosopher-

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[311] Butler, Ritual Magic, 69.

[312] For example, "exaudi hodie preces meas piissime, et neque secundum iniquitates meas, neque secundum peccata mea retribuas mihi, Domine Deus meus, sed secundum misericordiam tuam que maior est rebus omnibus visibilibus et invisibilibus,"and "Vide ne de hac oratione aliquid exponere vel transferre praesumas, nec tu, nec quis per te, nec quis post te. Sacramentale siquidem eius mysterium est, ut expresso sermone verborumque orationis audivit Deus orationem tuam, ut tibi intelligentia, memoria, facundia et horum trium stabilitas augeatur," *L'Ars Notoria au Moyen Age: Introduction et Édition Critique*, ed. Julien Véronèse.

[313] See especially Walker's discussion of how music made the practice of ritual magic a spiritual pursuit, Walker, *Spiritual and Demonic Magic*, 1-24.

magicians as using an understanding of nature and logical processes to achieve an intellectual understanding of God, the very goal which brought mystical theologians and church authorities into conflict with the rigidly rational scholastics. But texts like the Ars Notoria and *Sworn Book of Honorius*, discussed below, show that there was already a hint of this Renaissance mystical magic circulating in the intellectual scholastic world.

Another text frequently ascribed to Solomon, but occasionally to another ancient mytho-historical figure according to that other putative author's name, was the *Sworn Book of Honorius.* This text exists in three complete manuscripts in the Sloane collection of the British Library. It has recently been the subject of a critical edition and dissertation by Gösta Hedegård (2002). Robert Mathiesen, Lynn Thorndike, and Edward Peters all date the composition of the work to the early thirteenth century, but both Hedegård and Richard Kieckhefer agree that this *Liber iuratus* was composed in the early fourteenth century. The earlier dating assumes that a book condemned by William of Auvergne, the *Liber sacratus*, was in fact the same work and that "sacratus" is a conflation of two Latin titles by which the *Sworn Book* was known, *Liber iuratus* and *Liber sacer*.

Both Hedegård and Kieckhefer find this argument insufficient. Kieckhefer insists on an early fourteenth-century composition because the text shows clear Kabbalistic influences which, he argues, would not have been available until the fourteenth century.[314] Hedegård disagrees, arguing that, although knowledge of Kabbalah was not widespread in Christian Europe before the fourteenth century, it was available at an earlier date and so does not confirm a fourteenth-century composition. However, both Hedegård and Kieckhefer agree that a mention of papal persecution of magicians in the

[314] Richard Kieckhefer, "The Devil's Contemplatives: The Liber Iuratus, the Liber Visionum, and Christian Appropriation of Jewish Occultism," in *Conjuring Spirits: Texts and Traditions of Medieval Ritual Magic*, ed. Claire Fanger (University Park: The University of Pennsylvannia Press, 1998), 253-255.

prologue of the text makes it likely that the work was composed during the papacy of John XXII (1316-1334).[315]

Another work which illustrates the medieval understanding of the image of Solomon is CLM 849, held in the Bayerische Staatsbibliothek in Munich. It has no conventional title but has become well known among historians of medieval magic by the slightly more intimate nickname given it by Richard Kieckhefer, the *Munich Handbook*.[316] This work can be distinguished from the above two because it is a complete book, rather than a briefer text, and it exists in a single manuscript. The *Munich Handbook* is not a part of the Solomonic tradition in itself. Solomonic magic was indisputably part of the high, learned magical tradition. It was created by learned intellectuals, for learned intellectuals. It appealed to men who identified with the wisest figure in the Bible, men who were not only fluent in Latin but had learned or aspired to learn other tongues. The *Munich Handbook*, by contrast, was a product of what Kieckhefer describes as the "clerical underworld," a shadowy, liminal space between the uneducated folk magic of the masses and the highly, even excessively, learned men of the university world. The *Munich Handbook* was written in German, not in Latin; the priests of the "clerical underworld" would have had only an erratic knowledge of the tongue which was an absolute prerequisite for higher levels of study—and which, according to their superiors in Rome, really ought to have been an absolute prerequisite for their pastoral duties as well.

The *Munich Handbook* is also more unabashedly demonic than the texts of the Solomonic tradition. While many of the Solomonic spells claim to be invoking angels

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[315] Gösta Hedegård , Introduction to *Liber Iuratus Honorii: A Critical Edition of the Latin Version of the Sworn Book of Honorius*, ed. Gösta Hedegård, Acta Universitatis Stockholmiensis, Studia Latina Stockholmiensia (Stockholm, Sweden: Almqvist & Wiksell International, 2002), 12-13.

[316] Kieckhefer gives the *Munich Handbook* extensive scholarly treatment in his *Forbidden Rights: A Necromancer's Manual of the Fifteenth Century* (University Park, PA: The Pennsylvania State University Press, 1997). However, it is also plays a key role in his analysis of the distinction between natural and ritual magic explained in his earlier work for a slightly wider readership, *Magic in the Middle Ages* (1989).

rather than demons and have spiritually uplifting consequences, the spells in the *Munich Handbook* have temporal ends and admit to be constraining demons to work the magician's will. Kieckhefer divides the spells, which he calls "experiments," found in this text into three main categories: illusionist, divinitory, and psychological. The first category refers to the casting of illusions (among other things, the magician gets instructions on how to conjure an imaginary castle); divinitory experiments are concerned with gaining knowledge of things unknown, particularly about the future. If there is any overlap in objective between the necromantic rituals of the *Munich Handbook* and the angelic image magic of the Ars Notoria and the *Sworn Book*, it is in these spells for obtaining knowledge. The psychological experiments are to help the magician win favor or sow discord. Kieckhefer's category of "psychological" experiments makes use of the term "psychology" in a way which would have been unfamiliar to medieval commentators on Aristotle's works on the psyche and is not the way the term has been used in this dissertation so far. Perhaps medieval people might have called these experiments "political" or "social," since they almost invariably have to do with changing desires, emotions, and thoughts not as felt internally by the practitioner but as expressed between individuals.

Why discuss this text that falls outside the tradition of Solomonic magic and learned magic more broadly? The *Munich Handbook* is certainly something that Pietro d'Abano would have condemned—or, more likely, laughed off as primitive, superstitious, and ineffectual. However, even this magical text invokes the wisdom of Solomon on occasion, in turn further shaping Solomon's image. The *Munich Handbook* hints at how Solomon was viewed by a slightly wider circle of medieval society than the strictly Solomonic texts themselves show us. This matter of circulation is important—texts like the *Munich Handbook* probably tell us more about how people thought about Solomon in the fourteenth century than strictly learned works do, just as the *Heptameron* tells us more about how people would have viewed Pietro than his actual works do. The

Munich Handbook helps us to reconstruct the picture of Solomon which would have been held by medieval magical practitioners. For example, his plethora of wives was widely known and gave him plenty of credibility when it came to love spells. One spell commands spirits to hold a woman inside a circle and touch her with an image worn about the practitioner's neck to ensure the woman's unending affection and loyalty. Then the text assures the practitioner "that this experiment is effective and is not at all dangerous. By this experiment alone, Solomon had whatever women he wished. And let this suffice on the subject of obtaining women."[317] Such a seduction spell would hardly have seemed like a legitimate use of Solomon's authority to the scholars who were hoping that angels would transmit knowledge of astronomy and geometry into their minds! Works like these met the particular ire of learned magicians, who would have resented the association with this lower version of their own magic and dreaded the persecution to which the association exposed them. While we have no comparable text to the *Munich Handbook* from Pietro's own day, the texts he and others wrote in defense of their own practices as scientific hint at an effort to distance themselves from similar superstitions like those described in the later work.

The *Munich Handbook* also takes for granted Solomon's prowess as a manipulator of malign spirits. The practitioner of a divinatory spell invokes Solomon's name directly to bind such a spirit: "I conjure you by the seven signs of Solomon, and by his seal and wisdom, that you should have no license to withdraw from here until you have told and shown me truth about all that I ask."[318] The *Munich Handbook* is using an already established tradition. Rather than actively shaping an image of Solomon, it assumes that the reader not only knows who Solomon is in the official, orthodox, above-ground culture, but also that the reader knows and accepts the reputation of Solomon as a

[317] *Munich Handbook*, trans. Richard Kieckhefer in *Forbidden Rights: A Necromancer's Manual of the Fifteenth Century* (University Park, PA: The Pennsylvania State University Press, 1997), 85.

[318] Kieckhefer, *Forbidden Rights*, 108.

magician. The author or authors do not embellish, inflate, or craft an image of Solomon to justify themselves—by this point, all they need to do is invoke him to give authority to their claims.

Solomon was particularly associated with magical items and artifacts, such as rings or seals. Again, such association was already present at the time the *Munich Handbook* was written. It was a connection which its authors affirmed and exploited but which they did not have to develop themselves. As Kieckhefer explains, "In view of the magical powers often ascribed to Solomon, it is not surprising to find his rings invoked, along with the signs and names inscribed on them (nos 28, 33); his seven signs, his seal, and his characters (nos 27, 38); or his wisdom (nos 12, 30, 38)."[319] Magical items, such as rings, seals, and symbols, like images, played an ambiguous role in medieval magic. Arguments could be made that these items channeled natural occult powers by physical mechanisms or sympathetic relationships, as will be discussed in the following section, but it seems unlikely that the authors and utilizers of the *Munich Handbook* were thinking about Solomon's rings in natural philosophical terms. Rather, the ideas of rings and seals appealed yet again to the mystery and romanticism of the Solomonic myth and were given authority by their connection to a thoroughly established figure of King Solomon, the wise and, of particular importance for the men of the clerical underworld, efficacious magician.

Mechanisms of Magic

It is important to first have a cursory understanding of theories of magic impacting the external, physical word prior to focusing on their relevance to medieval psychological beliefs. For Pietro d'Abano, the line between magic and non-magical practice or knowledge came from an explanation of why, physically, things happened.

[319] Kieckhefer, *Forbidden Rights*, 140.

Both magical practitioners and those who condemned magic tended to accept the same set of rules—anything requiring the aid of demons was bad and magical (more often called *superstitio* than *magia*), but anything that relied on natural forces was acceptable. These natural forces might be "occult" (hidden) rather than "manifest," but occult forces did not qualify as magical because they were still natural. Modern historians have coined the phrase "natural magic" to describe practices relying on these hidden forces. While it is a useful distinction to make, it is also creates a barrier between science and pseudo-science based entirely on present-day standards—what proved to be accepted as true became science and what was rejected as false became natural magic, not because there was any real methodological difference between the two in the Middle Ages. The science of optics and the science of judicial astrology both rested primarily on theoretical arguments and were intimately intertwined.[320] There is no reason to say that medieval optics was more scientific than medieval astrology, even though one produced theories which became foundational for modern scientific theories and the other survives only on the fringes of modern popular culture largely as an object of ridicule. Those who rejected astrology as a science did so because they either thought it appealed to malign intelligences, since it threatened human free will, or because they thought that the mechanisms were so complicated as to render it practically useless. They did not reject it because they thought that the mechanisms were simply bogus.[321]

Another distinction historians draw between science and magic is that one is about observing or understanding the world whereas the other is about manipulating it. Science is pure knowledge, magic is technology.[322] By this definition, astrology might be

[320] The distinction is often made between "judicial astrology," using the positions of the stars to make predictions about events on earth, and "observational astrology," merely observing and recording the movements of celestial bodies, which corresponds more with modern astronomy. Observational astrology was never regarded as a magical practice. For the sake of simplicity, this study uses "astrology" to refer to "judicial astrology" unless otherwise specified.

[321] See discussion of Thomas Aquinas's condemnation of the Ars Notoria below.

[322] Bert Hansen, "Science and Magic," in *Science in the Middle Ages*, ed. David C. Lindberg, 484-485.

called a form of science or at least pseudo-science, since it is about observation, even if it assumes a false mechanism, but astral magic—the use of astral forces, typically channeled through images to effect some physical change—can hardly be called anything *but* magic. Yet for Pietro d'Abano, a physical mechanism rather than the distinction between passive acquisition of knowledge and active manipulation of nature makes a pursuit scientific rather than superstitious.

We return now to medieval psychological theories via the magical practices meant to influence the mind. Many times, magicians performed the psychologically-oriented spells on themselves to enhance their intellectual capacities, either by strengthening memory or gaining knowledge. There are a few exceptions—the Ars Notoria contains an oration to diminish lust, for example. Spells for manipulating the minds and emotions of others also abound in texts of ritual magic, like those experiments in the Munich Handbook which Kieckhefer had dubbed "psychological" and were designed to get others to feel or behave in certain ways. While the actual texts of ritual magic like the Ars Notoria or the spurious *Heptameron* give almost no explanation of mechanism, scholastic works defending the practice of certain kinds of image magic by Pietro and others do explain how such processes might happen naturally, relying on theoretical concepts which are not remotely magical—theories about the very nature of the physical universe and how force and information are transmitted from a source to a recipient.

The most useful explanations for the natural forces which made astrology seem valid and scientific to its practitioners were provided by the science of optics or *perspectiva*. Pietro d'Abano did not rigorously apply himself to the study of optics as a science in itself,[323] but his explanations of astrology and its medical applications, of astral magic, and of fascination do show a general understanding and acceptance of the

[323] Thorndike, 885; Hasse, 645-650.

perspectivist theory of his day. Scholastic optical theory drew heavily on the *De radiis stellarum* of the Arabic scientist al-Kindi (c. 801-873). The work gives an explanation of how rays from the stars could have an impact on earthly things and events.

> Indeed every star has its proper nature and condition in which is contained the projection of rays with other things. And just as each one has its proper nature which happens to be found in no other in its totality, in which the emission of rays is contained, thus those rays in different stars are of a diverse nature, just as those stars are diverse in nature...Whence it comes to be that every star does different things and does them differently in different places and things, however small the thing be and however slightly they differ, where all of the operation of stars proceed through rays which in all various aspects are in themselves varied.[324]

Roger Bacon embraced al-Kindi's theories of stellar rays. However, he preferred to talk about celestial forces as transmitted by the multiplication of *species* rather than al-Kindi's rays. Al-Kindi's rays appear more as static lines of force connecting the stars to the earth, whereas Bacon proposed a chain of causal events passing the force along in that straight line. A clear explanation of mechanism for the transfer of this force was an important part of what made optics a science for medieval thinkers. The power or force emitted by the stars was transmitted by contact between the pieces of the physical media through which it traveled. As Katherine Tachau explains, "Strictly speaking, Bacon insists, the propagation of species is really not a transmission of impressions but a process of successive actualization of the various media (including the sense organs) involved."[325] Bacon may have a reputation for being one of the fathers of modern science because of his experiments, but for Bacon and his contemporaries the experiment was not the central element of science. Rather than taking pains to prove that his theory had consistent predictive power, Bacon labored over giving a *physical explanation* for

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[324] "Omnis enim stella suam habet propriam naturam et condicionem in qua radiorum proiecto cum aliis continetur. Et sicut unaque suam habet propriam naturam quam totaliter in nulla alia contingit repire, in qua radiorum emissio continetur, sic ipsi radii in diversis stellis sunt diverse nature, sicut et ipse stelle sunt in natura diverse...Unde sit quod omnis stella aliud et aliter operatur in locis et rebus diversus, quantumque modicis et quam modice differentibus, cum tota stellaris operatio per radios procedat qui in omni aspectu vario in se ipsis variantur," al-Kindi, *De radiis*, 219.

[325] Tachau, *Vision and Certitude*, 8.

what was going on that he found satisfactory. This emphasis on mechanism and on the purely material process is also characteristic of Pietro's explanations of everything from psychology to astrology.

Theories about the propagation of light and force also needed to explain how stellar forces did not simply cancel each other out. For both al-Kindi and Bacon, geometry was particularly important for assessing the efficacy of the force—only what struck an object perpendicularly could produce maximum effect, and every stellar body produced a cone of light which could impact matter below it, either by simply being picked up by the eye and being observed, or by influencing the matter in other ways. The multiplication of *species* also formed a link between astrology and alchemy, for Bacon argued that the stars could influence the development of minerals beneath the earth.[326]

To say that the stars can influence the world is one thing. Everyone must agree that, at the very least, the rays of the sun provide both light and heat, and that the heat can cause a noticeable physical change on the surface of the earth—so is it such a leap to think that rays or *species* emitted from other stellar bodies could also somehow interact with earthly objects? Even Augustine of Hippo, who was highly critical of astrology and its ability to yield practical predictions about the course of human events, conceded that the stars could influence the climate and tides.[327] But al-Kindi takes this a step further. He argues that stars can influence the human mind through rays and, furthermore, the human mind can also emit rays which influence the external world.

> The accidents helping to inducing motion are the passions of the soul, from which we say for the sake of discussion that human imagination and reason acquire a likeness to the world, while the species of mundane things in themselves are

[326] For an explanation of Islamic and medieval optics, see David C. Lindberg, "The Science of Optics," in *Science in the Middle Ages*, ed. David C. Lindberg (), 342-354;for further detail of Bacon's theory of the multiplication of species, his use of al-Kindi's optical theories, and especially his theories of how *species* impact terrestrial objects (thus having relevance for the study of medicine and alchemy), see Tachau, "Roger Bacon's Optics and Alchemy"; for more on the geometry and astrological applications of Bacon's theory, see Molland, 151-158.

[327] Augustine, *De civitate dei*, 5.5.

> actually imprinted through the exercise of the senses, on account of which the imaginary spirit has rays which conform to the rays of the world...In addition when man conceives some corporeal thing in his imagination, that thing receives actual existence according to the species in the imaginary spirit. Whence the same spirit emits rays moving outward, just as the thing [does] of which it is the image.[328]

Roger Bacon also argues that, through words, the rational soul is able to impress its will upon the outside world, "For characters are like images, and incantations are words uttered in accordance with the intention of the rational soul, which receive in the mere act of pronouncing them the force of the heavens."[329] By natural means, the seemingly magical process of "fascination" is possible; the impressing of one's will on another simply by the emission of species. This is, according to Bacon, fundamentally the same phenomenon as the way the stars are able to impact human psychology. It depends entirely on the complexion of the recipient of the species, as this is what receives the intention of either the stars or the person seeking to impress his or her will. Thus attempts at fascination will have different results depending on the existing nature of the one being fascinated.[330]

Pietro d'Abano also believed in the power of the will to impress itself on the external world. He argues that a physician's success is improved by confidence, because the physician can emit "intentional species" which influence the actual state of the patient's body. Incantations are likewise made effective because of the strength of will of the enchanter. These explanations appear in the *Conciliator* but here, as in his *LCP*, Pietro takes for granted that the kinds of magic he is describing can happen. He does not

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[328] "Accidentia autem ad motum iucendum adiuvantia sunt anime passiones, de quibus disserentes dicimus quod ymaginatio et ratio humana adquirunt similitudinem mundi, dum species rerum mundialum in ipsis actualiter imprimatur per exercicium sensuum, propter quod spiritus ymaginarius habet radios conformes radiis mundi...Preterea cum homo concipit rem aliquam corpoream ymaginatione, illa res recipit actualem existentiam secundum speciem in spiritu ymaginario. Unde idem spiritus emittit radios moventes exteriora, sicut res cuius est ymago." Al-Kindi, *De radiis*, 230-231.

[329] Roger Bacon, *The Opus Majus of Roger Bacon*, trans. Robert Belle Burke, vol. 1 (Philadelphia: University of Pennsylvania Press, 1928), 411.

[330] Ibid., 413-414.

ask whether or not it is possible but how and why it works—and the "why" is, for Pietro, physical rather than spiritual. While the author of the spurious *Heptameron* emphasized the purity of the practitioner in making his appeal to angelic spirits effective, the genuine Pietro says that such rituals work as a result of how a confident and strong-willed practitioner can mechanistically effect change in the world around him.[331]

Image Magic in the Thirteenth Century: Defenses and Condemnations

By understanding the scholastic physical explanations for the transmission of forces, it becomes possible to see how some thinkers were able to try to excuse image magic as natural, non-magical practice. For authorities looking for reasons to condemn magical texts, images were often signs that a text was demonically engaged—they interpreted the symbols as means of communicating with and attempting to coerce the spirits. However, even in the case of image magic, practitioners who did not wish to be identified as magicians had ways of providing natural explanations for the functioning of these images. Nevertheless, it is certainly possible that there were practitioners who *did* believe that they were coercing demons and had no desire to convince authorities otherwise—but we do not have writings explaining this position, probably because there would have been no point. People who approached image magic in this way knew that they were transgressors of theologically accepted boundaries, and explaining that they actually were talking to demons would have been counterproductive. But for others, even image magic could arguably be "scientific."

Exactly how were images within the manuscripts supposed to work? Images and diagrams function on multiple levels and could serve multiple purposes for the reader or magician. First, they were models for the magician to use in constructing larger images which should have some active role in coercing supernatural powers or redirecting

[331] *Conciliator*, Diff. 135, 156; see also Thorndike, vol. II, 901-902, and Klemm, 120-131.

natural powers to perform the magician's will. But some images were also meant to be merely observed by the reader and not necessarily reproduced in the course of the ritual, as is the case with the images in the Ars Notoria. On one level, diagrams are aids to understanding, functioning as ways to help the brain to grasp a difficult topic that is hard to communicate in words. Unlike "narrative" art, which depicts scenes or events from stories, diagrams are atemporal and didactic.[332] They tend to either show concepts in some sort of symbolic manner or be simplified depictions of objects meant to help the reader manufacture a similar object or make use of the represented object. The former use of diagrams applies more to theoretical texts, the latter to practical texts (like anatomical diagrams or diagrams of how to construct an alchemical apparatus). The latter case applies the least to the Solomonic magical texts—the images therein are abstract, not representative pictures of real scenes or diagrams of real objects.

The practice of using diagrams to illustrate philosophical concepts has a distinctly neo-Platonic flavor to it. Barbara Obrist, in her analysis of visualization in medieval alchemical texts, contrasts the Platonic or neo-Platonic approach to the Aristotelian one. The relationship between a diagram and the concept, process, or physical object it illustrated mirrors the relationship between the Platonic world of matter and world of forms. Just as the world we see around us is a mere representation of the ideal, perfect world of forms, so diagrams are representations—either of processes or objects in the world of matter, or of concepts directly from the world of forms. Analogical reasoning and argument was a feature of neo-Platonic thought, and "in Platonic and neo-Platonic theories of knowledge, the analogical argument hinges on the assumption of an essential link between the intelligible model and its visible copy, between intelligible realities and

[332] Jeffrey Hamburger, "*Haec Figura Demonstrat*: Diagrams in an Early Thirteenth-Century Parisian Copy of Lothar de Segni's *De Missarum Mysteriis*" in *Neue Forschungen zur Buchmalerei* (Vienna: Böhlau Verlag, 2009), 7-8.

mental constructs."[333] In this sense, the diagram was not a representation of a process or theory distinct from what it explained. It had a real relationship to whatever it depicted. Analogical reasoning of this visual character came to play a particularly important part in the alchemical discussions of scholars such as Arnald of Villanova and John of Rupescissa, who drew parallels between alchemical transmutation and the Eucharist, as well as between Christ's suffering and the experience of the transmuting materials.[334] Such reasoning also connects to a broader characteristic of medieval magic, the notion of "sympathy." Sympathy refers to a relationship between two objects whereby acting on one influences the other even though the two are not clearly connected. An herb whose leaves resemble dragons would be used for treating snakebites, for example.[335] Although it fits into the Platonic view of the world, we can hardly say that sympathy is a Platonic idea, because it is also characteristic of popular and Germanic magic. But broader popular acceptance of sympathetic relationships might well make the natural functioning of images in learned rituals seem more plausible to the practitioner.

Of course, this does not mean that Aristotelian-inspired natural philosophy rejected the use of diagrams altogether. It simply put diagrams to a different use and rejected the idea of a real, rather than merely symbolic, relationship between the diagram and the thing being depicted. Obrist asserts that "just as Aristotle himself did not make frequent use of geometric demonstration, his medieval followers never developed it into a widely used method of proof."[336] Instead, images were used in texts containing practical instructions. In the context of alchemy, this meant that images would be diagrams for constructing tools and implements, like furnaces, rather than as illustrations of abstract theoretical concepts. Aristotelians also used analogical reasoning, but without the same

[333] Barbara Obrist, "Visualization in Medieval Alchemy," in *HYLE--International Journal for Philosophy of Chemistry,* Vol. 9, No.2 (2003), 7.

[334] Obrist, 23-25.

[335] Kieckhefer, *Magic in the Middle Ages*, 13.

[336] Obrist, 7.

conviction of an inherent relationship between the two halves of the analogy. An analogy in this context was more illustrative than real. Ultimately, then, medieval thinkers were heirs to two ancient ways of approaching both diagrams and the sort of analogical thought that connected the diagram to the thing it depicted. Obrist argues that medieval alchemists combined a natural philosophy heavily influenced by Aristotle with a neo-Platonic understanding of the relationship between images and physical reality. [337]

Images in the Ars Notoria are closer to the category of substantially real analogical connections. However, while they are labeled by subject ("the first image of grammar," etc.), the words within the diagrams do not explain the relationship between the diagram and the subject itself. In fact, the text filling the spaces of the diagrams is the names of spirits which the practitioner should be reciting in conjunction with his observation of the diagrams. "The drawings do not simply serve a mnemonic function of a kind often construed for medieval diagrams. They stand on their own as instruments of instruction, demonstration and edification, and, above all, meditation," as Hamburger states.[338] It is more difficult to see the connection between the images in the *Munich Handbook* and the use of diagrams for remembering or conceptualizing abstract ideas. These images are diagrams of a slightly different sort—not collapsing a theory into an image, but something for the practitioner himself to reproduce (like the diagrams of how to put together do-it-yourself furniture). Kieckhefer says of the role of demons in the psychological experiments, "The specifically demonic or necromantic element in these experiments is typically an appendage to this sympathetic magic, and the demons generally play a less prominent role than in illusionist or divinatory experiments."[339]

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[337] Obrist, 17.

[338] Hamburger, 45.

[339] Richard Kieckhefer, *Forbidden Rites: A Necromancer's Manual of the Fifteenth Century* (Pennsylvania State University Press, 1998), 71.

Al-Kindi is again able to provide a natural, physical explanation for how images work to channel astral forces

> Certain characters [images drawn by a practitioner] indeed having been drawn with due solemnity reinforce the operation of Saturn, others of the other planets, others of the fixed stars. Again certain [characters] harmonize with Aries in their effects, others with other signs, and all this difference around the figures in force and effect produces harmony of the stars, attributing to each figure its power bringing about motion in bodies positioned externally through rays which each figure sends out.[340]

While Obrist's explanation of the neo-Platonic relationship between images and reality may have found assent among some scholastics, al-Kindi, Roger Bacon, and Pietro d'Abano would probably have rejected the neo-Platonic analogical relationship in preference for a strictly material, mechanical, Aristotelian explanation. All repeatedly insist on physical mechanisms for the transmission of force in the defense of the non-magical nature of disciplines like astrology and astral magic. The relationship between images and stars, or for that matter between a confident physician and his ailing patient, does not occur on some abstract plane but in actualization of intentions and the multiplications of *species*.

Yet neither physical mechanisms nor the reputation of Solomon enough to protect the practitioners of ritual magic from condemnation. The most famous condemnation of the Ars Notoria and magical arts in general comes from none other than Thomas Aquinas—who, as we saw in earlier chapters, also experienced a dramatic posthumous makeover which would enhance the status of those who wanted to use his words to argue their own positions. He attacked the Solomonic magical tradition not by trying to undermine the reputation of Solomon himself but by distinguishing between Solomon and the magical practitioners who claimed to be emulating him. For example, in asking

[340] Quidem etiam karacters cum debita sollempnitate exarati confortant operationem Saturni, alii aliorum planetarum, alii stellarum fixarum. Item quidem concordant cum Ariete in effectu, alii cum aliis signis, et totam hanc diversitatem circa figuras in virtute et effectu, operatur celestis armonia, tribuens unicuique virtutem suam faciendi motus in corporibus extra positis per radios quos emittet," al-Kindi, *De radiis*, 251.

questions about whether knowledge could be received when one was asleep, the case of Solomon served as a point in the affirmative.[341] In the *Summa Theologica*, Thomas does not use any of the magical texts attributed to Solomon. His characterization of Solomon comes entirely from the Bible. Although he was clearly familiar with the Ars Notoria, he does not allude to any of the additions made to the image of the figure of Solomon in the Solomonic texts.

Thomas addresses the notory art in Question 96 of the Secunda Secundae of the *Summa Theologica.* By Thomas's definition, "magic" means engaging in "certain fasts and prayers" for the ultimate "good end" of the "acquisition of science:"

> It is wrong because the means it uses are not capable of demonstrating genuine knowledge, for example, the close inspection of various configurations and the muttering of strange words, and so forth. It does not use these means as causes, but rather as signs: not, however, as signs instituted through divine instrumentality, as are sacramental signs. Consequently they are useless as signs, and moreover imply *agreements and pacts made with demonic powers for the purpose of consultation about portents for the future*.[342]

Ultimately then, Thomas appears to reject the sort of Platonic analogical relationship that some might say constitutes a *natural* relationship between the sign and the thing signified—even though many defenders of magic posited a physical mechanism instead. He argues that this kind of sign is only valid when it has divine sanction. Otherwise, it acts as a sign only in that it signifies something to the demons, a sort of language for communicating with them and cementing a pact. Thomas insists that the notory art does not work by any natural mechanism but only by forging a compact with demons. In the second article of Question 96, however, Thomas does acknowledge the possibility of natural occult forces. Here he insists that if a practice is natural then it is lawful. He distinguishes forcefully between causes and signs—a cause is natural, a sign is not.

Thomas also denies that astrology is a natural magic and insists that it is demonic:

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[341] *Summa Theologica*, I.II.113.3.

[342] *Summa Theologica,* II.II.95.1.

> Wherefore those images called astronomical also derive their efficacy from the actions of demons: a sign of this is that it is requisite to inscribe certain characters on them which do not conduce any effect naturally, since shape is not a principle of natural action. Yet astronomical images differ from necromantic images in this, that the latter include certain explicit invocations and trickery, wherefore they come under the head of explicit agreements made with the demons: whereas in the other images there are tacit agreements by means of tokens in certain shapes or characters.[343]

From a modern perspective, Thomas's argument makes a great deal of sense. He says that there must be a clear natural mechanism connecting cause and effect (although for him the lack of a mechanism is evidence of demons, whereas for us it would just be evidence of nonsense). The problem is that he acknowledges that occult forces *do* exist. It is easy enough to say that something natural is not demonic—but how does one prove that a thing is a sign and not a cause if you accept that there might be occult natural forces?

Even though Thomas is talking about a genre of magic that modern historians label as angelic/demonic, he focuses on distinguishing it not from religion but from natural magic—or even natural science, if we think of science in the medieval sense of knowledge rather than method. While Thomas shows reverence for Solomon himself and does not try to deny that he was the actual author of these texts, the authority of Solomon is not enough to redeem the practice in Thomas's eyes. Solomon comes across as an exceptional figure, and what might have been godly in his case does not apply when magical practitioners of Thomas's own day try to reproduce his work, so Thomas has no need to refute his authority. Thomas turns instead to the question of mechanism—the real distinction between magic and science, for the scholastic thinkers—to prove the wickedness of the Ars Notoria. While there were not attempts to defend the Ars Notoria on the grounds that it used natural forces, there certainly were attempts to explain many practices condemned as "magical" by ascribing natural mechanisms to them. It is

[343] *Summa Theologica*, II.II.96.2.

probably the understanding that image magic relied upon demonic agency, put forth by Thomas and widely accepted as the authoritative argument against magic, against which Pietro sets himself when he gives discrete physical mechanisms for the transfer of forces to explain the efficacy of magic. However, he does not directly defend any particular texts or traditions (for example, he does not talk about the notary art by name). It is unclear whether this is because he thought the Ars Notoria a lost cause, securely condemned beyond redemption by the likes of Thomas, or because he agreed that this particular text was indeed *superstitio* and was only interested in defending less overtly angelic or demonic forms of image magic. For medieval scholastic thinkers, including Thomas, Pietro, Albertus Magnus, and Roger Bacon, the mechanism by which knowledge was obtained or by which a ritual had efficacy was what rightly separated magic and natural science.

The Renaissance Reinvention of Pietro d'Abano as Magus

How, then, does a fifteenth-century mystical work of image magic, invoking angels and spirits of the air, begin circulating under Pietro's name? And who exactly did these fifteenth- and sixteenth-century Hermetic magi think Pietro d'Abano was? Frenchman Gabriel Naudé (1600-1653), who is best known for his work on library sciences but who also studied medicine at both Paris and Padua, wrote a work entitled *The History of Magick* with the purpose of exonerating a wide host of ancient, medieval, and Renaissance thinkers who were accused of magical practices. Naudé explains that Pietro was widely regarded as a magician but completely rejects that portrayal of his subject. Naudé provides a detailed explanation of what Pietro's reputation was and his own theories about how Pietro obtained such a reputation.

> But if the particular and over-curious study of astrology hath ever proved prejudicial to those who have practiced it, we may truly say, that the famous physician Peter d'Apono hath felt the stings of calumny more than any of the

> precedent upon that account. For the common opinion of almost all authors is that he was the greatest magician in his time.[344]

Naudé goes on to explain the works attributed to Pietro, both those later judged genuine and those recognized as spurious, and what he believes was true of Pietro's accomplishments. Rather impressively for someone working in the early seventeenth century, Naudé reaches many conclusions about Pietro with which modern historians might well agree. For example, I have seen no evidence that anyone today would dispute his claim that Pietro's interest in astrology probably played a central role in his difficulties with authorities in his own lifetime and made his work appealing to the Renaissance thinkers who would recast Pietro as a magician.

Naudé also observes that Pietro's views may have been regarded as heretical, leading to his subsequent reputation as a magician.

> From his so great celebration of this science [astrology] through all his works, especially in the hundred and fifty-sixth Difference of his *Conciliator*, have some authors taken occasion to maintain...that the sentence passed upon him was not for his magic, but because he would give an account of the miraculous effects that happen many times in nature, by virtue of the celestial bodies, without referring them either to angels or demons.[345]

Naudé's explanation here is rather unlikely. In giving natural explanations for these events, Pietro was trying to distance these practices from magical ones; he was creating space between religion and divination by drawing divination closer to natural philosophy, instead of *explicitly* denying the possibility of angels or demons. While it seems possible that denying the existence of demons might cause problems with religious authorities in his period, I have seen no evidence in any late-thirteenth- or early-fourteenth-century reprimands or condemnations that scholars were suspect for saying that demons did not perform specific activities. Deliberately invoking demons was cause for condemnation,

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[344] Gabriel Naudé, *The History of Magick, By Way of Apology For All the Wise Men who have unjustly been reputed Magicians, from the Creation, to the present Age*, Englished [*sic*] by J. Davies (London: 1657), 178 (spelling modernized).

[345] Ibid., 180.

as was denying the power of God to control those demons. But explaining the exact mechanism of divinitory practices (explaining, not performing!) was a matter of open debate. While the position of Thomas Aquinas, that divination *did* rely demons, was the orthodox one, defending divination as having a natural mechanism was problematic not because it seemed to be denying the power of demons but because it seemed to be denying the power of free will.

More likely, Pietro's attempt to explain such things by natural mechanisms led to his reputation for the very reason that they seemed to deny agency to man's free will. The freedom of the will was given particular emphasis with the Condemnations of 1270 and 1277, and the scholastic obsession with maintaining the idea of free will had implications for discussions not only of psychology but also of astrology and the omnipotence and omniscience of God. Under no circumstances could anyone or anything—from the lowly demands of the stomach to the stars in the heavens to God—be held responsible for an individual's choices other than that person. Pietro's explanations of human psychology were highly materialistic and consistant with his materialistic understanding of the cosmos as well. If these were the basis for accusations of heresy against him, they were likely part of the enduring legacy of the Condemnation of 1277. In Pietro's own day, small-scale academic censures were not uncommon, and scholars often attracted negative attention as much for overstepping disciplinary and hierarchical boundaries, like circulating texts before permission had been obtained, as for holding views which were regarded as heterodox in and of themselves.[346] Such censures were distinct from major incidents like 1277 or the condemnation of Ockhamist teachings in the mid-fourteenth-century.

The prominent issue with which the Roman Inquisition of the late thirteenth- and early-fourteenth century was concerned was apostolic poverty—it would be shocking if

[346] Thijssen, 1-39.

Pietro, as a secular physician-philosopher, had any involvement in that controversy. It is also worth noting that, after his death, Pietro's name was associated with Averroism at Padua, but Thorndike dismisses the idea that Pietro was actually a leader of the alleged heretical movement.[347] Nancy Siraisi explains that Pietro was "nominated" as the leader of a movement of "Paduan Averroism" by nineteenth and early twentieth-century scholars but shows that only a few passages of Pietro's actual writings hint at Averroes's teachings. The connections are tenuous and the evidence inconclusive at best. Averroism became the great bogeyman among historians of high scholastic thought, but it now seems that it lacked any kind of coherent teaching or organization. Many heterodox ideas—including emphasizing the materiality of the human mind more strongly than authorities were comfortable with, which Pietro did—were quickly labeled as "Averroist" by early historians. However, more recent scholars such as Siraisi agree that the label is anachronistic.[348] Pietro's case (accusations of heresy in his lifetime, and being remembered in the Renaissance as a magician) was not an isolated one. He was not the only physician or scholastic philosopher to be remembered as a magician or suspected of heresy. In the attempt to understand why Pietro might have been remembered as a magus we must take into account that he was actually part of a larger trend, sufficiently widespread to give Naudé enough material for an entire book about people falsely remembered as magicians. Naudé also notes that physicians have been particularly susceptible to accusations of magic because Pliny had identified medicine as branch of magic and associated it with the sorceress Circe.[349]

To further place Pietro's reputation in context, it is fruitful to consider another physician with a reputation as a magician, Arnald of Villanova (1235-1313). Like Pietro, Arnald was a famous physician in his own day, a strong proponent of astrology and

[347] Thorndike, 888.

[348] Siraisi, *Arts and Sciences at Padua*, 136-139.

[349] Naude, 165.

natural magic, and likewise forced to deal with accusations of heresy. Their careers followed quite different trajectories, for Arnald's great temporal success came from his role as a practicing physician, in both royal and papal courts, while Pietro's came from his role in shaping the medical school at Padua. Arnald was also far more interested in theology than was common for physicians, and in the later part of his life wrote extensively on the subject. Joseph Ziegler suggests that part of Arnald's offense with the Inquisition came not just from the claims he made but because he was transgressing disciplinary boundaries. Lacking an advanced degree in theology, Arnald presumed to talk about things he was not qualified to discuss.[350] Ziegler's claim is entirely reasonable in the context of other condemnations and accusations in the decades before and shortly after Arnald's life, especially recalling that the Condemnation of 1277 was in large part intended to keep the faculty of arts from delving into theological questions.

Albertus Magnus is another prominent medieval scholar who developed a reputation as a magician. By the Renaissance, this reputation was widespread but not universally accepted. In the late fifteenth century, German Dominicans launched an attempt to rehabilitate Albertus and clear him from the taint of magic. We have little direct evidence of the accusations made against Albertus and must rely on the Dominicans' justifications to elucidate his magical reputation. In his defense of Albertus, Peter of Prussia acknowledges that Albertus did study occult texts but insists that this was for putting their contents to good moral use and in order to argue more effectively against the evil they contained. Peter also placed Albertus's study of alchemy and astrology into the field of natural philosophy rather than magic and dismissed several of Albertus's spurious works. Thus the ways in which Peter of Prussia defended Albertus look rather similar to the ways in which Naudé would later defend Pietro. In his own defense of

[350] Ziegler, *Medicine and Religion*, 24-34.

Albertus, Naudé in fact relied heavily on Peter of Prussia's work.[351] In both cases, we see an attempt to draw a distinction between magic, relying on demons, and those practices involving purely natural forces.

The case of Albertus Magnus further demonstrates the importance of the historical memory of important individuals. To people like Peter of Prussia, Albertus Magnus was first and foremost a Dominican, and it was important to accentuate the qualities which they wanted to see reflecting back upon their own order. Historian David Collins argues that it is significant that Albertus's rehabilitation took place just as the Dominican Order was undergoing reforms, and that those of the Observant faction were particularly keen on holding up Albertus as their own forerunner and champion. To do so, it was important to present him as someone embodying their own values. Thus they not only tried to absolve him of the image of the magus but also emphasized his sanctity and his identity as a friar over his identity as a bishop or scholar.[352] In the tumultuous religious and intellectual environment of the Renaissance, it was important for new movements to draw authority from both earlier texts and persons. Vast numbers of scholastic texts on natural philosophy were reproduced in the fifteenth century, and this effort was accompanied by attempts to compile lists of authentic and spurious texts which "indicate how important the authority of figures drawn from the past was in the fifteenth-century struggle to regulate natural philosophy and the magical arts."[353] At the same time that Albertus's followers were trying to distance him from magical practices, some who admired Pietro were inventing ways to connect him with the magic they themselves claimed to practice.

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[351] David. J. Collins, "Albertus, Magnus or Magus? Magic, Natural Philosophy, and Religious Reform in the Late Middle Ages," *Renaissance Quarterly* Vol. 63, No. 1 (Spring 2010), 9-11, 14.

[352] Collins, 25-29.

[353] Ibid,. 33.

Johannes Trithemius (1462-1516) and Heinrich Cornelius Agrippa (1486-1535) were the two major Renaissance figures behind the reconstructed image of Pietro-as-magus. Trithemius attributes a work called the *Elucidarium necromanticum* to Pietro. Naudé, who accepts the attribution of other magical works to Pietro despite his attempts to clear Pietro's name, does express the opinion that this particular text was spurious.[354] Thorndike rejects its authenticity, and I have found no scholar since who mentions the work in connection with Pietro. The more important work of pseudo-Pietro, the *Heptameron*, was much more critical to Pietro's magical reputation. The earliest surviving edition dates from 1496, but it was also included as an appendix to Agrippa's *De occulta philosophia* (1533). Here the power of reputation worked in two directions, for Pietro's reputation as both a scholar and a magician leant credibility to Agrippa's work in his own day, but the popularity of Agrippa's work also helped to spread and cement Pietro's reputation as the author the *Heptameron*.

Naudé's refutation of claims that such men as Pietro and Arnald were magicians is quite different from the approach of the modern historian. He was not concerned with questions about self-identity or broader theoretical definitions of magic and popular belief. He was trying to prove that none of these men *actually* were able to perform magical tasks, something modern historians take for granted. Thus he devotes an entire section to proving that Agrippa was not a magician, even though Agrippa would have embraced the title. While Pietro probably would have appreciated Naudé's characterization of himself, a paean of his accomplishments as a scientist and physician, as well as Naude's attempt to clear him of charges of magic, Agrippa would almost certainly have taken offense at his own chapter:

> Were there no more requisite to declare a man a magician, than that he should give himself the title, or were it just, that who should brag he could do thousands of tricks and invocations, were truly guilty of the practice thereof, that

[354] Naude, 179, 183.

> imposter...should certainly be taken for the most exquisite conjurer of our last ages.[355]

Historians of magic have long since abandoned the idea that we can define magic as something that actually happens. We define it by its place in society and culture, by the rules it follows and by its relationship to other cultural practice. For a seventeenth-century writer like Naudé, living in a time when individuals could still be executed for witchcraft, it was important to take seriously the question of whether or not these magical claims were really possible.

Did any of Pietro's genuine works contribute to his posthumous image as a magus? Some material in the *Conciliator* might indeed be labeled "occult," as it deals with hidden forces. However, this material can be described as either astrology or the hidden virtues of natural objects.[356] According to Pietro, such things would not constitute magic (when talking about the kind of magic from which he would distance himself, he uses the term *superstitio*; recall that he also regarded the abstract theological arguments of many of his Parisian contemporaries as superstitious). Renaissance thinkers like Marsilio Ficino, Pietro Pomponazzi, and Giovanni Francesco Pico made use of Pietro's genuine writings on occult forces. They relied mainly not on the works that lend themselves most to discussions of magic—the *LCP*, certain questions of the *Expositio*, or the astrologically-oriented *Lucidator*—but to Differentiae 135 and 156 of the *Conciliator*.[357] While the *Conciliator* was certainly the most widely accessible, the *LCP* and the *Expositio* both were popular enough to have print runs in the Renaissance. It is interesting that the Renaissance Hermeticists chose to focus on Pietro's medical work, especially because its materialistic explanation of the mechanisms for these phenomena is so antithetical to their mystical, neo-Platonic approach to natural magic. While both

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[355] Naudé, 188.

[356] Thorndike explains the occult materials in the *Conciliator* in vol. II, 890-893. Some main examples of Pietro's astrological theories can be found in Diff. 9, 10, 101, and 113.

[357] Walker, 36, 108, 151.

Pietro and Renaissance thinkers like Ficino and Agrippa insisted that astral magic and fascination were "natural," their entire conception of "nature" was different. By seeing in the *Conciliator* mirrors of their own conceptions of the cosmos, they were distorting Pietro's theories. It is thus less surprising that we find this jump from the *Conciliator* to the *Heptameron*, skipping over Pietro's more magically suggestive writings on the topics of physiognomy and astrology in other works.

Pietro's reputation has continued to evolve in modern scholarship. For the first three-quarters of the twentieth century, Pietro was primarily studied in the history of magic—even when scholars were refuting his reputation as a magician. However, since the 1970s, scholars have been much more interested in emphasizing other aspects of his work, particularly his medical contributions. Emphasis has shifted from the few Differentiae of the *Conciliator* which do address natural magic to the more mundane medical questions which occupy the rest of the work's several hundred pages. Nancy Siraisi's study of the arts and medicine at the University of Padua was particularly important in shifting this emphasis. Pietro-as-philosopher, particularly his connection with the Parisian intellectual world rather than the Paduan one, has come to the foreground of scholarship most recently, and now it has grown unfashionable to talk about the magical, imaginary Pietro alongside the authentic physician Pietro. But the false memory of Pietro was clearly not made entirely of smoke and shadows—it rested on a legitimate foundation. Whether the construction of Pietro's magical identity was meant to elevate him and defend magical pursuits, like Solomon-as-magus, or to condemn both him and the practice of image magic more broadly, like the heretic-magicians described by eleventh and twelfth-century clerical authors, is difficult to say. Either way, the real Pietro did believe in the legitimacy of what might be called magic. His faith in astrology in particular is clear throughout his works, from the *LCP* onwards. In reshaping Pietro into a magus of their own style, the Renaissance writers were not necessarily mistaking

what Pietro thought was possible—but they were completely reconfiguring *how* he thought the natural world functioned.

CONCLUSION

This project began as a study of the history of psychology. I have used Pietro d'Abano's life as a lens through which to view medieval perceptions and attitudes surrounding the many factors influencing this complex history. By placing him within the broader context of scholastic philosophy and medicine before and during his lifetime, I have shown that Pietro's bridging of these genres made him an exceptional figure in his day, despite his working in a university milieu with well-defined curricula and structures for writing and debate.

The examination of Pietro's *Liber consolationis phisonomie* places physiognomy within the framework of the historical development of what we now understand as psychology. The primary trait of the *LCP* that makes it unusual is simply that it is a text on physiognomy—very few of these were produced in medieval Europe. The content itself is largely a list of aphorisms taken from earlier sources, especially Polemon's *Physiognomy* and the *Secretum secretorum* of Pseudo-Aristotle. The *LCP* contains only hints of the sort of radical materialism and biological determinism which would characterize Pietro's more mature works, such as the *Conciliator* and *Expositio problematum Aristotelis*. The *LCP* does, however, provide evidence of broader medieval assumptions about the nature of emotions, personality, and the relationship between mind and body, which were more fully developed in other scholastic texts. The *LCP* was part of a general movement apparent in the theological and philosophical texts of Albertus Magnus, Thomas Aquinas, and Richard of Middleton of providing increasingly biological explanations for passions, personality, and mental capacities. This development signaled a gradual shift in the concern for psychological suffering away from the religious to the medical sphere and also naturalized judgments of moral character and intellect based on physical features, providing a scientific justification for prejudice.

It is interesting to note the ways in which Pietro's ideas anticipated modern ones, particularly his biological conception of human nature, but Pietro was not the starting point of a modern neuroscience. There were too many intermediate developments, and Pietro's work does not appear to be a stepping stone along a steady path towards a materialist theory of emotions. The pendulum swung in the other direction, and we had to go through a Cartesian division of reason and emotion before swinging back to a view that looked anything like Pietro's anthropology. It is appropriate to give once more Thorndike's criticism of the Renaissance thinkers:

> The writers of the Renaissance and of the early modern times became so enthusiastic over Peter of Abano, and at the same time so failed to appreciate the character and accomplishments of medieval learning in general, that they were wont to depict him as a miracle of learning in a rude age...a precursor of their own period rather than as a final representative and product of a rich earlier period of culture.[358]

Pietro reached conclusions about the cosmos which looked very familiar to Renaissance thinkers. Likewise, his materialist psychology might look like a foreshadowing of modern psychology. But in his methods, Pietro was very much a medieval thinker. He relied heavily on ancient authors and used observational evidence to support his conclusions rather than engaging in any kind of controlled experiment.

Continuing the analysis of the progression of ideas of of via a posthumous Pietro, I considered the Renaissance reconstruction of Pietro as a magician. What we now believe to be true about Pietro is that he was not the author of the *Heptameron* and, far from engaging in ritual magic, he rejected belief in the supernatural in general and tried to provide natural mechanisms for those pseudo-scientific practices, like astrology, which he did accept. I investigated how the memories of historical figures were reshaped to give credibility to practices like ritual magic, alchemy, astrology, and other forms of natural magic.

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[358] Thorndike, 883.

While I have not reached any broad conclusions to reshape scholarship on medieval physiognomy, philosophy, medicine, or Pietro himself, I have a number of proposals to contribute. I have drawn attention to the strong urge of ancient and medieval scholars to categorize and organize both emotions and personalities in straightforward and finite systems. I have clarified what I believe to be Pietro's view on masculinity and femininity. I have proposed that the *LCP* itself may have been responsible for developing an association between physiognomy and astrology which would ultimately taint the former with an aura of magic. I have suggested that both Pietro's positive reputation as a scientist and negative reputation as materialist heretic contributed to the entirely false reputation as a magus with which he would be posthumously burdened in the fifteenth century. I have shown that by shifting the focus of the intellectual historian from the nuances of a scholar's theories to what that scholar thought was worth spilling ink over—and also remaining silent about—can give us interesting insights into what sorts of knowledge were taken for granted.

As I stated, this project began as a study of the history of psychology. But I feel that its practical relevance lies in what it says about the psychology of history and what it reveals about that which has remained unchanged in the study of psychology across time. For example, the compulsion with categorizing emotions and personality types which psychologists from the Hippocratics until today deserves careful consideration. We must consider what we ridicule and reject alongside what we uncritically embrace; rather than presuming that there are distinct and finite personality types or axes while simultaneously laughing at the idea of the humors, we could use lessons from the history of psychology to help us appreciate what we are taking for granted.

The same applies to physiognomy. Many of the conclusions in medieval physiognomical texts like the *LCP* appear, frankly, preposterous. Why? What do we assume about human nature that makes us not only reject but ridicule an idea that was so widely accepted for so long? Furthermore, what sort of physiognomical judgments do we

reflexively but hypocritically pass on those around us while simultaneously mocking medieval thinkers who devised biological mechanisms to justify their natural impulses? This is why the study of physiognomy is important—not because it leads to an accurate view of the world, but because it can help us to find inaccuracies which endure in our modern thought processes. History not only tells us where we come from, it also tells us where we are. It enables us to look critically at ourselves. We are often able to see idiosyncrasies or fallacies in the ideas and behavior of historical figures to which we are blind when we look at our own thought and behavior.

A similar argument can be made when we consider the Renaissance reconstruction of Pietro as a magician—it demonstrates how people can be willing to embrace and misappropriate historical figures for their own ends, even to the point of radically rewriting the past in order to give their own causes legitimacy. Even though I doubt that Trithemius was being consciously dishonest in his recasting of Pietro, this circumstance shows how easy it could be to deceive oneself into believing that a respected historical person would support one's own views. Such tendencies continue to be prevalent in the modern world. History is a capricious discipline. We cannot know for certain when Pietro d'Abano was born or whether his bones were actually exhumed and burned for heresy, yet we attempt to deduce knowledge of what went on inside his mind. Even when we have the words of historical individuals in front of us, even when we trust the manuscript tradition and believe that those words are the authentic product of that individual, still we must always be wary of the temptation to distort those words to make them say just what we want to hear. In this respect, we are still very much like our medieval ancestors.

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