

The Boundaries of the Supernatural

THE CONCEPT OF "NATURE" IS AN ANCIENT AND CENTRAL feature of Western thinking. Whether it has exact correlates in other civilizations is a demanding and interesting question, which someone else can answer. In Western culture it has been employed in a variety of ways. Sometimes it has been used to structure large intellectual systems (natural law theory or natural religion, for example), but at all times it permeates discourse. For instance, in such a formative text for the Western intellectual tradition as St Augustine's *City of God* the word nature and its cognates occur 600 times. Obviously not each of those occurrences bears exactly the same weight and has exactly the same significance, and it is always important to be aware of the many uses to which the word can be put. C. S. Lewis dedicates fifty pages in his *Studies in Words* to the "vast semantic growths" around the word "nature" and its equivalents "*phusis*" and "*kind*".¹

Most of the texts I discuss here are in Latin, the standard language of the educated in the Middle Ages, so it is helpful for me that *The Dictionary of Medieval Latin from British Sources*

¹ *Studies in Words* (Cambridge, 1960), chap. 2, pp. 24-74 (quotation at p. 25).

now in progress, reached the letter "N" in 2002.² It gives ten primary meanings of *natura*, "nature", and eleven of *naturalis*, "natural", but, since each main meaning is subdivided into often quite distinct senses, there are in reality twenty-five meanings of nature and twenty-nine of natural. The word nature can be a synonym for something as grand as the whole physical creation but is also employed in the euphemistic phrase "answer a call of nature", whereas the meanings of "natural" range from "not artificially made" to "of illegitimate birth", from "normal" to "native". And this is only from British sources!

However, I am not going to pursue a doggedly definitional path. The value, for me, of the dichotomy "natural/supernatural" is that it leads directly to investigation of medieval debates, to conflicting views of what exists and different ideas of what an explanation consists of. This book is concerned with debates and differences in the medieval period – there will be nothing about "the medieval mind".

Some intellectual historians, like some literary scholars or anthropologists, seem to have a strong urge to search for the inner coherence of the beliefs of those they study and might talk easily of "belief systems". This urge is doubtless well intentioned but seems to prejudge the issue. What of our own beliefs? I would be surprised if a thorough and sincere review of my own beliefs concluded that they were consistent, coherent, and steady. Like most people, I think I hold many discordant beliefs. Their discord only becomes apparent, however, in certain circumstances – this, in the terms made familiar by the historian of science Thomas Kuhn, is when latent anomalies in our paradigms become visible and uncomfortable.³ I look at several instances of such intellectual discomfort in the Middle Ages.

² Fascicule 7, prepared by D. R. Howlett (published for the British Academy by Oxford University Press).

³ *The Structure of Scientific Revolutions* (Chicago, 1962).

In fact the concept of "nature" leads naturally to debate, for it is usually defined *against* something. The natural can be contrasted with the artificial, that is, the man-made, with grace, that is, the God-given, with the unnatural, with human society, and so on. C. S. Lewis, in the work just mentioned, actually structures much of his discussion by asking, "What is the implied opposite to nature?"⁴ Any concept that is so dyadic will generate discussion about its boundaries and its contraries.

I start my enquiry with a concrete example of the discourse of the natural and supernatural from the central Middle Ages.

Like all scriptural religions, medieval Catholic Christianity gave birth to a rich culture of textual analysis, exegesis, and commentary. The Word of God was scanned, pondered, and elucidated, and then these elucidations were themselves scanned, pondered, and elucidated. The Gloss, that is, detailed commentary, was a characteristic fruit of such a process. A telling instance is provided by the layers that built up on the biblical passage Genesis 2: 21–2 (here I give the King James version):

And the Lord God caused a deep sleep to fall upon Adam, and he slept: and he took one of his ribs, and closed up the flesh instead thereof; and the rib, which the Lord God had taken from the man, made he a woman, and brought her unto the man.

Now this remarkable passage could be the starting point for any number of reflections, not least, of course, on its deep message about the secondary nature of woman. In the schools of twelfth-century Europe, however, it provoked a different chain of thought. Around the middle of that century, in Paris, the intellectual centre of Catholic Christianity, Peter Lombard composed his *Four Books of Sentences*, a work of systematic theology which was to be a standard university text for hundreds of years

⁴ *Studies in Words* (as in n. 1), p. 43.

to come. This passage from Genesis stimulated in his mind not thoughts about female subordination, but an austere philosophical question:

When God created the world, was its character such that woman *had to be* born from man's ribs or merely such that she *could be* born in that way?⁵

The ancient Middle Eastern legend of Adam and Eve, dealing with the creation of man and the creation of woman, had thus stirred the mind of this twelfth-century academic to address the profound question of necessity and contingency. It is a classic Scholastic *quaestio*: "quaeritur an . . . an" – "it is asked whether A or B". "What kind of universe do we live in?" was his question. "Is everything laid down immutably, or are there undetermined potentialities?"

It is a big question, but Peter Lombard did his best to give an answer. And, for a Scholastically trained theologian of the time, the first task was obviously to distinguish different senses:

The causes of all things are in God; but the causes of some things are in God and in creatures, the causes of some things in God alone.⁶

⁵ Sed quaeritur an ratio quam Deus primis operibus concreavit id haberet, ut secundum ipsam ex viri latere feminam fieri necesse foret, an hoc tantum ut fieri posset: Peter Lombard, *Sententiae in IV libris distinctae* 2. 18. 5, ed. Collegium S. Bonaventurae (3rd ed., 2 vols., *Spicilegium Bonaventurianum* 4–5, Grottaferrata, 1971–81) 1, p. 418; Peter Lombard's whole discussion here is deeply dependent on that of Augustine, *De genesi ad litteram* 9. 17–18, ed. J. Zycha (*Corpus Scriptorum Ecclesiasticorum Latinorum* 28, 1894), pp. 290–3 (*Patrologia latina* 34: 405–8).

⁶ Omnium igitur rerum causae in Deo sunt; sed quarundam causae et in Deo sunt et in creaturis, quarundam vero causae in Deo tantum sunt: *Sententiae* (as in previous note) 2. 18. 6, p. 419.



1. CREATION OF EVE. Psalter-Hours of Yolande de Soissons, Amiens, France, between 1280 and 1299. The creation of Eve from Adam's rib as described in *Genesis* 2 had stimulated philosophical and theological discussion since patristic times. In the twelfth century, Peter Lombard took up the theme in his *Four Books of Sentences*, which was to become the standard theology text-book of the Latin West. Peter asked, "When God created the world, was its character such that woman *had to be* born from man's ribs or merely such that she *could be* born in that way?" This, in turn, led him to a theory of nature and miracle. (The Pierpont Morgan Library, New York. MS M.729, fol. 293v.)

To clarify the first category, those things whose causes "are in God and in creatures", Peter Lombard employed St Augustine's concept of "seminal natures" or "seminal reasons":

God has implanted "seminal natures" in things, according to which things come forth from other things, from this seed such a grain, from this tree such a fruit, etc. . . . they were implanted into things by God at the initial creation. And just as creatures are mutable, so too these causes can be altered; the cause which is in the immutable God, however, cannot be changed.⁷

The causes that are in God and creatures are therefore both primordial, in that they were implanted by God at the creation, and mutable, like all creatures. In contrast, the causes that are in God alone are immutable. Peter Lombard has thus moved from the Genesis verses to a theory that causes are of two different kinds (and in the Western tradition ontology, the science of being, often assumes that a key distinction is different kinds of cause). According to Peter Lombard, following Augustine, God had implanted the seminal causes in things – a horse will give birth to a horse, an apple tree bears apples – but had reserved certain things to himself alone. He believes this distinction can be expressed in the language of the natural:

Whatever happens according to the seminal cause is said to happen naturally (*naturaliter*), for in this way the course of nature becomes known to men. Other things are beyond nature (*praeter naturam*), since their causes are in God alone.⁸

⁷ . . . inseruit Deus seminales rationes rebus, secundum quas alia ex aliis proveniunt, ut de hoc semine tale granum, de hac arbore talis fructus, et huiusmodi. . . . in prima rerum conditione rebus a Deo insitae sunt. Et sicut creaturae mutabiles sunt, ita et hae causae mutari possunt; quae autem in immutabili Deo causa est, non mutari potest: *ibid.* 2. 18. 5, p. 419.

⁸ Et illa quidem quae secundum causam seminalem fiunt, dicuntur naturaliter fieri, quia ita cursus naturae hominibus innotuit; alia vero praeter naturam, quorum causae tantum sunt in Deo: *ibid.* 2. 18. 6, p. 419.

Here is a central dualism: the natural and what is beyond nature. As we shall see, at the time Peter Lombard was writing, in the mid-twelfth century, the word "supernatural" was scarcely known, let alone widespread, but, if it had been, he would surely have employed it to label these "things beyond nature".

Hence we see, in this influential Parisian theologian, a clear division of those things in the universe: some are natural, follow their seminal reason, are part of the course of nature known to man; others are beyond nature, and their cause is in God alone.

In subsequent centuries, the style of thinking that Peter Lombard embodied, with its careful distinctions of sense, analytical ingenuity, and the constant impulse towards abstraction, all, of course, on a bedrock of Scripture, became the dominant mode in the universities that arose in France, Italy, and elsewhere in the late twelfth and thirteenth centuries. That style is termed by historians "Scholasticism," and its most familiar representative is Thomas Aquinas. By his time, a standard rung in the theologian's ladder was the composition of a commentary on Peter Lombard's *Sentences*, and Aquinas dutifully fulfilled this requirement. His *Commentary on the Sentences*, written around 1255, naturally included discussion of the passage I have just been talking about, that is, Lombard's exposition of Genesis 2: 21–2, the creation of Eve from Adam's rib.

Aquinas was stimulated by his predecessor's analysis into outlining his own definition and classification of miracles. A miracle, he writes, is something "wonderful in itself" which he defines as follows:

Something is "wonderful in itself" when its cause is absolutely hidden, when there is a power in the thing, which, if it followed its true nature, would produce a different result. Of this kind are the things caused directly by God's power (the most unknown cause)

in a way different from that exhibited by the order of natural causes. . . .⁹

So, like Peter Lombard, Aquinas is looking for definitions in terms of type of cause: some things are caused by "the most unknown cause", God's direct power, others are part of "the order of natural causes". The concept of the miraculous thus depends on the concept of the natural, and this interdependence is even more explicit in Aquinas's categorization of miracles. According to him, they fall into three categories: "above nature", "beyond nature", and "against nature". It would be a digression to explore this further here, but it is worth stressing that, for Aquinas, what determines his classification of miracles is their relationship to nature, a relationship which he couches in a semi-metaphorical language of location – above, beyond, against.

Christian definitions of miracle have tended to revolve around three central conceptions: miracles can be characterized by their causation, by the sense of wonder they arouse, or by their function as signs. Some thinkers take a strong stance on one of these

⁹ Admirabile autem in se est id cuius causa simpliciter occulta est, ita etiam quod in re est aliqua virtus secundum rei veritatem per quam aliter debeat contingere. Hujusmodi autem sunt quae immediate a virtute divina causantur, quae est causa occultissima, alio modo quam se habeat ordo causarum naturalium: *Super Sententiis*, lib. 2 d. 18 q. 1 a. 3 co., Thomas Aquinas, *Opera omnia*, ed. Roberto Busa (7 vols., Stuttgart-Bad Cannstatt, 1980) 1, pp. 176–7. Aquinas has a succinct discussion of miracles in *Summa contra Gentiles* 3. 98–107, *ibid.* 2, pp. 92–5. Discussions of Aquinas' theory of miracle are often from a denominational viewpoint: Alois Van Hove, *La Doctrine du miracle chez saint Thomas et son accord avec les principes de la recherche scientifique* (Wetteren, 1927); Gilles Berceville, "L'Étonnante alliance: évangile et miracles selon saint Thomas d'Aquin", *Revue Thomiste* 103 (2003), pp. 5–74 (esp. pp. 19–29); François Pouliot, *La Doctrine du miracle chez Thomas d'Aquin: Deus in omnibus intime operatur* (Paris, 2005).

ideas, whereas others attempt to integrate them.¹⁰ In general terms, the medieval Latin West inherited from Augustine a stress on the wonderfulness of miracles. They are God's work and amazing. But then again, all God's works are amazing. As Augustine put it, "the world itself is a miracle greater and more excellent than all the things that fill it".¹¹ It is a style of thinking that might inspire reverential awe but was unlikely to generate clear conceptual categorization of the type in which Scholastic theologians dealt. For thinkers in that tradition, such as Peter Lombard and Thomas Aquinas, the heart of a definition of miracle lay in the way that it was distinct from "the order of natural causes". Hence Scholastic theorists of miracle, in stressing the primary importance of different orders of causation, created a sharper line between miracle and nature than that inherited from the patristic tradition.¹²

In the thirteenth century, as the theologians elaborated and pondered their definitions of miracle, there arose a new and very practical need that stimulated thinking about the distinction between the supernatural and the natural. This was the canonization process. Although the cult of the saints had been part of Christianity from early in its history, the precise, legally defined

¹⁰ There are some relevant general considerations in John A. Hardon, "The Concept of Miracle from St. Augustine to Modern Apologetics", *Theological Studies* 15 (1954), pp. 229–57; Richard Swinburne, *The Concept of Miracle* (London, 1970); Benedicta Ward, *Miracles and the Medieval Mind: Theory, Record and Event 1000–1215* (Aldershot and Philadelphia, 1982), chapter 1; André Vauchez, *Saints, prophètes et visionnaires: le pouvoir surnaturel au Moyen Âge* (Paris, 1999), pp. 39–55.

¹¹ cum sit omnibus quibus plenus est procul dubio maius et excellentius etiam ipse mundus miraculum: *De civitate dei* 21. 7, ed. B. Dombart and A. Kalb (2 vols., *Corpus Christianorum, series latina* 47–8, 1955), vol. 48, p. 768.

¹² There are some brief but pertinent observations on this contrast in Lorraine Daston, "Marvelous Facts and Miraculous Evidence in Early Modern Europe", *Critical Inquiry* 18 (1991), pp. 93–124, at pp. 95–9.

procedure that characterized papal canonization was a novelty devised around the year 1200. One of the new features of this procedure was the interrogatory. This was a set of questions, drawn up at the beginning of a canonization process, designed to channel the flood of testimony that such occasions provoked on the virtues and miracles of the candidate for sanctity.¹³

As one would expect, the existence of a fixed questionnaire guided what the witnesses in a canonization process might say. Here are some of the questions listed in the interrogatory for the canonization process of Thomas de Cantilupe, bishop of Hereford, a process which took place in 1307: witnesses were to be asked "if his miracles were above or contrary to nature"; "what words were used by those who requested that these miracles be performed"; and "if in the operation of these miracles herbs or stones were applied or any other natural or medicinal things".¹⁴ Clearly the papal commissioners in charge of the inquest were aiming at setting certain dichotomies before those they cross-examined and those dichotomies would push witnesses to express themselves in the language of the natural and its opposites.

Some indicative examples of how this worked in practice may be cited from another canonization process, that of cardinal Peter

¹³ The first canonization process in which such an interrogatory was used was that of St Dominic in 1233; a standard formulary for inquiring about miracles had already been devised in the preceding year: André Vauchez, *Sainthood in the Late Middle Ages* (Eng. tr., Cambridge, 1997), pp. 48–50.

¹⁴ *si dicta miracula fuerunt supra vel contra naturam . . . quibus verbis utebantur illi qui petebant dicta miracula fieri . . . si in operatione dictorum miraculorum apposite herbe vel lapides vel alique alie res naturales vel medicinales: Inquisitio de fide, vita et moribus, fama et miraculis . . . Thome de Cantilupo*; MS Vatican City, Biblioteca Apostolica Vaticana, Vat. Lat. 4015, fol. 4v. For further discussion, see R. Bartlett, *The Hanged Man: A Story of Miracle, Memory and Colonization in the Middle Ages* (Princeton, 2004), esp. pp. 13–14, 23–4, and 110–11.

of Luxemburg, which took place in January 1390. The cardinal had died only three years earlier, in 1387, but already 180 miracles had been attributed to his intercession.¹⁵ One of the things that the witnesses to the late cardinal's miraculous powers of healing frequently mentioned was that the cures he effected were beyond the powers of nature (the depositions were of course mostly given in the vernacular but recorded in Latin). Thus in the summer of 1387, a sergeant-of-arms of the pope was seized with vomiting and diarrhoea: "when he was visited by the doctors, it was judged, according to nature (*secundum naturam*), that it was impossible for him to escape death".¹⁶ It was at this point that his mother invoked the aid of the recently deceased Peter. Another cure involved a man who had blinded himself accidentally with a knife, so that "it was impossible for his sight to be restored according to nature".¹⁷ Henrietta, widow of an Avignonese notary, suffered for three months from a swollen arm. She eventually sought the help of the saint, "despairing that the arm would heal naturally (*naturaliter*)".¹⁸

Even more telling is a miracle involving a boy who had been standing on the bridge at Avignon (really) when a rope pulling a passing boat had accidentally caught him and dragged him off the bridge. Even though the boy could not swim and he

¹⁵ *Processus de Vita et Miraculis B. Petri de Luxemburgo, Acta sanctorum, Julii 1* (Antwerp, 1719), pp. 527–607; for the number of miracles, Vauchez, *Sainthood* (as in n. 13), p. 503. There is a good brief introduction to Peter and his cult in Richard Kieckhefer, *Unquiet Souls: Fourteenth-Century Saints and their Religious Milieu* (Chicago, 1984), pp. 33–44, 125–7.

¹⁶ qui per medicos visitatus, iudicatus fuit secundum naturam, impossibile esse ipsum evitare mortem: *Processus* (as in previous note) no. 121, col. 570.

¹⁷ quod impossibile erat secundum naturam lumen eidem restaurari: *ibid.*, no. 138, col. 572.

¹⁸ de dicti brachii sanitate naturaliter recuperanda desperans: *ibid.*, no. 164, col. 575.

was in the river for a long time – as long as it takes to say the psalm *Miserere mei* twice, according to one witness – he was not drowned and was eventually pulled out by a shipman with a gaffe (*unum baculum, sive gaf*, in the Latin). One witness to this event was asked directly “if he believed that the boy escaped naturally or miraculously (*naturaliter, vel miraculose*)?”¹⁹ It would be hard to imagine a more striking example of a leading question. Naturally the witness replied “miraculously”.

Such instances show the way that a probing investigation into the miraculous, conducted, as it was, by men with sophisticated Scholastic ideas about how the universe ran, could encourage thinking in terms of the natural.²⁰ An obvious twin of the natural is the supernatural, and it is unsurprising that exactly the period that sees the creation of standard questionnaires on miracles, the thirteenth century, sees also the appearance, for the first time, of the word “supernatural” (*supernaturalis*) as a significant tool for organizing thought.

The Catholic theologian Henri de Lubac traced the evolution of this term in Christian theological writings in a work published in 1946.²¹ He recognized that the idea itself could be well expressed periphrastically by the phrase “above nature (*supra naturam*)”, which was common from the fourth century onwards, but there

¹⁹ Interrogatus si credit quod naturaliter, vel miraculose dictus puer evasit?: *ibid.*, no. 209, col. 593; the process contains several other accounts of this miracle. For instance, the reference to the gaff and the psalm is no. 201, col. 591.

²⁰ For an excellent study of how a canonization process might force the witnesses to consider the “boundaries and rules by which they defined the natural and the supernatural”, see Laura Smoller, “Defining the Boundaries of the Natural in Fifteenth-century Brittany: The Inquest into the Miracles of Saint Vincent Ferrer (d. 1419)”, *Viator* 28 (1997), pp. 333–59 (quotation at p. 358).

²¹ Henri de Lubac, *Surnaturel: études historiques* (Paris, 1946), pp. 323–428, “Aux origines du mot ‘surnaturel’”, esp. 369–73.

is something significant about a new coinage. Even if the mere word “supernatural” does not enable writers and thinkers to say something they could not say before, its appearance surely indicates that they wanted to say it more often and more conveniently. It is therefore important that it is in the thirteenth century that, in de Lubac’s words, “*supernaturalis* will begin to be used as a common term (*un mot courant*)”. He points especially to its employment by Thomas Aquinas: “after him, the distinction natural/supernatural tends to replace many analogous distinctions”.²² De Lubac’s conclusions certainly seem well founded. The *Index Thomisticus* (which, it should be pointed out, also indexes some works not by Aquinas) gives 370 instances of the word. For example, returning to our Genesis account, Aquinas asserts that the creation of the universe in such a way that woman could be produced from the rib of man was effected “through supernatural power (*per virtutem supernaturalem*)”.²³ To keep a sense of proportion, it is worth noting that the *Index* also lists 43,000 uses of “nature” and “natural”.

Lubac’s survey indicates that the term “supernatural” was rare before the twelfth century. The main exception is in the works of the unusual ninth-century scholar John the Scot, who employed it both in his own writings and in his translations from Greek, but John the Scot is an isolated case.²⁴ Otherwise, the new term

²² *Ibid.*, pp. 371–3, 398–9.

²³ *Super Sententiis*, lib. 2 d. 18 q. 1 a. 1 ad 5, in *Opera omnia* (as in note 9) 1, p. 176.

²⁴ John the Scot seems to have devised the term as a Latin equivalent for the ὑπερφύσις of the Pseudo-Dionysius, whom he translated, and then used it extensively in his own *Periphyseon* (ed. Edouard Jeaneau, 5 vols., *Corpus Christianorum, continuatio medievalis* 161–5, 1996–2003). Denys l’Aréopagite, *La Hiérarchie céleste*, ed. and tr. Günter Heil and Maurice de Gandillac (Sources chrétiennes 58, 1958), p. 153 n. 1, lists all occurrences of ὑπερφύσις and ὑπερφυσίως in the works of Pseudo-Dionysius and also argues that “merveilleux” is a better translation than “surnaturel” for the

fits well into that efflorescence of novel technical terms in philosophy and theology that characterized high Scholasticism. As Francis Bacon noted, looking back from the seventeenth century on "the schoolmen", as he called them, medieval Scholastic writers showed great "liberty to coin and frame new terms of art to express their own sense".²⁵

It is, of course, always a risky business to assert this or that occurrence is the earliest use of a term. After all, it only needs one counter-example to be falsified. The new tool of machine-readable texts has made this a much less hazardous proposition, however. De Lubac wrote at a time when writing the history of terms could not be based on the swift scanning of a database but required one to read everything. He dealt mainly with theological texts. What if we turn to another kind of text which might well be thought likely to generate the language of the supernatural, namely, hagiographical writings, that is, the Lives of the saints and accounts of their miracles? Fortunately, in modern conditions, we now have a huge database that can be searched for these purposes. The Acta Sanctorum Database contains the text of the sixty-eight printed volumes of the Acta Sanctorum published by the Bollandists, a branch of the Jesuits specializing in hagiography. The Acta Sanctorum is organized not alphabetically or chronologically but calendrically, by saints' days. The Bollandists published their first two volumes, dealing with the saints whose feasts fall in the month of January, in 1643. In 1925, the series reached the saints of 10 November. There can be few if any publishing histories like it.

term. The two words are not uncommon in Greek patristic writers; examples are cited in *A Patristic Greek Lexicon*, ed. G. W. H. Lampe (Oxford, 1961), p. 1443 s.vv.

²⁵ *Advancement of Learning* (London, 1605) 1. 4. 2.

The outcome of a search on the word "supernatural" (*supernaturalis*) and its various grammatical forms in this database is as follows.²⁶ First, the word is not particularly common. In all the hundreds of hagiographic texts included in the Acta Sanctorum, we find fewer than fifty instances. Second, these show a clear chronological distribution: not one is earlier than the mid-thirteenth century, precisely the time when, according to de Lubac, Thomas Aquinas was bringing the word "supernatural" into common theological discourse. Third, there is a noticeable tendency for the term to be used by the mendicant friars, Franciscans and Dominicans alike. Indeed, amongst the earliest uses of "supernatural" is that by Bonaventure, writing his Life of St Francis in the early 1260s, and other early examples include Lives of St Dominic and Thomas Aquinas himself.²⁷ The new

²⁶ One should note that several of the occurrences of "supernaturalis" and its forms in the Acta Sanctorum Database and the Patrologia Latina Database turn out to be "spiritalis" or "spiritualis" when newer and better editions can be checked. Two such cases are Jocelin of Furness' *Vita Patricii, Acta sanctorum*, Martii 2 (Antwerp, 1668), pp. 540–80, at p. 577, where the Bollandists' "supernaturali etiam more" should be "spiritali etiam sudore" – a reading kindly supplied by Richard Sharpe from his own draft edition; and Gilbert Crispin's *Vita Herluini* (*Patrologia latina* 150, cols. 697–714, at col. 712), where "supernaturalis" should be "spiritualis", as in *The Works of Gilbert Crispin*, ed. Anna Sapir Abulafia and G. R. Evans (London, 1986), "Vita Herluini", pp. 185–212, at p. 212. In general, the effect of such corrections is to make the thirteenth-century emergence of the term even more evident.

²⁷ Bonaventure, *Legenda maior S. Francisci* 4 ("supernaturali virtute"), 5 ("supernaturaliter"), *Analecta Franciscana* 10 (1926–41), pp. 555–652, at pp. 573, 581; Dietrich von Apolda, *Vita S. Dominici* (of 1297) 25 ("nec naturaliter, sed supernaturaliter ac divinitus"), *Acta sanctorum*, Augusti 1 (Antwerp, 1733), pp. 562–632, at p. 612; William de Tocco, *Vita S. Thomae Aquinatis* 33 ("quod mirabiliter Deus revelaret miraculo, quod supernaturaliter concessisset ex dono"), in *Fontes Vitae S. Thomas Aquinatis*, ed. D. Prümmer and M.-H. Laurent (Documents inédits publiés par la Revue Thomiste 6 fascicules, 1912–37), pp. 57–160 (fasc. 2), at p. 107, and

Latin coinage came into the vernacular languages at the end of the Middle Ages, appearing for the first time in French in 1375 and in English around the middle of the following century, in both cases by direct modelling on the Latin word.²⁸

The history of the term "supernatural" in hagiographic writing thus corresponds exceptionally well with that in general theological writing. The mendicants, high Scholasticism, and the supernatural were born together.

Clearly, one would not wish to pin too much on the history of a single term, but it does seem that a new explicitness in the categorization of phenomena marked the period from the thirteenth century on. Theologians, hagiographers, and papal commissioners in canonization proceedings were elaborating and insisting on a particular mental geography, in which

ed. Claire Le Brun-Gouanvic, *Ystoria sancti Thome de Aquino de Guillaume de Tocco* (1323). *Édition critique, introduction et notes* (Studies and Texts 127: Pontifical Institute of Medieval Studies, Toronto, 1996), p. 161.

²⁸ *Dictionnaire historique de la langue française*, ed. Alain Rey (2 vols., Paris, 1992) 2, p. 2055, s.v. "surnaturel", records the earliest use of the vernacular "supernaturel" as "1375, Robert de Presles". This must refer to the translation of Augustine's *City of God* by Raoul (not Robert) de Presles, which was completed in that year. Raoul's translation work led him to create other neologisms: Olivier Bertrand, "Les néologismes religieux dans la traduction de la Cité de Dieu par Raoul de Presles ou comment christianiser le lexique latin", in *Actes du 23e Congrès International de Linguistique et de Philologie Romanes*, ed. Fernando Sanchez Miret (6 vols. in 5, Tübingen, 2003) 3, pp. 43–7. See also Charity Cannon Willard, "Raoul de Presles's Translation of Saint Augustine's *De Civitate Dei*", in *Medieval Translators and their Craft*, ed. Jeanette Beer (Kalamazoo, 1989), pp. 329–46.

The earliest instance recorded in the *Oxford English Dictionary* is from a mid-fifteenth-century translation of Thomas à Kempis' *Imitation of Christ*, where his Latin phrase *naturaliter vel supernaturaliter* is rendered "naturely or supernaturally": *The Earliest English Translation of the First Three Books of the De imitatione Christi*, ed. John K. Ingram (Early English Text Society, extra series 63, 1893), p. 94 (numbered in this version as 3. 24, corresponding to 3. 22 of the Latin text).

events could be assigned to particular domains, this natural, that supernatural.

In the second part of this chapter, I address two large questions that arise from what I have been discussing. First, what were the chief problems over the boundaries of the supernatural, that is, when deciding what was natural and what was not, which were the fraught areas for thinkers of the medieval period? Second, and very speculatively, I want to conclude by asking how developments in discussion of the natural and supernatural fit into the general cultural and intellectual history of the high and late Middle Ages, focussing in particular on the question: Was there a contraction of the sphere of the supernatural in that period?

To turn to the first topic. We have seen the elaboration of a new term, the supernatural, the essence of which is to mark off from the natural something else. Marking off the natural from other things had always been a major concern of Western thinkers, for if nature is not to be regarded, somewhat vacuously, as a synonym for "everything", it obviously has things it is defined against. In the instances discussed so far, the important borderline has been between nature and miracle, but this was not the only problem of classification that preoccupied medieval thinkers. There were other categories that needed to be defined, both against nature and against each other. Delimiting these was a concern of any writer who had to think about the regularities of the world, and this meant not only theologians but also historians, travel writers, and others.²⁹

²⁹ In an important article, Jacques Le Goff notes that "in the twelfth and thirteenth centuries supernatural phenomena were divided, in the West, into three categories, fairly clearly delineated by three adjectives: *mirabilis*, *magicus*, *miraculosus*": Jacques Le Goff, "The Marvelous in the Medieval West", in *The Medieval Imagination* (Eng. tr., Chicago, 1988), pp. 27–44, at p. 30; see also Caroline Walker Bynum, "Miracles and Marvels: The Limits of Alterity", in *Vita religiosa im Mittelalter: Festschrift für Kaspar Elm*

For instance, in a work probably completed in 1215, Gervase of Tilbury, a kind of international courtier, introduced a collection of amazing tales by making the following distinction. He starts by discussing the general category of unfamiliar and unusual things (*inaudita*, literally, "things unheard of"). These, he says, intrigue us "partly because we marvel at the alteration in the natural course of affairs, partly from our ignorance of the cause, the source of which is completely unknown to us". So there are things in the world that are not part of the ordinary course of nature and the cause of which is mysterious. Gervase then goes on to divide this general category into two:

From these arise two things, miracles and wonders (*miracula et mirabilia*), although the end result of both is amazement. Now we commonly call things miracles that are beyond nature and that we ascribe to the divine power. . . . However, we call things marvels that are beyond our understanding, even when they are natural.³⁰

zum 70. Geburtstag, ed. Franz J. Felten and Nikolas Jaspert (Berlin, 1999), pp. 799–817.

³⁰ Que inaudita percipiuntur amplectimur, tum ex mutatione cursu naturalis quam admiramur tum ex ignorancia cause cuius ratio nobis est imper-scrutabilis. . . . Ex hiis, duo proueniunt: miracula et mirabilia, cum utro-rumque finis sit admiratio. Porro miracula dicimus usitatus que preter naturam diuine uirtuti ascribimus. . . . Mirabili vero dicimus que nostre cog-nicioni non subiacent, etiam cum sunt naturalia . . . : Gervase of Tilbury, *Otia Imperialia* 3, pref., ed. S. E. Banks and J. W. Binns (Oxford, 2002), p. 558. See Michael Rothmann, "Mirabilia vero dicimus, quae nostrae cognitioni non subiacent, etiam cum sint naturalia. Wundergeschichten zwischen Wissen und Unterhaltung: der 'Liber de mirabilibus mundi' ('Otia Imperialia') des Gervasius von Tilbury", in *Mirakel im Mittelalter: Konzeptionen, Erscheinungs-formen, Deutungen*, ed. Martin Heinzelmann, Klaus Herbers and Dieter R. Bauer (Beiträge zur Hagiographie 3, Stuttgart, 2002), pp. 399–432.

From out of the undifferentiated category of the unusual and inexplicable, Gervase has thus distinguished two subgroups, on the one hand miracles, which are beyond nature and caused by God directly, on the other hand marvels, which are natural even if inexplicable and unusual. It is fairly clear what Gervase means in practice by natural marvels from the following exam-ples in his collection: people born with no head, bearded ladies, the power of fennel to ward off enchantment, and so forth.³¹ It is the kind of miscellaneous and sensationalist assortment that might remind us of nineteenth-century fairground attrac-tions. Gervase's mental map thus places marvels in the category "natural". Of course, they are an unusual part of nature, to be distinguished from the regular patterns, and as a consequence his nature is not uniform – it contains both regularities and anomalies.

Such distinctions are not uncommon. They served to maintain important conceptual borders, as can be seen clearly in the com-ments Thomas Aquinas makes on monsters. This forms part of his discussion of the creation of Eve already mentioned. "Mon-sters occur in nature", he writes, and then makes a distinction: "they occur beyond the intention of active nature but they are not termed miracles."³² His phrasing, "in nature" yet "beyond the intention of active nature" secures for the monstrous a special place in the natural world and yet keeps the category "miracle" intact for what he wants to use it for. Because Aquinas thought it important not to conflate the miraculous and the monstrous, he preserved the distinction by consigning monsters to nature, where they shared a home with natural marvels.

³¹ Gervase, *Otia* (as in previous note) 3, 75, 76, 83, pp. 700, 712–14.

³² monstra in natura contingunt, et praeter intentionem naturae agentis; non tamen miracula dicuntur: *Super Sententiis*, lib. 2 d. 18 q. 1 a. 3 arg. 6, *Opera omnia* (as in note 9), 1, p. 176.

Another important distinction that it was crucial to maintain was that between miracle and magic. Again, Aquinas provides a succinct illustration. "God alone can perform miracles", he writes, and "true miracles are requested by someone from God". The miracles of the saints would obviously be of this type. If this is not the case, however, and "it appears that a creature is performing miracles, then they are not true miracles." He then goes on to explain how such apparent miracles are performed: "they are performed through some forces of natural things, although hidden from us, such as the miracles of demons, which are performed by magic arts".³³ It is worth emphasizing here that the "non-true miracles" Aquinas is talking about can be described equally well as natural, demonic and magical – he attributes them to occult "forces of natural things" but then gives as an example "the miracles of demons, which are performed by magic arts". This idea that the demonic and the magical should be categorized as natural rather than supernatural or preternatural was to have a long future, forming the cornerstone of conventional demonological thinking in the era of the great witch-hunt. The fullest recent account of early modern demonology in English is insistent that demonology was considered by contemporaries "a form of natural knowledge" and that it is a fundamental mistake to associate the witchcraft beliefs of the time with "supernaturalism".³⁴

³³ *miracula facere, solius Dei est. . . . Cum igitur ab aliqua creatura miracula fieri videntur, vel non sunt vera miracula, quia fiunt per aliquas virtutes naturalium rerum, licet nobis occultas, sicut est de miraculis daemonum, quae magicis artibus fiunt; vel si sunt vera miracula, impetrantur per aliquem a Deo, ut scilicet talia operetur: Compendium theologiae, lib. 1, chapter 136 co., Opera omnia (as in note 9), 3, p. 615; cf. Summa contra gentiles 3. 102–7, ibid., 2, pp. 94–6.*

³⁴ Stuart Clark, *Thinking with Demons: The Idea of Witchcraft in Early Modern Europe* (Oxford, 1997), pp. 168–9.

There were, however, alternative approaches to magic, which saw it, or at least some forms of it, as indeed natural but non-demonic. The heyday of the concept "natural magic" was to be in the sixteenth and seventeenth centuries, but it was not unknown in the medieval period, being employed notably by William of Auvergne, an impeccably orthodox figure – teacher of theology at Paris and bishop of Paris – whose main work, the modestly titled "On the Universe", dates, probably, from the 1230s.³⁵ William makes it clear that he regards "natural magic (*magica naturalis* or *magia naturalis*)" as quite innocent: "Those things worked by natural magic are not an offence against the Creator or a wrong, unless someone employs that art either too curiously or for evil."³⁶ Being "too curious" meant indulging in *curiositas*, that is, "the desire to know things that are not

³⁵ *Opera omnia* (2 vols., Orleans, 1674, reprint Frankfurt, 1963) 1, pp. 593–1074; some parts have been translated: William of Auvergne, *The Universe of Creatures*, tr. Roland J. Teske (Milwaukee, 1998). On William and magic, see Steven B. Marrone, "William of Auvergne on Magic in Natural Philosophy and Theology", in *Was ist Philosophie im Mittelalter?*, ed. Jan Aertsen and Andreas Speer (*Miscellanea Medievalia* 26, Berlin, 1998), pp. 741–8; Lynn Thorndike, *A History of Magic and Experimental Science during the First Thirteen Centuries of Our Era* (2 vols., New York, 1923) 2, chapter 52, pp. 338–71: "William of Auvergne". For his general views of Nature, Albrecht Quentin, *Naturkenntnis und Naturanschauungen bei Wilhelm von Auvergne* (Hildesheim, 1976); there is a general summary in Roland J. Teske, "William of Auvergne", in *A Companion to Philosophy in the Middle Ages*, ed. Jorge J. E. Gracia and Timothy B. Noone (Malden, MA, and Oxford, 2003), pp. 680–7.

³⁶ De his autem, quae fiunt per magicam naturalem, scito quod nullam habent creatoris offensam, vel injuriam, nisi quis ex ea arte, vel nimis curiose, vel malum operetur: *De universo* (as in previous note) 1. 1. 46 (a – two successive chapters are numbered 46 in this edition), p. 663; the phrase *magia naturalis* occurs in his *De legibus* 24, in his *Opera omnia* (as in previous note) 1, pp. 18–102, at p. 69.

necessary" and might lead to such "unspeakable operations" as divination and fortune-telling.³⁷

Properly directed, however, natural magic was, according to William, simply a branch of natural science. Its special sphere of activity is the wonderful works of nature, which in some ways its practitioners could develop. For instance, nature can generate frogs, lice, and worms suddenly, but assistance can be applied to strengthen and sharpen the process. Those ignorant of these methods presume that demonic aid must be being invoked, but

those who are learned in these things are not amazed at such things but glorify the creator alone in them, knowing that nature works through his omnipotent will alone, both according to the custom known to men and beyond that custom, not only working in new ways but also producing new things.³⁸

William's list of wonderful natural forces has some of the miscellaneous quality of Gervase of Tilbury's marvels: sealskin repels lightning; olive trees planted by virgins thrive much better; some people have a morbid fear of cats – "they are terrified at the sight of a cat", he says – *horrent aspectum catti* (and curiously such a phobia is recorded of one thirteenth-century monarch, Wenceslas II of Bohemia).³⁹ William of Auvergne has to tread a careful

³⁷ *curiositate quae est libido sciendi non necessaria...infandissima illa opera...videlicet inspectio speculi, etc.*: *ibid.* 24, p. 70.

³⁸ *Qui autem in his docti sunt, talia non mirantur, sed solum creatorem in eis glorificant scientes, quod sola omnipotentissima voluntate ipsius natura operatur, et juxta consuetudinem notam hominibus et praeter consuetudinem non solum novis modis, sed etiam res novas*: *ibid.* 24, p. 70.

³⁹ *De universo* (as in note 35) 1. 1. 46 (a – two successive chapters are numbered 46 in this edition), pp. 657–8; cf. the comment of a contemporary chronicler on Wenceslas: *catos videre eorumque garritum audire ex quadam consuetudine exhorruit*: Peter of Zittau, *Chronicon Aule Regie* 1. 15, *Fontes Rerum Bohemicarum* 4, ed. J. Emler (Prague, 1884), pp. 1–337, at p. 22.

line: amulets are vain nonsense, but paschal wax images blessed by the pope ward off thunder; incantations are wicked but exorcisms work.⁴⁰

The canonization processes of the later medieval period, already mentioned, were particularly focussed on sifting out anything that might be identified as natural or magical from supposed miracles. For, if, say, an apparent healing miracle could be explained by natural processes, perhaps medical, or had involved such illicit magical procedures as incantations, then it could be ruled out as a true miracle supporting the case for canonization. And demarcating the licit and illicit in such cases might be complex. How, for example, did one draw the line between legitimate invocation and prohibited incantation? Hostiensis, one of the great canon lawyers of the thirteenth century, insisted that it was a condition of a true miracle that it *not* be a result solely of the pronouncement of certain words – "not from the power of words (*non ex vi verborum*)".⁴¹ He would perhaps have endorsed the distinction that anthropologists of earlier generations used to employ, between magic (coercive) and religion (propitiatory or supplicatory). Here the Victorian and Edwardian anthropologists and the thirteenth-century Scholastics had common ground.

It was thus not always a simple matter to spell out the difference, which we have seen Thomas Aquinas confronting, between true miracles and the marvellous feats of magicians and demons. A biblical example that proved a favourite peg on which to hang discussion of this topic was the contest between Moses and Aaron and the magicians of Egypt before Pharaoh described in the Book

⁴⁰ Thorndike, *History of Magic* (as in note 35), 2, pp. 352–3, drawing particularly on *De legibus* 27, pp. 84–9.

⁴¹ Hostiensis (Henry de Segusio), *Summa aurea* (Lyons, 1548), III, sub rubrica "De reliquiis et veneratione sanctorum", fol. 188v.



2. MIRACLE OF RODS CHANGED INTO SERPENTS. The contest between Moses and Aaron on one hand and Pharaoh's magicians on the other, as described in Exodus 7, involved Aaron casting down his rod, which then became a serpent, and the magicians then casting down their rods, which also became serpents. Although Aaron's serpent swallowed up the other serpents, the passage still seemed to indicate that magicians could effect genuine transformations. The biblical passage thus proved a major stimulus to medieval discussion of the distinction between miracle and magic. (The Pierpont Morgan Library, New York. MS M.394, fol. 43v (Bible Historiale of Guyart des Moulins, ca. 1251-ca. 1297).)

of Exodus, chapter 7.⁴² When Aaron threw down his rod, it became a serpent, but when the magicians threw down theirs, they became serpents too. Was there any difference?

We can see one of the leading scholars of the thirteenth century, Aquinas' teacher Albertus Magnus, almost becoming entangled with these serpents.⁴³ In his discussion of the question whether the conjurations of magicians are miracles, he first affirms that the activities of Pharaoh's magicians were true and not illusory; they really did change staffs into serpents. In a strict sense, however, these transformations were not miracles, he says, for it is natural for wood to turn into serpents (we leave aside the empirical issue here, because for Albertus it was an axiom that rotting trees generated serpents and dragons). All that happened in the case of Pharaoh's magicians was that this natural process was speeded up by the help of demons, who were able to do so through the subtlety and agility of their nature. This view left Albertus a little exposed, however. One of the most well-known biblical miracles was Christ turning water into wine, and was it not the case that water turned naturally into wine, through rainfall, absorption by the vine and so forth? It was a process at least as natural as wood turning into snakes. "But", argues Albertus, "Christ did not make wine from water in this way, but solely by the command of his will."⁴⁴ He then goes on to point out that it is not instantaneous action that constitutes a miracle,

⁴² Caroline Bynum points out the that "the fullest scholastic treatments of the miraculous" address precisely such paradigmatic "species transformations" rather than cures, which are however "by far the most common miracle in actual miracle collections": Caroline Walker Bynum, *Metamorphosis and Identity* (New York, 2001), p. 90.

⁴³ Albertus Magnus, *Summa Theologica* 2. 8. 30. 1. 1, ed. A. Borgnet, *Opera omnia* 32 (Paris, 1895), pp. 319-23.

⁴⁴ Sed hoc modo Christus non fecit vinum ex aqua, sed solo imperio suae voluntatis... : *ibid.*, p. 323.

but rather an event "raised above the order of nature". In any case, the magic transformations of Pharaoh's magicians were not instantaneous, he says, but, properly speaking, simply quicker than nature could produce and hence "wonders" not "miracles". The proliferation of argument here may remind one of the old adage, "Never believe anyone who gives you more than one reason why they can't do something." Albertus is evidently in some intellectual discomfort, hovering as he considers the proper definition of miracle, in particular whether instantaneous effect or acceleration of natural processes are to be considered essential or irrelevant considerations.

When thinkers and writers of the medieval period deployed the language of "nature", they thus did so to make a range of possible points. Addressing the marvels of the natural world, they might declare how such things were indeed contrary to the usual course of nature but not to nature intrinsically, and hence they could still be clearly distinguished from divine miracles. Such natural oddities might amaze people (which was, of course, the heart of the Augustinian concept of miracle), but their causes were natural, even if unknown. They also had to steer a careful course in their thinking between the miraculous and the magical.

In general, one of the striking things in these discussions of the boundaries of the natural is how difficult it was for medieval thinkers to be consistently systematic on the subject. Concepts of nature and its opposites and exceptions, whether the latter be construed as miracle, marvel, monster or magic, are not susceptible to quick and easy definition, indeed not only for the thinkers of the medieval period but also for us. The categories and definitions used for discussing or referring to the natural and the supernatural were fluid, potentially contradictory, and often indeed unexamined.

Moreover, the vocabulary and terms of discussion of the natural and the supernatural did not develop in isolation but under the

pressure of dogmatic constraints. One did not want a God who was unnatural. "Nature" had such a large and ancient associated baggage as a positive and normative concept that it was hard to classify anything God did as "contrary to nature". "The things that God does beyond the order of nature", Aquinas asserts, "are not contrary to nature."⁴⁵ God could indeed even be identified as "first nature (*prima natura*)" and hence his deeds were pre-eminently "natural".⁴⁶ Further, if to God all things were natural, then, of course, in a sense, there are no miracles. In the pithy statement of a thirteenth-century monk: "we call a miracle anything against the accustomed course of nature, which produces wonder in us; according to the causes above, nothing is a miracle."⁴⁷

Let me now turn briefly to my final theme or, rather, question: was there a contraction of the sphere of the supernatural in the period, say, 1000–1500? A persuasive case can be made, although with such a vast topic, I focus only on a couple of selected component parts of that argument.

To take an example at random, let us turn to trial by ordeal. Ordeal, which was widespread in Latin Europe during the early and central Middle Ages, involved the resolution of a dispute

⁴⁵ Quod ea quae Deus facit praeter naturae ordinem non sunt contra naturam: Thomas Aquinas, *Summa contra Gentiles*, 3. 100, title, *Opera omnia* (as in note 9), 2, p. 94.

⁴⁶ Miracula... ab alio principio fiunt quam sit natura, scilicet a superiori et prima natura: Alexander of Hales, *Summa theologica* 2. 2. 3. q. 3, tit. 3. 1, "de miraculis" (4 vols. in 5, plus index vol., Quarracchi, 1924–79) 2, p. 286. For the common phrase, "Natura, id est Deus", see Jacques Chiffolleau, "Contra Naturam: pour une approche casuistique et procédurale de la nature médiévale", *Micrologus* 4 (1996), pp. 265–312, at p. 285.

⁴⁷ Miraculum dicimus quicquid fit contra solitum cursum naturae, unde miramur. Secundum causas superiores miraculum nihil est: Caesarius of Heisterbach, *Dialogus miraculorum* 10. 1, ed. J. Strange (2 vols. and index, Cologne, etc., 1851–7) 2, p. 217.

not by the usual legal means of oath-swearing, the testimony of witnesses and the hearing of relevant evidence, but by submitting the accused or one of the parties in a civil suit to a dramatic physical test: carrying a red-hot iron, plucking a pebble from a boiling cauldron, being cast into a pool or stream. The result would determine the verdict. In the ordeals of hot iron and hot water, the hand had to be healing cleanly after a given period, usually three days; in the ordeal of cold water, the accused were deemed guilty if they floated, innocent if they sank (students especially like this apparent piece of imbecility, with its echoes of the mob in *Monty Python and the Holy Grail* calling out, "Throw her into the pond!", but, of course, the accused were fastened to a rope and pulled out if they sank). The underlying concept of trial by ordeal was not a random test but a carefully staged ritual in which God would give his verdict, and *iudicium Dei*, "judgment of God", was in fact a standard medieval term for ordeal.

Trial by ordeal virtually disappeared from Latin Europe by 1300, and several great scholars have been willing to see its passing as part of a "process of limiting the scope of the appeal to the supernatural in human affairs" and a sign of a new "disengagement of the sacred from the profane", involving a "sharpening and delimitation of the role of the supernatural".⁴⁸ Some of the debate that took place about trial by ordeal in the twelfth and thirteenth centuries was indeed couched in terms of the natural and the supernatural. Those who thought that trial by ordeal seemed to require the elements to behave in an unusual way, hot

⁴⁸ Richard W. Southern, *The Making of the Middle Ages* (London and New Haven, 1953), p. 98; Peter Brown, "Society and the Supernatural: A Medieval Change", *Daedalus* 104 (1975), pp. 133-51, at pp. 135, 147 (repr. in his *Society and the Holy in Late Antiquity* (Berkeley and Los Angeles, 1982), pp. 302-32).

iron not burning the innocent, water not submerging the guilty, might question whether God wished to "compel the nature of things to yield to" merely human requirements.⁴⁹ Other opponents mocked these "ordeal miracles"⁵⁰ and stressed that they were given credence only by simple people ignorant of the natural order.⁵¹ Others thought that it was wrong to demand supernatural results. Ordeal was illicit according to Aquinas because "a miraculous effect is expected of God".⁵² In all this polemic, the anomalous place of ordeal in the landscape of the natural and the miraculous was an important point.

Another big area where one might look, when considering changes in the conceptualization of the natural and the supernatural, is the enormous transformation in the educational curriculum that took place in western Europe between 1150 and 1250.

Latin Europe was, for most of the Middle Ages, ignorant of Greek.⁵³ Scholars in western Europe thus had no access to the works of Plato, Aristotle and the other ancient Greek philosophers unless they had been translated into Latin, and, for a long time, few of them were, the main exceptions being some of

⁴⁹ ut quibushbet eorum votis rerum naturam cedere compellat: Saxo Grammaticus, *Gesta Danorum* 14. 54. 20, ed. J. Olrik and H. Raeder (2 vols., Copenhagen, 1931-57), p. 508.

⁵⁰ miracula peregrini iudicii: Peter the Chanter, *Verbum abbreviatum* 78, *Patrologia latina* 205, cols. 23-270, at col. 228.

⁵¹ Leges, que a quibusdam simplicibus sunt dicte paribiles, qui nec rerum naturam respiciunt nec veritatem attendunt: Frederick II, *Constitutions of Melfi* 2. 31, ed. Wolfgang Stürner, *Die Konstitutionen Friedrichs II. für das Königreich Sizilien, Monumenta Germaniae Historica, Constitutiones et acta publica imperatorum et regum* 2, suppl. (Hanover, 1996), p. 337.

⁵² expectatur aliquis miraculosus effectus a Deo: Thomas Aquinas, *Summa Theologiae* 2. 2. 95. 8 ad 3, *Opera omnia* (as in note 9), 2, p. 650.

⁵³ See Walther Berschin, *Greek Letters and the Latin Middle Ages* (Eng. tr., Washington, DC, 1988).

Aristotle's elementary works on logic. From around 1100, this changed dramatically as ever increasing numbers of works of Greek science and philosophy were translated, notably but by no means only Aristotle's works. The tale of what happened when these works did arrive in Paris, Europe's leading academic centre, is remarkable, involving as it does one of the most dramatic reversals in European intellectual history. Aristotle's logical works were uncontroversial, but his works on biology, psychology, physics, and so on, which bore the significant collective title *libri naturales*, "the books about natural things", were initially viewed with suspicion by the ecclesiastical authorities. In 1210, they were even banned in the nascent university of Paris: "the books of Aristotle on natural philosophy and the commentaries on them shall not be read at Paris, in public or in private, and this under pain of excommunication".⁵⁴ It is therefore rather poignant to read an account of the basic arts syllabus at Paris from 1255: after the introductory lectures on logic and grammar had been given, the teachers were to turn to lecturing on "Aristotle's Physics, Metaphysics and the book On Animals . . . the book On the Heavens, books one and four of the Meteorology . . . the book On the Soul . . . the book Sense and Sensibilia . . . the book On Sleep . . .", and so on.⁵⁵ Aristotle's books on nature had gone from proscribed texts to prescribed texts in a generation or so.

⁵⁴ nec libri Aristotelis de naturali philosophia nec commenta legantur Parisius publice vel secreto, et hoc sub pena excommunicationis inhibemus: *Chartularium Universitatis Parisiensis* 1 (1200–1286), ed. Henri Denifle (Paris, 1889), no. 11, p. 70.

⁵⁵ Physicam Aristotelis, metaphysicam et librum de animalibus . . . librum celi et mundi, librum primum metheorum cum quarto . . . librum de anima . . . librum de sensu et sensato . . . librum de sompno et vigilia . . . : *ibid.*, no. 246, p. 278.

What the works of Aristotle, along with the other Greek and Arabic texts which were translated in this period, offered the Latin West was something new – systematic, naturalistic, and rationalistic analysis of the world from a non-Christian viewpoint. There was a certain audaciousness in making this the foundation course in the universities of Catholic Europe.

It would be possible to argue that the adoption of Aristotelianism in the great centres of higher study in medieval Europe should be interpreted as a big step towards a more naturalistic world view. One could seek to illustrate this from most branches of study (for Aristotle is famously impressive on subjects as diverse as metaphysics and the ink sac of the cuttlefish), but perhaps the strongest apparent case emerges from his *Politics*. Aristotle's *Politics* was translated into Latin by the Dominican William of Moerbeke around 1260 and quickly became the subject of commentaries by Albertus Magnus, Aquinas, and others. Probably the most familiar phrase from the *Politics* is Aristotle's dogmatic statement that "man is by nature a political animal (*politikon zoon*)".⁵⁶ In William of Moerbeke's translation "*politikon zoon*" becomes "*civile animal*", an animal naturally civic, and Aquinas elaborates, "it is natural for man to be a social and political animal".⁵⁷ All this makes it plausible to argue, as a distinguished historian of medieval thought has done, that "The

⁵⁶ I would normally use the translation "human being" rather than "man" but Aristotle has just been at pains to point out how we should be sure to distinguish women from slaves, so perhaps the more gender-specific term is appropriate here.

⁵⁷ Aristotle, *Politics* 1253a 2; homo natura civile animal est: William of Moerbeke's translation, in Aristotle, *Politicon libri octo cum vetusta translatione Guilelmi de Moerbeka*, ed. F. Susemihl (Leipzig, 1872), p. 7. Naturale autem est homini ut sit animal sociale et politicum: Thomas Aquinas, *De regno (De regimine principum)* 1. 1, *Opera omnia* (as in note 9) 3, p. 595.

recovery of Aristotle's natural philosophy led people to take note of the naturalness of the political community itself".⁵⁸ The birth or rebirth of political thought premised on the naturalness of the human political community can be set alongside the disappearance of ordeal, the judgment of God, in legal process as another instance of that limitation of the supernatural that has been mentioned.

The great German sociologist of the early twentieth century Max Weber used the phrase "disenchantment of the world" to describe what he saw as the special path the West had taken, marked by the growing dominance of rationalism and an increasingly instrumental attitude to the natural world. It is a viewpoint that harmonizes easily with some modern environmentalist critiques of western civilization. Amongst professional historians, at least among those prepared to make rash generalizations, Weber's phrase is usually applied specifically to the period from the sixteenth to the eighteenth centuries, with the rise of modern science and the Enlightenment as uncontentious contributors to the disenchantment, and Protestantism and capitalism as less certain members of the cast. However, it is clear that Weber himself believed this process had been going on in the West not for centuries but for millennia.⁵⁹ Hence, if we take this seriously, the medieval period could be viewed not as the cartoon "Other" to modern pragmatic rationalist society but as a stage on the path to it. The German original of Weber's "disenchantment of the world" is "die Entzauberung der Welt". *Zauber* is the usual

⁵⁸ David Luscombe, "The State of Nature and the Origin of the State", in *The Cambridge History of Later Medieval Philosophy*, ed. Norman Kretzmann, Anthony Kenny, and Jan Pinborg (Cambridge, 1982), pp. 757-70, at p. 761.

⁵⁹ *dieser in der okzidentalen Kultur durch Jahrtausende fortgesetzte Entzauberungsprozess . . . : Wissenschaft als Beruf* (Stuttgart, 1995), p. 19 (originally published Munich and Leipzig, 1919).

German word for magic, so the literal sense of the phrase is "taking the magic out of the world". Perhaps those who opposed and eventually prohibited trial by ordeal or those who introduced the new natural sciences to European universities can be seen as agents busily taking the magic out of the world.

Historical issues of this degree of generality can, of course, never be resolved conclusively, no matter how much evidence is piled up. However, if we wanted suddenly to turn devil's advocate – an appropriate metaphor in fact – and argue an opposite case, one of our prime exhibits would be the great witch persecutions, which were not, or were barely, medieval, but, rather, characteristic of the early modern period.

It is indeed one of the most perplexing aspects of early modern European history that the centuries to which historians have given such labels as the Renaissance and the Age of Discovery, the same period which saw the rise of modern science, coincided with the age of the mass witch-hunt. Historians generally like their period labels clear-cut. How many books, for instance, are titled "Age of . . ." something – Absolutism, Adversity, Affluence, Anxiety (especially popular), and that is only the beginning of the "A"s. These "Ages" are difficult to match with complex realities, however. How does one reconcile the picture of a new dawn in European history, marked by such glories as the art of Leonardo, the scientific breakthroughs of Copernicus and Galileo, and the literary genius of Shakespeare with the hard fact that at this very period, tens of thousands of women and men were executed by the courts for copulating with demons, eating babies, and flying to midnight orgies?