

Spices and Late-Medieval European Ideas of Scarcity and Value

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SPICES AND DANGER

In book 17 of Isidore of Seville's *Etymologies*, pepper is said to come from groves of trees in India "guarded" by poisonous serpents. In order to harvest the pepper, the trees have to be burned, driving the snakes away and in the process turning the originally white fruit black.¹ Why the serpents are so devoted to these particular trees is not explained, but linking an exotic product with danger appealed to the imagination, and this story also ingeniously accounted for the fact that pepper is normally black and shriveled (it was vaguely known that a white and smooth variety also existed).

Isidore's sources of information about pepper include Pliny's *Natural History* and Solinus's compendium of marvels, but the snakes appear to be derived from a fictitious letter to the emperor Hadrian on the marvels of the East, a text that interacted with legends about Alexander's conquests.² Fascination with the origins of imported aromatic substances and the supposed peril of gathering them were commonplaces of the classical tradition. Herodotus describes the difficulties attending the collection of several fragrant products. Frankincense is guarded by snakes; cassia is patrolled by winged batlike creatures; and cinnamon grows in inaccessible Arabian mountains, but birds, fortunately, gather it for their nests. In this last case the birds are tempted by pieces of meat left out for them, but when they bring them back, the weight of the meat breaks apart the cinnamon nests

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¹ Isidore of Seville, *Etymologiae, livre XVII*, ed. and trans. Jacques André (Paris, 1981), 17.8.8, p. 147: "Piperis arbor nascitur in India, in latere montis Caucasi quod soli obuersum est, folia iuniperi similitudine. Cuius siluas serpentes custodiunt, sed incolae regionis illius, cum maturae fuerint, incendunt et serpentes igni fugantur, et inde ex flamma nigrum piper efficitur."

² Solinus, *Collectanea rerum memorabilium*, ed. Theodor Mommsen (Berlin, 1958), 52, p. 192; Pliny, *Natural History* 12.14; Edmond Faral, "Une source latine de l'histoire d'Alexandre: *La lettre sur les merveilles de l'Inde*," *Romania* 43 (1914), 119–215 and 353–70, at p. 205 (version A): "Ibi nascitur multitudo piperis, quod idem serpentes custodiunt; homines vero per industriam suam sic colligunt: cum maturum fuerit, incendunt eadem loca, et serpentes sentientes ignem fugiunt et sub terra se mittunt merito propter flammam: piper ipsum nigrum efficiet et sic eligitur, verumtamen natura piperis alba est." On the relation between this text and Isidore of Seville, see pp. 354 and 358–59. On the complex history of the letter, see Ann Knock, "Wonders of the East: A Synoptic Edition of the Letter of Pharasmanes and the Old English and Old Picard Translations" (Ph.D. dissertation, University of London, 1982).

and the sticks can then be collected when they fall to the ground.³ In his account of picturesque Greece, Pausanias says that in Arabia vipers build their nests around balsam trees and have to be driven away with sticks in order for the plants' precious resin to be collected.⁴ Pausanias is unusual in offering a reason why snakes patrol the plants: the vipers favor balsam above all other food. As it happens, according to Pausanias, balsam requires less heroic methods to obtain than the spices mentioned by Herodotus: even if the viper attacks, its bite is not poisonous because the diet of balsam has exerted a benign and soothing influence.

Venerable though it was, the idea that serpents surround and therefore impede the harvest of fragrant plants was not universally accepted. Pliny, not usually credited with skepticism about marvels, ridiculed Herodotus's accounts of the dangers of gathering cinnamon and cassia as deliberate fabrications put forth by natives of the regions where the spices grow in order to elevate prices. Pliny's comment offers the first intimation of a commercial motive for such alleged marvels. Theophrastus in his authoritative botanical treatise also dismissed these stories as fables.⁵ Yet Pliny and Theophrastus are not consistent in their skepticism, for elsewhere they describe other aromatic plants infested with very small, very poisonous serpents.⁶

On one level the snakes and the burning pepper trees form another enduring bit of classical and medieval lore about the Orient as a place of luxuries and wonders. Indeed, such images of valuable exotica paired with frightening phenomena flourished in modern colonial discourses about the tropics.⁷ The difficulties of harvesting pepper in India are mentioned frequently in texts from the ninth to fifteenth centuries.⁸ Other precious goods would collect similar legends. Marco

³ Herodotus, *Histories* 3.107 and 110–11. That cinnamon is made into birds' nests would be absorbed into the legend of the immortal phoenix: for example, Pliny, *Natural History* 10.2; *De ave phoenice* (attributed to Lactantius), lines 83–84, in *Minor Latin Poets*, ed. and trans. J. Wight Duff and Arnold M. Duff, rev. ed., Loeb Classical Library (Cambridge, Mass., 1935), p. 656; Ambrose, *Hexameron* 5.23, ed. Karl Schenkl, CSEL 32/1 (Vienna, 1897), p. 198; and Isidore, *Etymologiae, livre XII*, ed. and trans. Jacques André (Paris, 1986), 12.7.23, pp. 241 and 243. See M. Laurent, "Le phénix, les serpents et les aromates dans une miniature du XIIe siècle," *L'antiquité classique* 4 (1935), 375–401.

⁴ Pausanias, *Description of Greece* 9.28.1.

⁵ Pliny, *Natural History* 12.85; Theophrastus, *Enquiry into Plants* 9.5.1.

⁶ Examples in Laurent, "Le phénix," p. 381. In addition, Pliny (*Natural History* 12.81) says that snakes are driven out of the perfume-bearing trees of Arabia by the burning of storax (*Styrax officinalis*), itself another fragrant Arabian resin.

⁷ James A. Boon, *Affinities and Extremes: Crisscrossing the Bittersweet Ethnology of East Indies History, Hindu-Balinese Culture, and Indo-European Allure* (Chicago, 1990). A specific example is the upas tree of the East Indies, supposed by European observers in the seventeenth and eighteenth century to contain a deadly poison that killed everything within miles. The connection between this legend and the Dutch control of the spice trade is discussed in Michael R. Dove and Carol Carpenter, "The 'Poison Tree' and the Changing Vision of the Indo-Malay Realm: 17th Century–20th Century," forthcoming in *Environmental Change in Native and Colonial Histories of Borneo*, ed. Reid Wadley (Leiden, 2005).

⁸ Some examples of the snakes surrounding the pepper plants: the Old English "Wonders of the East" (see Andy Orchard, *Pride and Prodigies: Studies in the Monsters of the "Beowulf" Manuscript* [Woodbridge, Eng., 1995], p. 188); the *Liber monstrorum de diversis generibus* 3.6 (eighth century? see Orchard, *Pride and Prodigies*, p. 308); the purported letter of Alexander to Aristotle (probably

Polo says that diamonds in India have to be extracted from deep gorges infested by snakes. Pieces of meat are thrown into the abyss, attracting white eagles. The diamonds stick to the meat and are retrieved either by scaring the eagles away or collecting the gems they leave behind.⁹

In more general terms, the alluringly exotic and the perilous were often conjoined.¹⁰ Poison and medicine were conceptually linked: snakes entwine the wand of Mercury, the caduceus, which became a medical symbol, while in medieval pharmacological illustrations serpents accompany various medically useful plants including pepper.¹¹ Within this associative vocabulary Isidore's account of the

ninth century; *Epistola Alexandri ad Aristotelem ad codicum fidem edita et commentario critico instructa*, ed. W. W. Boer [The Hague, 1953], p. 53); histories of Alexander such as the *Historia de proeliis* and Jean Waquelin's *Histoire d'Alexandre* (cited by Faral, "Une source latine," pp. 199–200); Honorius Augustodunensis, *Imago mundi* (ed. Valerie I. J. Flint in *Archives d'histoire doctrinale et littéraire du moyen âge* 57 [1982], 53); vernacular works derived from the *Imago mundi* such as the thirteenth-century *L'image du monde de maître Gossouin* (ed. O. H. Prior [Lausanne, 1913], pt. 2, 2c[a], p. 111; a late-fifteenth-century English version is *Caxton's Mirrour of the World*, ed. Oliver H. Prior [London, 1913], p. 71); Gervase of Tilbury, *Otia imperialia: Recreation for an Emperor* (ed. and trans. S. E. Banks and J. W. Binns [Oxford, 2002], 2.3, p. 187 [pepper in India], and 3.73, p. 697 [pepper in Arabia]); Jacques de Vitry, *Historia Orientalis* 86 (in *Iacobi de Vitriaco . . . libri duo quorum prior Orientalis, sive Hierosolymitanae, alter Occidentalis historiae nomine inscribitur* [Douai, 1597; repr. Farnborough, Eng., 1971], p. 136); Thomas of Cantimpré, *Liber de natura rerum* 8.39 and 11.28 (ed. H. Boese [Berlin, 1973], pp. 289 and 339); and Johannes Witte de Hese, *Itinerarius* (ed. Scott D. Westrem, *Broader Horizons: A Study of Johannes Witte de Hese's "Itinerarius" and Medieval Travel Narratives*, Medieval Academy Books 105 [Cambridge, Mass., 2001], p. 138).

⁹ Marco Polo, *Milione, Le devisament dou monde: Il Milione nelle redazioni toscana e franco-italiana*, ed. Gabriella Ronchi, Biblioteca 45 (Milan, 1982), 175, pp. 562–63. This wonder is at least potentially present in Herodotus's description of gathering cinnamon, but it seems to originate with the first Christian lapidary, written near the end of the fourth century by Epiphanius of Constantia (modern Famagusta in Cyprus) according to whom the gem "hyacinth" (*iacinthus*, probably zircon) is extracted from Scythian gorges by throwing pieces of lamb that eagles retrieve: Epiphanius Constantiensis, "De gemmis," Latin version preserved in the *Collectio Avellana*, a sixth-century compendium of mostly papal and imperial laws, ed. Otto Günther, CSEL 35/2 (Vienna, 1898), pp. 753–54. See also *Epiphanius de gemmis: The Old Georgian Version and the Fragments of the Armenian Version*, ed. Robert P. Blake and Henri de Vis, Studies and Documents 11 (London, 1934), English trans. pp. 117–18. There are no snakes in Epiphanius, the gorges being simply inaccessible. The first snakes appear in one of the legends of Alexander that went under Aristotle's name. Versions of this story (with and without snakes) made their way to China and the Byzantine Empire and are featured in Arabic accounts of the wonders of India including the story of Sinbad in the Arabian Nights tales; see Christel Meier, *Gemma spiritalis: Methode und Gebrauch der Edelsteinallegorese vom frühen Christentum bis ins 18. Jahrhundert*, 1, Münstersche Mittelalter-Schriften 34 (Munich, 1977), pp. 99–138 and 353–58; and Berthold Laufer, *The Diamond: A Study in Chinese and Hellenistic Folk-Lore*, Field Museum of Natural History Publication 184, Anthropological Series 15/1 (Chicago, 1915), pp. 6–28. Marco Polo's account is cited in the Catalan Atlas of 1376, which says Alexander knew about this marvel (*L'Atlas Català de Cresques Abraham* [Barcelona, 1975], p. 135), and appears also in Niccolò de' Conti's fifteenth-century account of "Bizangalia" (Vijayanagar), as found in Poggio Bracciolini, *De l'Inde. Les voyages en Asie de Niccolò de' Conti: "De varietate fortunae," livre IV*, ed. and trans. Michèle Guéret-Laferté (Turnhout, 2004), lines 622–27, pp. 155–56.

¹⁰ On dangerous animals in connection with precious natural substances, see Jean-Pierre Albert, *Odeurs de sainteté: La mythologie chrétienne des aromates*, Recherches d'Histoire et de Sciences Sociales 42 (Paris, 1990), pp. 185–91; and Laurent, "Le phénix, les serpents et les aromates."

¹¹ On snakes in *materia medica* see Peter Murray Jones, *Medicina antiqua: Codex Vindobonensis* 93, Manuscripts in Miniature 4 (London, 1999). Snakes guard pepper plants in the tenth-century

snakes and the pepper trees has the implicit virtue of explaining why pepper is so costly. In addition to the expense of importation from far away, the high price of pepper arises from the difficulties of its harvest. Because of the snakes, the supply of pepper is restricted, an enhancement not only of its price but also of the status of those able to acquire and consume it.

What follows is an effort to examine medieval ideas of scarcity and abundance by focusing on pepper and to some extent other spices that were luxuries but sufficiently important economically and imaginatively to affect the historical events of the past millennium. Demand, rarity, and the cultural value of luxury commodities reveal aspects of the medieval imagination and the origins of modern European overseas expansion.¹²

The rarity of pepper according to Isidore of Seville is not absolute (after all, the serpents watch over entire pepper *silvae*) but circumstantial. There is plenty of pepper in India, but its acquisition involves danger and requires labor and skill. A modern example of absolute rarity is the truffle, which is difficult to find and has a very limited habitat. Saffron, on the other hand, is a reasonably common plant that will grow in many climates, but the delicate stigmas of the flower require tremendous effort to collect. Saffron is rare and expensive because of the circumstances of its harvesting.

Not everything that is rare, however, is expensive. Mastic, a resinous gum, is produced by plants that grow only on the Aegean island of Chios.¹³ Used as a medicine and cosmetic in the Middle Ages, mastic was at that time an extremely valuable commodity and was cited by Columbus in his first exultant letter to Ferdinand and Isabella as among the treasures he was (wrongly) sure he had found.¹⁴ Today mastic still grows only in Chios, but it has lost its allure as a healthful and luxurious substance. There is little market for it, and so rare though it may be, its relative price is now incomparably lower than in the fourteenth or fifteenth century.

Conversely, certain things are not all that rare but nevertheless very expensive. The fashion industry depends on an appearance of exclusivity coupled with ample supply. Every airport duty-free store, after all, has Cartier watches and Hermès scarves. Diamonds are another modern commodity more ordinary than their rep-

illustrated Latin translation of Dioscorides' pharmacological handbook, Munich, Bayerische Staatsbibliothek, Clm. 337, fol. 64r. They accompany vervain in a late-eleventh-century herbal produced at Canterbury, Oxford, Bodleian Library, MS Ashmole 1431, fol. 15r, and dragonwort (*Arum dracuncululus*), known as *serpentaria*, in Paris, Bibliothèque nationale de France, MS lat. 6823, fol. 143r, the latter illustrated in Minta Collins, *Medieval Herbals: The Illustrative Traditions* (Toronto, 2000), p. 259.

¹² On the interrelations among demand, rarity, and the cultural value ascribed to commodities, see Arjun Appadurai's introduction to his edited volume, *The Social Life of Things: Commodities in Cultural Perspective* (Cambridge, Eng., 1986), pp. 3–63. On luxury and fashion in the early-modern world, see Lisa Jardine, *Worldly Goods: A New History of the Renaissance* (London, 1996).

¹³ On mastic in its historical setting, see Andrew Dalby, "Mastic for Beginners," *Petits propos culinaires* 65 (2000), 38–45.

¹⁴ A *Synoptic Edition of the Log of Columbus's First Voyage*, ed. Francesca Lardicci et al., *Repositorium Columbianum* 6 (Turnhout, 1999), pp. 67, 86, and 224. Other examples of Columbus's over-optimistic identification of spices are given in Valerie I. J. Flint, *The Imaginative Landscape of Christopher Columbus* (Princeton, N.J., 1992), pp. 133–35.

utation suggests. They are expensive because of monopolistic practices, high demand, and effective image marketing rather than on account of any great rarity.

In the Middle Ages, spices (along with precious stones and such curiosities as unicorn horns) were objects of considerable fascination.¹⁵ The actual price of spices in European markets fluctuated but was consistently quite high, the result of voracious demand encouraged by an elaborate and authoritative tradition about their exotic origins (India, or even the earthly paradise), virtues (as medicines not just food flavorings), and rarity. Spices may not have dominated European trade in quite the way once ascribed to them in old-fashioned economic histories, but their significance goes beyond their statistical place in international commerce to encompass ideas about their value and about the reasons for their high price.¹⁶ When King Manuel of Portugal authorized Vasco da Gama's voyage in 1497, it was "in search of spices." When the ships arrived in Calicut in July 1498, da Gama's first messenger on shore was asked (in Spanish) by Muslim merchants from Tunis, "The devil take you, what brought you here?" The succinct reply was, "We came to look for Christians and spices."¹⁷ This tells us something about the demand for spices in Europe and, like Isidore's theory, implies a reason for their high price, not, in this case, due to either absolute or circumstantial rarity but rather to unexotic economic factors of transport and monopoly.

Fewer than half of da Gama's crew survived the voyage, and similar levels of mortality would continue for over two centuries. Between 1500 and 1634, 28 percent of all ships that set out from Portugal bound for India were lost at sea.¹⁸ The anticipated profit opportunities, therefore, had to be surpassingly high, enough to offset the terrible risks. Da Gama and his backers expected to find something substantially more than a merely adequate pepper supply limited by poisonous guardians. By this time pepper and other spices were regarded as abundant in their native lands, their high cost in Europe caused not by rarity but by the monopolistic control of supply by Egypt or other Muslim powers.

¹⁵ Stefan Halikowski Smith, "The Mystification of Spices in the Western Tradition," *European Review of History/Revue européenne d'histoire* 8 (2001), 119–35; Jack Turner, *Spice: The History of a Temptation* (New York, 2004).

¹⁶ Robert Henri Bautier, *The Economic Development of Medieval Europe*, trans. Heather Karolyi (London, 1971), p. 142, says that "traditional" historians exaggerate the economic role of spices. According to Peter Spufford, *Power and Profit: The Merchant in Medieval Europe* (New York, 2003), pp. 309–16, Europe played a small role in the international spice trade, but he notes the importance of spices for European merchants and the high unit value of these products. Michel Balard, "Du navire à l'échoppe: La vente des épices à Gênes au XIVe siècle," *Asian and African Studies* 22 (1988), 203–26, esp. pp. 203–4, regards spices as the most valuable Mediterranean cargo notwithstanding the significance of bulkier commodities such as textiles, wool, salt, and cereals.

¹⁷ Joaquim Romero Magalhães, *Portugueses no mundo do século XVI: Espaços e produtos* (Lisbon, 1998), pp. 24–25; Vitorino Magalhães Godinho, *Os descobrimentos e a economia mundial*, 2nd ed. (Lisbon, 1985), 2:159, quoting the anonymous chronicle attributed to Álvaro Velho. See also Sanjay Subrahmanyam, *The Career and Legend of Vasco da Gama* (Cambridge, Eng., 1997), p. 129. The conversation between the crewman and the merchant of Tunis is also reported in the *Lusíadas* of Camões, canto 7, but although the poem is full of information about spices, here it is only Christianity that motivates the voyagers.

¹⁸ Philip D. Curtin, *Cross-Cultural Trade in World History* (Cambridge, Eng., 1984), p. 142.

In medieval as well as modern times, economic theories and behavior were influenced by notions of scarcity and abundance. These interact, so that in our day we have seen wide fears of both intrinsic and manipulated scarcity (of petroleum, for example) alternate with utopian expectations of plenitude (the Internet/“dot-com” mania, cold fusion). Economic assumptions and their political consequences flow not only from rational calculations of such things as markets, distance, and cost but also from reckless optimism, without which risk would tend more often to outweigh opportunity.¹⁹

THE PRICE OF PEPPER

How expensive was pepper in the Middle Ages? Of all spices it was the cheapest, and it is likely that its price was in fact declining during the course of the fifteenth century.²⁰ Ginger (which came in several types of varying quality) ranged from near parity with pepper to three times its price. Cloves and nutmeg were anywhere from five to twenty times as expensive as pepper. The most extravagant prices were obtained for ambergris, aloe wood, and camphor, all especially valuable as medicines, whose wholesale cost was usually on the order of thirty-five times the price of pepper.²¹

In terms of supply and consumption, however, pepper was the predominant spice. Michel Balard has found that pepper accounted for 41 percent of the monetary value of Genoese cargoes coming from Alexandria between 1367 and 1371, compared with 18 percent for ginger and 12 percent for sugar during the same period. Genoese ships trading with Syria and Egypt in 1376 and 1377 carried spices of which 50 percent by value consisted of pepper, 24.5 percent ginger, and 6 percent sugar.²²

The quantities of spices imported into Europe were impressive. In the late fifteenth century Venice acquired in an average year 412 tons of pepper from Al-

¹⁹ Peter Musgrave discusses the risks of the spice trade, but his article deals with the postmedieval period: “The Economics of Uncertainty: The Structural Revolution in the Spice Trade, 1480–1640,” in *Shipping, Trade and Commerce: Essays in Memory of Ralph Davis*, ed. P. L. Cottrell and D. H. Aldcroft (Leicester, 1981), pp. 9–21.

²⁰ Frederic Lane, “Pepper Prices before da Gama,” *Journal of Economic History* 28 (1968), 590–97; Eliyahu Ashtor, *Levant Trade in the Later Middle Ages* (Princeton, N.J., 1983), pp. 167–69, 313–15, 421–23, and 463. These articles deal with the wholesale price of pepper in Mediterranean ports. At the retail level there is some indication that pepper and other spices became more expensive over the course of the fifteenth century; see, for example, Raymond van Uytven, “Herbes et épices dans les villes des Pays-Bas du sud,” in *Saveurs de paradis: Les routes des épices* (Brussels, 1992), pp. 77–78.

²¹ On the comparative prices among different spices, see Federigo Melis, *Documenti per la storia economica dei secoli XIII–XVI*, Istituto Internazionale di Storia Economica F. Datini, Pubblicazioni, 1/1 (Florence, 1972), pp. 298–320; Eliyahu Ashtor, *Histoire des prix et des salaires dans l’Orient médiéval*, Monnaie, Prix, Conjoncture 8 (Paris, 1969), pp. 138–41, 323–39, and 409–27; Magalhães Godinho, *Os descobrimentos*, 2:183–220; Damien Coulon, “Barcelone et le grand commerce d’Orient au moyen âge: Un siècle des relations avec l’Égypte et la Syrie-Palestine (1330–1430 environ)” (doctoral dissertation, University of Paris I, 1999), 2:512–46; and Spufford, *Power and Profit*, pp. 313–15.

²² Balard, “Du navire à l’échoppe,” tables 1 and 2 (pp. 207 and 208).

exandria and another 104 tons from Beirut.²³ Some estimates for specific years surpass even those amounts. In November 1496, on the eve of the Portuguese discovery of the sea route to India, four galleys arrived in Venice from Alexandria with at least 2 million kilograms of spices, of which 1,363,934 were pepper and 288,524 ginger. In the same year another convoy of four ships came from Alexandria with over a million kilograms of spices, of which half was pepper.²⁴

Although pepper was no longer as costly as it had been in previous centuries, considerable profits accrued to fifteenth-century merchants who brought it and other spices from eastern Mediterranean ports into western Europe. Peter Spufford estimates the Venetians marked up the price of spices an average of 40 percent during the fifteenth century, while Eliyahu Ashtor found an even greater profit for cloves in the period 1418–20 (72 percent) and nutmeg in 1496–98 (220 percent).²⁵ For Barcelona merchants in the fourteenth century, profit margins ranged from 20 percent for cloves to 41.35 percent for cinnamon. Pepper fetched about 25 percent more in Barcelona than in the Levant.²⁶

Relative to other spices, pepper lost some of its prestige toward the end of the Middle Ages. In the most widely circulated medieval cookbook, the *Viandier* attributed to Taillevent, ginger and grains of paradise figure more prominently than pepper.²⁷ A fifteenth-century medical writer commenting on the *Regimen sanitatis Salernitanum* referred to pepper as a seasoning appropriate for peasants, an opinion shared by the poet Eustache Deschamps, who complained about rural inns where one could eat only coarse peasant comestibles such as leeks or cabbage, all flavored with black pepper.²⁸ Notwithstanding such remarks, pepper enjoyed the status of a necessary luxury throughout the Middle Ages and beyond, an expensive condiment, but one within reach of a substantial proportion of the population. However cheap pepper was in comparison with other aromatic products, it accounted for a great share of the profits of the spice trade. Above all, pepper remained in very great demand.

²³ Eliyahu Ashtor, "The Volume of Mediaeval Spice Trade," *Journal of European Economic History* 9 (1980), 753–63, esp. p. 757, reprinted in Ashtor, *East-West Trade in the Medieval Mediterranean*, ed. Benjamin Z. Kedar, Collected Studies Series 245 (London, 1986). On this question see also C. H. H. Wake, "The Changing Pattern of Europe's Pepper and Spice Imports, ca. 1400–1700," *Journal of European Economic History* 8 (1979), 361–403; and Wake, "The Volume of European Spice Imports at the Beginning and End of the Fifteenth Century," *ibid.* 15 (1986), 621–35.

²⁴ K. S. Mathew, *Portuguese Trade with India in the Sixteenth Century* (New Delhi, 1983), p. 22.

²⁵ Spufford, *Power and Profit*, p. 312; E. Ashtor, "Profits from Trade with the Levant in the Fifteenth Century," *Bulletin of the School of Oriental and African Studies* 38 (1975), 257, reprinted in Ashtor, *Studies on the Levantine Trade in the Middle Ages*, Collected Studies Series 74 (London, 1978).

²⁶ Coulon, "Barcelone et le grand commerce," p. 540; Josep Plana i Borràs, "The Accounts of Joan Bener's Trading Venture from Barcelona to Famagusta, 1343," *Epeteris* 19 (1992), 105–18.

²⁷ *The Viandier of Taillevent: An Edition of All Extant Manuscripts*, ed. Terence Scully (Ottawa, 1988).

²⁸ The medical commentary was wrongly attributed to Arnau de Villanova in early printed editions of his works (e.g., *Opera nuperrime revisa una cum ipsius vita . . .* [Lyons, 1520], fol. 137ra) and was probably by a fifteenth-century German writer. (I am grateful to Michael McVaugh of the University of North Carolina for his advice on this passage.) On Eustache Deschamps, see *Œuvres complètes*, ed. Marquis de Queux de Saint-Hilaire and Gaston Raynaud, 7 (Paris, 1891), pp. 88–90. (Anne Dropick, my colleague at Yale University, kindly pointed out the two poems to me.)

European demand for pepper goes back to the Roman Empire whose cuisine was characterized by the piquant flavors of fish paste, asafetida, and pepper.²⁹ In the sole surviving Roman cookbook, which purports to be by Apicius, fully 80 percent of the recipes call for pepper.³⁰ Pliny expressed an exasperated perplexity as to why pepper, which is merely pungent rather than pleasant tasting, should excite such enthusiasm. Who was the first to decide that food required such additional inducement over and above normal hunger? he asked. It's all very well for ginger and pepper to be consumed in India where they grow wild, but in the Roman Empire their use requires the expenditure of gold and silver.³¹ Recent archaeological research on the Red Sea coast of southern Egypt shows an active Roman trade with India from now-obliterated ports such as Berenike and Myos Hormos.³² By the time Isidore was writing, this direct exchange no longer flourished; nevertheless, a not-inconsiderable amount of pepper and other Eastern spices still found their way to Europe.³³

From the tenth to fourteenth century, the spice trade grew exponentially with the acceleration of Europe's economic tempo.³⁴ Usually the spices were obtained by Mediterranean traders (Venetian, Genoese, Catalan, Provençal) in eastern Mediterranean ports: from Outremer before the fall of Acre in 1291, and thereafter from Cyprus, Constantinople, but most frequently from Egypt and Syria. During the period of Mongol hegemony (the late thirteenth and early fourteenth centuries), Western merchants ventured as far as the Black Sea and Persian Tabriz for spices, but after 1350, these opportunities were restricted by the resurgence of

²⁹ Phyllis Pray Bober, *Art, Culture and Cuisine: Ancient and Medieval Gastronomy* (Chicago, 1999), pp. 145–92; Johanna Maria van Winter, “Kochen und Essen im Mittelalter,” in *Mensch und Umwelt im Mittelalter*, ed. Bernd Herrmann (Stuttgart, 1986), pp. 88–92.

³⁰ Bruno Laurioux, *Le moyen âge à table* (Paris, 1989), p. 39.

³¹ Pliny, *Natural History* 12.14, ed. and trans. H. Rackham, Loeb Classical Library (Cambridge, Mass., 1960), p. 20: “Usum eius adeo placuisse mirum est: in aliis quippe. suavitas cepit, in aliis species invitavit, huic nec pomi nec bacae commendatio est aliqua. sola placere amaritudine, et hanc in Indos peti! quis ille primus experiri cibis voluit aut cui in appetendi aviditate esurire non fuit satis? utrumque silvestre gentibus suis est et tamen pondere emitur ut aurum vel argentum.” In *Natural History* 6.101 Pliny estimates that exotic products in general sold in Rome for a hundred times their price in India.

³² *The Periplus Maris Erythraei*, ed. and trans. Lionel Casson (Princeton, N.J., 1989), pp. 11–43, 94–97, and 283–91; Steven E. Sidebotham, *Roman Economic Policy in the Erythra Thalassa, 30 B.C.–A.D. 217*, Mnemosyne Supplementum 91 (Leiden, 1986); Steven E. Sidebotham and Willemina Z. Wendrich, “Berenike: A Ptolomaic-Roman Port on the Ancient Maritime Spice and Incense Route,” *Minerva* 13/3 (May–June 2002), 28–31; Sidebotham and Wendrich, “Berenike: Archaeological Fieldwork at a Ptolomaic-Roman Port on the Red Sea Coast of Egypt, 1994–1998,” *Sahara* 10 (1998), 85–96; Gary K. Young, *Rome's Eastern Trade: International Commerce and Imperial Policy, 31 BC–AD 305* (London, 2001), pp. 27–89.

³³ On the trade in drugs and spices, see Michael McCormick, *Origins of the European Economy: Communications and Commerce, A.D. 300–900* (Cambridge, Eng., 2001), pp. 708–10. The cookbook of Anthimus, a Greek writing in the early sixth century for a Frankish king, includes pepper as well as ginger and cloves in a few recipes: *De observatione ciborum: On the Observance of Foods*, ed. and trans. Mark Grant (Totnes, 1996), pp. 50, 52, 54, and 60.

³⁴ In general, see W. Heyd, *Histoire du commerce du Levant au moyen âge*, 2 vols. (Leipzig, 1885–86); Robert S. Lopez, *The Commercial Revolution of the Middle Ages, 950–1350* (Englewood Cliffs, N.J., 1971); and Jean Favier, *Gold and Spices: The Rise of Commerce in the Middle Ages*, trans. Caroline Higgitt (New York, 1998).

divided and often hostile powers.³⁵ During the fifteenth century the Venetians won out over their rivals and came to dominate, although not completely monopolize, the last part of the long and complex journey of spices imported into Europe.

Several quixotic attempts were launched to obtain direct contact with southern India or to establish a Christian European naval force in the Indian Ocean that might outflank the ships of the Muslim Middle East. In 1182 Reynald de Châtillon captured Eilat at the head of the Gulf of Aqaba in an effort to disrupt Egypt's trade with India, but Saladin dislodged him within a year. The mysterious Vivaldi expedition from Genoa in 1291 may have intended to circumnavigate Africa or find a western route to India, and William Adam in 1318 proposed a Christian blockade in the Red Sea and Gulf of Aden, but nothing came of these schemes.³⁶ Yet it is precisely such visionary and even fantastic ideas that changed the outlook of Europeans from the notion of scarcity implied by the serpents and the pepper trees to what Timothy Morton has called the "cornucopia" image of spontaneous plenitude: that in faraway (but not necessarily inaccessible) places extremely valuable commodities abound. They grow wild (as Pliny surmised of pepper) or are so common that the natives don't know their true value or even that they are valuable at all.³⁷

Perceptions of scarcity and plenitude could coexist: it is not that one replaced the other but that in order for there to be sufficient motivation for exploration and expansion, the belief in fabulous wealth in distant places had to become more powerful than notions of dangerous exotic products, or even of rationally high-priced goods. I will first look at the fortunes of the pepper-and-snakes theme and then discuss the articulation of an irrational exuberance that saw the East as overflowing with valuable substances more or less there for the taking.

HOW IS PEPPER HARVESTED?

The association of pepper with snakes is part of a varied and reasonably complicated set of ideas about the East imagined as both fortunate and strange, where monsters and valuable substances proliferate.³⁸ We should not assume this was an exclusively orientalizing discourse in which the marvelous crowded out the ordinary or in which the East was regarded as simply alien. Nor is it the case that good knowledge tended to drive out bad, that the gradual increase in geographical

³⁵ Robert S. Lopez, "Nouveaux documents sur les marchands italiens en Chine à l'époque mongole," *Académie des Inscriptions et Belles-Lettres: Comptes-rendus* (1977), pp. 445–57, at pp. 453–55.

³⁶ J. R. S. Phillips, *The Medieval Expansion of Europe* (Oxford, 1988), pp. 122–40.

³⁷ Timothy Morton, *The Poetics of Spice: Romantic Consumerism and the Exotic*, Cambridge Studies in Romanticism 42 (Cambridge, Eng., 2000), pp. 53–54.

³⁸ On the riches and wonders of the East, see Rudolf Wittkower, "Marvels of the East: A Study in the History of Monsters," *Journal of the Warburg and Courtauld Institutes* 5 (1942), 159–97; Wittkower, "Marco Polo and the Pictorial Tradition of the Marvels of the East," in *Oriente poliano*, ed. É. Balazs et al. (Rome, 1957), pp. 155–72, both reprinted in Wittkower, *Allegory and the Migration of Symbols* (London, 1977), pp. 45–74 and 75–92; Mary B. Campbell, *The Witness and the Other World: Exotic European Travel Writing, 400–1600* (Ithaca, N.Y., 1988); and Joan-Pau Rubiés, *Travel and Ethnology in the Renaissance: South India through European Eyes, 1250–1625* (Cambridge, Eng., 2000), pp. 35–124.

information and actual European travel to India or China marginalized or undermined the fabulous. That snakes guard the pepper groves was doubted, even ridiculed, from an early date, but the legend nonetheless was quite durable.

In Platearius's pharmacological manual *Circa Instans*, which dates from the second half of the twelfth century, the logical problem is raised that when the fires are set, not only are the serpents driven away, but the trees themselves burn up, presumably making future harvests impossible for years.³⁹

Marco Polo, the first known medieval Western visitor to India, remarks that pepper is harvested from May through July. He states that it is a domesticated crop but doesn't comment on the matter of the snakes or fire.⁴⁰ For Marco Polo it is diamonds, not pepper, that require ingenuity to wrest from serpents.

The Franciscan friar Odoric of Pordenone visited southern India in 1321. He describes pepper as a vine with leaves like ivy that is planted between trees (in the manner of grape vines). Its fruit resembles grapes.⁴¹ Odoric asserts that the rivers in the pepper groves support crocodiles (which he considers a type of serpent),⁴² and in one of the most important manuscript versions he adds that these creatures have to be driven off by fire.⁴³ The fire, however, is not used to explain the shriveled, black appearance of peppercorns. In all the manuscripts Odoric accurately reports that pepper is dried in the sun.⁴⁴ In an Italian version of his travels, Odoric ignores both serpents and fire but says that pepper is as abundant in "Minabar"

³⁹ *Das Arzneidrogenbuch Circa Instans in einer Fassung des XIII. Jahrhunderts aus der Universitätsbibliothek Erlangen*, ed. Hans Wölfel (Hamburg, 1939), p. 91: "Cum enim debet colligi propter copiam serpenicum ibi existentium opponitur ignis inter arbores ut serpentes comburantur aut fugiant, sed eadem ratione comburentur arbores ipse." The late-thirteenth-century *Herbal of Rufinus* quotes this passage but prefaces it with the statement "Dicunt etiam quidam quod piper sit nigrum per excoctionem": *The Herbal of Rufinus, Edited from the Unique Manuscript*, ed. Lynn Thorndike (Chicago, 1946), p. 238.

⁴⁰ Marco Polo, *Milione* 176, p. 579: ". . . il hi [i.e. Quilon, on the Malabar Coast] naist encore pevre en grant abundance; e se recueille dou mois de may et de jugn et de jugnet, e vos di que les arbres que font le pevre se plantent e le enaigent et sunt arbres domescas."

⁴¹ Odoric of Pordenone, *Relatio*, ed. Anastasius van den Wyngaert in *Simica Franciscana* 1 (1929), 9, pp. 439–40: "In hac autem contrata habetur piper per istum modum: nam primo nascitur in folia de elere, que folia iuxta magnos arbores plantantur, sicut hic nostre ponuntur vites. Hec folia producent fructum ut uvarum racemi producantur; in tanta autem producantur quantitate quod quasi videntur frangi. Cum ipsum autem maturum est, viridis est coloris. . . ."

⁴² *Ibid.*, p. 440: "In hoc etiam nemore sunt flumina, in quibus sunt multe male cocodrie, id est serpentes."

⁴³ The passage on the fires is in a British Library manuscript noted in the Yule-Cordier edition, *Cathay and the Way Thither*, ed. Henry Yule and Henri Cordier, 2 (London, 1913), p. 295, n. 8: "Et sunt etiam in isto nemore multi alii serpentes quos homines per stupam et paleas comburant, et sic ad colligendum piper secure accedunt."

⁴⁴ Odoric of Pordenone, *Relatio* 9, p. 440: ". . . et sic vindemiatur sicut hic vindemiantur uve, ponendo illud in sole ut desiccetur. Quod cum desiccatum est, ipsum in vasis collocatur." Cf. Ibn Battuta, who says that pepper resembles grape vines and is planted beside trees and that "most people in our country suppose that they roast them [the pepper fruit] with fire and that it is because of that they become crinkled, but it is not so since this results only from the action of the sun upon them": *The Travels of Ibn Battūta, A.D. 1325–1354*, trans. H. A. R. Gibb with C. F. Beckingham, 4, Works Issued by the Hakluyt Society, 2nd ser., 178 (London, 1994), p. 807.

(Malabar) as grain is “in our land.”⁴⁵ This is an important (but not widely circulated) conclusion that pepper is easy to harvest and that there is no dearth of supply where it grows.

In another early-fourteenth-century account of travels in Asia by the Dominican Jordan of Sévérac, pepper is said to grow from a vine that winds around trees like the wild grape. The fruit is green when unripe but eventually turns black and wrinkled (nothing is said about drying in the sun). Long pepper is similar, according to Jordan (in fact this spice, *Piper longum*, is a very different plant from black round pepper, *Piper nigrum*). Although Jordan was partial to stories of the marvelous (his book is in fact entitled *Mirabilia descripta*), he contemptuously dismisses as a lie the story that pepper is burned or cooked.⁴⁶

The mysterious John Mandeville, who embarked on an impressive if fictional voyage, is famous for the many derivative as well as original marvels in his narrative. He, too, however, doubts the veracity of the burning pepper groves on the grounds that such conflagrations would destroy the plants. Mandeville doesn't deny the presence of serpents but asserts that a simple ointment containing lemon, or snails, “and other things” smeared on the hands and feet is sufficient to cause the snakes to flee.⁴⁷

The author of the Mandeville account probably wrote around the middle of the fourteenth century. At about the same time, in 1353, the Franciscan John of Margnolli returned to Europe after a long stay in India and China. He reports that the town of Quilon on the Malabar coast is the source of all the world's pepper. Quilon was certainly a great center of the international pepper trade, but India was not the only place where the spice was cultivated. John is the medieval observer who most extensively and clearly describes pepper as an ordinary and not particularly scarce product. He begins by echoing the description of Jordan of Sévérac, that pepper grows from a grapelike vine. He then says it does not require burning and its harvest is sufficiently routine to require neither courage, training, nor special tools. Pepper grows in regular orchards, not in the desert as some

⁴⁵ *Cathay and the Way Thither*, 2:342: “E ivi cosi grande abondanza di pepe come qui in nostra terra di grano.”

⁴⁶ *Mirabilia descripta—Les merveilles de l'Asie par le père Jourdain Catalani de Sévérac*, ed. Henri Cordier (Paris, 1925), p. 116: “Piper est fructus herbae et semen quae est ad modum hederæ quae ascendit super arbores, et facit ad modum lambruscae, quasi uuam; quod est primo viride; deinde cum pervenit ad maturitatem, efficitur totum nigrum et rugatum, prout potestis videre. Sic etiam nascitur piper longum; nec credatis quod ponatur ignis ubi est piper, vel quod coquatur, sicut alicui volunt dicere mendose.”

⁴⁷ Mandeville's *Travels* exists in many languages and versions. For Mandeville on pepper (chapter 18 of his travels), see *Le livre des merveilles du monde*, ed. Christiane Deluz, Sources d'Histoire Médiévale 31 (Paris, 2000), pp. 318–20; *Mandeville's Travels*, ed. M. C. Seymour (Oxford, 1967), pp. 123–24; and *Mandeville's Travels*, ed. Malcolm Letts, 2 vols., Works Issued by the Hakluyt Society, 2nd ser., 101–2 (London, 1953), Egerton version in 1:121, Paris version in 2:324–25. The English metrical version states that the pepper forests are enchanted in such a way that no thievery can take place: Rosemary Tzanaki, *Mandeville's Medieval Audiences: A Study on the Reception of the “Book” of Sir John Mandeville (1371–1550)* (Aldershot, Eng., 2003), p. 107.

authorities believed. John emphasizes that he himself has seen the pepper harvest.⁴⁸ Finally, the inhabitants of this land are so far from being “other” that in fact they are Christians. According to John of Marignolli, the world’s pepper supply may be limited to the extent that it all has to come from one part of India, but within this fairly extensive territory, its harvest is unremarkable; hence its price in Europe is not the result of some fundamental difficulty in cultivation.

FABULOUS AND PRACTICAL ABUNDANCE

John’s account of the pepper harvest did not put an end to the belief that snakes block access to valuable commodities, including pepper. The author of the Catalan Atlas and the merchant traveler Niccolò de’ Conti, both writing after John of Marignolli, still believed that diamonds, at any rate, had to be extracted from snake-infested gorges.⁴⁹ Pierre d’Ailly and Aeneas Sylvius Piccolomini (Pope Pius II) mentioned serpents in connection with pepper.⁵⁰ Although Columbus was greatly attached to the geographical works of both these latter authors,⁵¹ he and others involved in enterprises to find realms of spices and treasures discounted traditions implying scarcity or limitations in the supply of exotic products in favor of myths of plenitude (which also figure in the works of d’Ailly and Pius II).

Columbus’s annotations to books he read in advance of his voyages deal repeatedly, almost obsessively with precious metals, gems, and spices. In his estimation these aren’t found merely here and there but abound in the exotic lands of the East.⁵² Obstacles to acquiring and profiting from spices, according to this view, have nothing to do with any intrinsic restrictions on their supply but with distance and the exploitative practices of those profiting from the excessively fragmented supply route. Pepper is expensive in Europe because India is far away and also because of the markup to benefit middlemen (the Arabs in particular). Finding a direct route to India would not only reduce the time involved in trade but would also circumvent the intermediaries.

⁴⁸ *Relatio Fr. Johannis de Marignolli*, ed. Wyngaert, *Sinica Franciscana* 1 (1929), 530 (also in “Kronika Jana z Marignoly,” ed. Joseph Emler, *Fontes rerum Bohemicarum*, 3 [Prague, 1882], p. 496): “A festo autem sancti Stephani usque ad dominicam olivarum per mare Indicum pervenimus ad nobilissimam civitatem Indie, nomine Columbum ubi nascitur piper tocus orbis. Nascitur autem in vitibus, que plantantur ad modum vinearum omnino, et facit vitis primo racemos quasi labruscas viridis coloris, post facit quasi racemos et est intus vinum rubeum quod manu mea pro salsa expressi in scutellam. Post maturantur et exsiccantur in arbore et arescit pre nimio calore et siccum excutitur parvo baculo cadens super linteamina et recollitur. Ista oculis vidi et manibus contractavi mensibus XIV, nec comburitur, ut menciuntur scriptores, nec nascitur in desertis sed in ortis.”

⁴⁹ See above, n. 9. Niccolò de’ Conti does, however, offer a naturalistic description of pepper, which grows like ivy, produces berries like those of the juniper, and is dried in the sun after being sprinkled with ashes: *De l’Inde*, lines 138–42, p. 96.

⁵⁰ Pierre d’Ailly, *Ymago mundi*, ed. Edmond Buron, 1 (Paris, 1930), 16 (“De mirabilibus Indie”), p. 264: “Apud hos crescit piper colore quidem albo sed tamen serpenta qui ibi habitant incendio nigredinem trahit”; Aeneas Sylvius Piccolomini, *Historia rerum ubique gestarum*, in *Aeneas Sylvii Piccolominei . . . opera quae extant omnia* (Basel, 1551; repr. Frankfurt, 1967), p. 288: “. . . serpentes assos in cicum pro deliciis habere, rubeasque formicas pipere conditas, paruulis gammaris similes.”

⁵¹ Flint, *Imaginative Landscape of Christopher Columbus*, pp. 47–64.

⁵² *Ibid.*, pp. 202–5.

Economic theories are a prominent feature of the annotated globe made by Martin Behaim of Nuremberg in 1492. In one of the texts placed on the globe, we read once again that in India diamonds and other gems abound in mountains that are guarded by snakes.⁵³ If jewels, therefore, have what I have called circumstantial rarity, the same is not true for spices, which are not rare at all. Behaim is aware that spices grow in many places besides India—Java, “Ciamba” (Indochina), Sumatra, even (fancifully) the Nicobar Islands and Japan. The transaction costs drive up the price of spices in Europe, not difficulty of supply at the source. In the longest of the globe’s texts, Behaim discusses the twelve steps that spices must pass through from their origin in the East Indian islands until they reach Germany.⁵⁴ The inhabitants of “Java Major” (Borneo, perhaps) collect spices from other islands, which are bought by merchants from Ceylon. In Ceylon they are sold to traders from “the Golden Khersonese” (the Malay Peninsula?) and then in turn to merchants of “Taprobana” (Sumatra?). This implausible eastern meandering shifts suddenly and more realistically westward in the fifth and sixth stages when the “heathen Mohammedans” (“heyden machmet”) from Aden buy the spices, which then pass through Cairo. The remaining steps involve the distribution of spices throughout Europe via Venice, Frankfurt, Bruges, and finally to retailers in Germany.

Customs and profits add greatly to the cost. Just the twelve customs levies alone (which Behaim figures at 10 percent per step, on average) account for a substantial markup. Martin Behaim concludes that spices proliferate in the Orient, where they are cheap, but that their European price is extremely high because of the intervening profits and taxes.⁵⁵ Neither rarity nor distance justifies the retail price of spices in Germany. This is due, rather, to things one could avoid by dealing directly with the cultivators.

Although he endorses the legend about snakes guarding diamonds, Behaim seems to have a realistic, or at least naturalistic, conception of the spice trade. Simultaneous with such rational calculations were more exciting, euphoric hopes of limitless supply. According to this more vigorous optimism, spices, gold, and gems were produced in such extravagant abundance in Asia that they were not regarded there as unusually valuable.

There are, of course, many stories about blessed and fabulously wealthy lands lying to the East or in the Western Ocean. Medieval observers were sufficiently

⁵³ E. G. Ravenstein, *Martin Behaim, His Life and His Globe* (London, 1908), p. 84: “In vil von de gebirg find man edelgestein und deamant aber um der schlangen willen sind sie verkumen.”

⁵⁴ *Ibid.*, p. 89: “item ess ist zu wissen dass die specerey die in den inseln in indien in orienten in manicherley hendt verkaufft würdt ehe sy heraus kumpt in unser landt.” The translation of this commentary is also given in Jardine, *Worldly Goods* (as above, n. 12), pp. 296–97.

⁵⁵ Ravenstein, *Martin Behaim*, pp. 89–90: “. . . dabey soll jederman vermerken die grosen zoll und den gewin. die 12 malen auf die specerey geht und zu mermalen von zehen pfundten eins muess geben zu zoll darbey zu verstehen ist das in den landt inorienten fast vil miss wachsen und wolfeil muss sein und das nit wunder wer man wis sy by enss den goldt gleich. . . .” In the late Middle Ages, northern European merchants such as Jacques Cœur did occasionally trade directly with the Levant, bypassing the Venetians, but this was a risky project. See Jacques Heers, *Jacques Cœur, 1400–1456* (Paris, 1997), pp. 84–126; and Michel Mollat, *Jacques Cœur ou l’esprit d’entreprise au XVe siècle* (Paris, 1988), pp. 168–82. Of course, none of this affected the markup between East Asia and the Levant.

aware of the appeal of such tales to elaborate acknowledged fantasies about the Land of Cockaigne, a place where no work was necessary, where houses and landscape features were edible, even precooked.⁵⁶ More serious hopes of plenitude were given an impetus in the twelfth century with the circulation of the Letter of Prester John. Beginning around 1170, a letter purporting to be from this great Christian ruler of the East arrived in Europe. The haughty and staggeringly wealthy monarch answered, or at least evoked, hopes of a Christian ally beyond the territories of Islam and gave a specific, if fantastic, shape to the traditional wealth-of-the-East ideas originating with Alexander's conquests.⁵⁷

The location of Prester John's realm changed as the tendency to place him in India or China yielded in the fifteenth century to Ethiopia, but right up to Vasco da Gama (who carried a letter to Prester John from the king of Portugal), the existence of this great Christian ruler was confidently maintained. In his letter Prester John claims that all manner of precious substances (especially gems) abound in his territories. Precious stones are emphasized more than spices, for although Prester John's empire produces pepper in large quantities, the spice still has to be taken from groves watched over by snakes. Pepper may be plentiful but not on the same fairy-tale level as gems.⁵⁸

Prester John was by no means the exclusive vehicle for fantasies of Eastern wealth. Marco Polo, generally cautious about conventional marvels, relegated Prester John to marginal significance, but he put forth a number of influential wonders of his own such as the astounding amount of gold on the island of "Cipangu" (Japan) in the Eastern Ocean, which he never visited but heard of while in China. He reports that in Cipangu there is an abundance of gold because it is found there in measureless quantities, that is, not because of wealth gained from something like trade but because of a marvelous natural phenomenon. The palace of the ruler is roofed in gold, just as lead is employed for European houses and churches, and its chambers are paved in gold more than two fingers thick.⁵⁹ This is certainly a commonplace of Asian plenitude, but unlike Prester John, who

⁵⁶ Herman Pleij, *Dreaming of Cockaigne: Medieval Fantasies of the Perfect Life*, trans. Diane Webb (New York, 2001).

⁵⁷ The letter is edited and commented on by Friedrich Zarncke, "Der Priester Johannes," in *Abhandlungen der philologisch-historischen Classe der Königl. Sächsischen Gesellschaft der Wissenschaften*, 7 (Leipzig, 1879), pp. 827–1030 (edition at pp. 909–24). On the letter see also Vsevolod Slessarev, *Prester John, the Letter and the Legend* (Minneapolis, 1959); and articles of C. F. Beckingham collected in his *Between Islam and Christendom: Travellers, Facts, and Legends in the Middle Ages and the Renaissance*, Collected Studies Series 175 (London, 1983).

⁵⁸ Ed. Zarncke, "Der Priester Johannes," p. 912. On the reiterated exaltation of gems in the letter, see Michael Uebel, "Imperial Fetishism: Prester John among the Natives," in *The Postcolonial Middle Ages*, ed. Jeffrey Jerome Cohen (New York, 2000), pp. 264–65. In the central part of Prester John's realms there are no poisonous snakes, but at the periphery, where the pepper groves are situated, strange and venomous creatures abound: István Bejczy, *La Lettre du Prêtre Jean, une utopie médiévale* (Paris, 2001), pp. 98–99.

⁵⁹ Marco Polo, *Milione* 159, p. 532: ". . . je vos di tout voiramant que il ha un grandisme palais, les que(l) est tout coverto d'or fin; tout en tel mainer come nos covron nostre maison de plo(n)be e nostre yglise, tout en tel mainere est cest palais covert d'or fin: que ce vaut tant qu'a poine se poroit conter. Et encore vos di que tout le pavimant de seç canbres, que asez hi n'i a, sunt ausint d'or fin, bien gros plus de II doies. . . ."

is boastful of his wealth, the inhabitants of Cipangu don't appreciate the true (or at least European) value of gold.⁶⁰ The people whom Marco Polo describes in other chapters hunting whales for ambergris or training eagles to pluck diamonds out of snake-infested gorges presumably expect a substantial reward for their difficult labors, but gold in Cipangu has a literal El Dorado quality that transcends normal economic calculation. Earlier accounts had it that gold, like pepper, is guarded by dangerous beasts that make its acquisition difficult, however plentiful it may be in absolute terms. According to St. Jerome (followed by Isidore of Seville and others), there are entire mountains of gold in India, but they are inaccessible because griffins, dragons, and monstrous giants dwell there.⁶¹ In Marco Polo, however, gold is found in an admittedly distant part of the world in such quantities that if one ever reached the place, one could obtain it for nearly nothing. Such a formulation of fantastic but natural abundance makes the heroic effort of figuring out how to find the source seem worthwhile.

One could imagine the riches of Asia as the result of an industrious and populous society or, alternatively, as a series of spontaneous wonders. Marco Polo for the most part describes the production of wealth as based on such mundane factors as good government, population density, and skill. For most Western travelers, the Great Khan appeared a just autocrat who ruled teeming, wealthy cities populated by ingenious and hardworking artisans.⁶² On the other hand, we also find tales of the effortless profligacy of nature in privileged locales where valuable things appear more conveniently. In his account of the crusade of King Louis IX in Egypt, Joinville describes the riches brought by the Nile from its origins in the terrestrial paradise:

Before this river enters Egypt, the people who usually do such work cast their nets of an evening into the water and let them lie outspread. When morning comes they find in their nets such things as are sold by weight and imported into Egypt, as for instance ginger, rhubarb,⁶³ aloes, and cinnamon. It is said that these things come from the earthly paradise; for in that heavenly place the wind blows down trees just as it does the dry

⁶⁰ Ideas of Asian realms of gold include the twin islands of Chryse (gold) and Argyre (silver), thought to be particularly rich in these metals, mentioned in Pliny, *Natural History* 6.21–23, and Solinus, *Collectanea rerum memorabilium* (as above, n. 2), 52.17, p. 186, and the so-called Golden Khersonese, perhaps a dim notion of Malaya: Paul Wheatley, *The Golden Khersonese: Studies in the Historical Geography of the Malay Peninsula before A.D. 1500* (Kuala Lumpur, 1961).

⁶¹ Jerome, Letter 125.3, in *Epistulae*, 3, ed. Isidor Hilberg, CSEL 56 (Vienna, 1918), p. 122: “ibi . . . montesque aurei, quos adire propter dracones et gryphas et inensorum corporum monstra hominibus impossibile est . . .”; Isidore, *Etymologiarum sive originum libri xx* 14.3.7, ed. W. M. Lindsay, 2 (Oxford, 1911), p. 113; Hrabanus Maurus, *De universo* 4.4, in PL 111:335; also Honorius Augustodunensis in *Imago mundi* (as above, n. 8), 10, p. 53. “Montes aureos, a draconibus custoditur” appears on the Hereford Map: Scott D. Westrem, *The Hereford Map, Terrarum Orbis* 1 (Turnhout, 2001), p. 33.

⁶² Folker E. Reichert, *Begegnungen mit China: Die Entdeckung Ostasiens im Mittelalter*, Beiträge zur Geschichte und Quellenkunde des Mittelalters 15 (Sigmaringen, 1992), pp. 109–10.

⁶³ Not the same as European and American rhubarb but the root of a different species, *Rheum officinale*, native to Tibet and credited with great medicinal properties in the Middle Ages; see Andrew Dalby, *Dangerous Tastes: The Story of Spices* (Berkeley, Calif., 2000), pp. 77–78.

wood in the forests of our own land; and the dry wood from the trees in paradise that thus falls into the river is sold to us by merchants in this country.⁶⁴

The inhabitants of the lands just beyond Egypt know something of the value of what they are taking out of the river, but they do not have to work very hard at it. According to Joinville, they merely spread out the nets and wait. His description accounts for the status of Egypt as an entrepôt for spices but also points to the disparity between the great cost of these spices when “sold to us” and their actual ease of acquisition. Yet even though the spices in Joinville are simple to gather, there is a certain intrinsic limitation in a supply that relies on flotsam carried by the particular rivers (the Nile, Ganges, Tigris, and Euphrates) thought to stream out of Paradise.⁶⁵

There were, therefore, different theories about the nature and circumstances of the wealth of the East. The wonderful products of Asia may be rare or at least difficult to acquire even in the place of their origin, as the story of the dangerous pepper orchards implies. Alternatively Asia might be rich because of the industry of its people and beneficent government, as in Marco Polo’s China. It could be extravagantly rich but closely governed as with Prester John or the court of the Great Khan. Finally, it may be a place of grotesque and effortless wealth on the order of the golden roofs of Cipangu.

The interaction of commercial calculation and fantastic speculation continued throughout the Middle Ages and into the modern world. It is not simply that accurate geographical information replaced fable, paving the way for the age of discovery.⁶⁶ John of Marignolli and Martin Behaim had practical, unmagical views of commerce in spices, but these were not in themselves enough to motivate anyone to undertake the frighteningly risky voyage to obtain such materials directly. The impetus had to come from a confidence founded not only on better ships, maps, or navigational technique but on a belief in wild plenitude. There was no point to facing the dangers and length of a voyage to achieve modest profits from

⁶⁴ *Chronicles of the Crusades*, trans. M. R. B. Shaw (Harmondsworth, Eng., 1963), p. 212. St. Jerome, in Letter 125.3, writes of India where, “it is said,” the Ganges carries spices (“pimentorum”) from Paradise. Precious botanical substances brought by rivers from Paradise also appear in *Circa Instans*, ed. Wölfel, *Arzneidrogebuch* (as above, n. 39), p. 4; Jacques de Vitry, *Historia Orientalis* 86 (as above, n. 8), p. 173; Wolfram von Eschenbach, *Parzifal* 8.845–50; Bartholomaeus Anglicus, *On the Properties of Things: John Trevisa’s Translation of Bartholomaeus Anglicus De proprietatibus rerum, a Critical Text*, ed. M. C. Seymour et al., 2 (Oxford, 1975), 17.5, p. 905; Mandeville, books 8 and 25; *Le livre des merveilles du monde*, pp. 163 and 398; *Travels*, ed. Seymour, pp. 41 and 174; *Mandeville’s Travels*, ed. Letts, Egerton version, 1:41 and 1:167, Paris version, 2:258 and 2:365.

⁶⁵ On the location of Paradise, see Alessandro Scafi, “Mapping Eden: Cartographies of the Earthly Paradise,” in *Mappings*, ed. Denis Cosgrove (London, 1999), pp. 50–70. On the Garden of Eden in general, see Jean Delumeau, *History of Paradise: The Garden of Eden in Myth and Tradition*, trans. Matthew O’Connell (New York, 1995).

⁶⁶ Technological and geographical progress are emphasized by William D. Phillips, Jr., and Carla Rahn Phillips, *The Worlds of Christopher Columbus* (Cambridge, Eng., 1992), pp. 64–84; Pierre Chaunu, *European Expansion in the Later Middle Ages*, trans. Katarine Bertram, Europe in the Middle Ages 10 (Amsterdam, 1979); Ingrid Baumgärtner, “Weltbild und Empire: Die Erweiterung des kartographischen Weltbilds durch die Asienreisen des späten Mittelalters,” *Journal of Medieval History* 23 (1997), 227–53; and Phillips, *The Medieval Expansion of Europe* (as above, n. 36), pp. 187–253.

a rare commodity.⁶⁷ What was required to encourage such an undertaking was the conviction that spices, gems, or precious metals were available cheaply and in great quantities. It would be even better if such valuable products were to be had for nearly nothing and in hyperbolic quantities, as with the gold of Cipangu or the gems of Prester John's realm.

Of course, attempts were made to cultivate or re-create exotic Eastern products in Europe. Silk, after all, had been successfully established, as had saffron. Sugar in the late Middle Ages was grown in Cyprus, Sicily, Andalusia, and the newly discovered Atlantic islands. We don't know of specific medieval efforts to transplant pepper or other spices, but as with alchemical gold, the quintessential example of attempted domestic production of a valuable import, any such scheme must have failed. Most precious items were to be found only in distant places.

Therefore it is not just that Columbus and others happened to rely on antiquated, unreliable (if learned) information but that the fantastic and inaccurate were *necessary* motives for the voyages of discovery. In the fifteenth century the encouragement to seek spices in their still-mysterious native lands came from fabulous stories of abundance as well as from better geographical knowledge. The marvelous and what might be called the "nonmarvelous" were combined and presented in certain ways. A prosaic (that is, nonmarvelous) account of a pepper harvest without snakes was a stimulus to exploration, but so were the marvelous golden roofs of Cipangu. In 1474 the Florentine astrologer and physician Paolo Toscanelli outlined a theory of a westward route to India in a letter to an adviser to the king of Portugal. Toscanelli, whose ideas probably influenced Columbus, describes Cipangu as an island whose temples and palaces are covered with gold. Recruiting for Columbus's initial voyage, Martín Alonso Pinzón (captain of the *Pinta*) put forth a popularized version of this same image, contrasting the poverty of his listeners with the golden-roofed houses of the land to be found in the forthcoming voyage.⁶⁸

It is not too functionalist to ask what specifically among the plethora of stories, lore, and even genuine new knowledge of nature and geography encouraged such schemes of expansion or led Europeans beyond isolated speculation to concrete projects. Much has to do with how what was deemed wonderful might be linked to the ordinary and how this pairing affected concepts of scarcity and availability. Michèle Guéret-Laferté describes the rhetorical trope of "parallelism" in travel literature as the description of foreign practices in light of the familiar, including the relativistic observation that what is common in one place is rare in another.⁶⁹ Marco Polo says that gold is used as roofing material in Cipangu in the way that

⁶⁷ The presence of Venetian and Genoese merchants resident in China in the early to mid-fourteenth century does show a willingness to make extremely long trading journeys, but on a small scale and generally for silk rather than for goods that were rare in the West. See Robert Lopez, "L'extrême frontière du commerce de l'Europe médiévale," *Le moyen âge* 69 (1963), 479–90, and "Nouveaux documents," pp. 445–57 (as above, n. 35).

⁶⁸ Cited in John Larner, *Marco Polo and the Discovery of the World* (New Haven, Conn., 1999), pp. 141–44. See also Folker Reichert, "Columbus und Marco Polo—Asien in Amerika: Zur Literaturgeschichte der Entdeckungen," *Zeitschrift für historische Forschung* 15 (1988), 45–46.

⁶⁹ Michèle Guéret-Laferté, *Sur les routes de l'Empire Mongol: Ordre et rhétorique des relations de voyages aux XIIIe et XIVe siècles*, Nouvelle Bibliothèque du Moyen Âge 28 (Paris, 1994), pp. 241–44.

lead is employed for churches at home. Joinville states that aloe wood and cinnamon fall into the Nile in Paradise just as ordinary trees drop branches into European rivers. Odoric of Pordenone's Italian version of his travels remarks that pepper in Malabar is as plentiful as grain in Europe. Conversely, it was sometimes observed that a familiar and inexpensive European commodity such as olive oil is a prized rarity in China.⁷⁰ According to St. Jerome (and repeated in Isidore's *Etymologies*), the common European herb pennyroyal (*Mentha pulegium*) is more expensive than pepper in India. Walafrid Strabo in his poem on gardens varied this slightly to say that the price of pennyroyal in India equals that of pepper in Europe.⁷¹ That pepper might be guarded by serpents in India is obviously a marvel of nature, but it is also marvelous in a different way if pepper is *common* in India: if this wonderful and (in Europe) expensive spice proliferates there in normal, snakeless orchards.

Notions of the marvelous and the ordinary complemented or succeeded each other, producing various representations of scarcity, difficulty, and abundance. If pepper or gold was not globally scarce, one could imagine tremendous profits from effective exploitation. Difficulties could be surmounted if a flood of treasured products was somewhere available. Problems might be posed by the natives of the places where spices, gold, or jewels originated, but this was not a great preoccupation of Europeans on the eve of expansion. It is logical but misleading, however, to think that from the first moments of contact with East Asia or the New World, Europeans thought in terms of colonial empires or that they were serenely confident in their technological superiority. At first they preferred to treat with politically and economically well organized states where pepper was already being cultivated or gold being mined than to deal with the sort of "primitive" peoples that Columbus found. Columbus's palpable frustration at finding only "savages" instead of officials of the Great Khan was related to an estimation of relative profit.⁷² The ease of taking things from unsophisticated natives was not going to compensate for the difficulty of setting up an infrastructure of exploitation from scratch, or so it seemed.

Whether civilized or uncivilized, the natives of the realms of gold and spices shared, in European eyes, a usefully underdeveloped appreciation of how valuable

⁷⁰ In his historical survey *La flor des estoires de la terre d'Orient*, written in 1307, King Hetoum of Armenia says that in Cathay olive oil is rare, costly, and treasured as a sovereign medicine by the great and wealthy: *Recueil des historiens des croisades: Documents arméniens*, 2 (Paris, 1906), p. 261: ". . . et illud fere quod in illis partibus carius emitur et habetur est oleum olivarum, quoniam reges et magnates illud, quando modo aliquo reperitur, quasi precipuum medicamen cum magna diligentia faciunt custodiri." According to some manuscripts of Mandeville's *Travels*, olive oil is believed in Cathay to have medicinal value (*The Defective Version of Mandeville's Travels*, ed. M. C. Seymour, Early English Text Society, O.S., 319 [Oxford, 2002], p. 105), or at least its price is high (Tzanaki, *Mandeville's Medieval Audiences*, p. 275).

⁷¹ Jerome, Letter 146.2, CSEL 56 (as above, n. 61), p. 311: "omne, quod rarum est, plus adpetitur; puleium apud Indos pipere pretiosius est"; Isidore, *Etymologiae, livre XVII* (as above, n. 1), 9.59, p. 197; Walafrid Strabo, *De cultura hortorum* 302–4, in MGH Poetae 2:346: "Hoc puleium, apud Indorum tanti constare peritos / Fertur apud Gallos quanti valet Indica nigri / congeris piperis." See McCormick, *Origins of the European Economy* (as above, n. 33), pp. 709–10.

⁷² Columbus's expectations and disappointments are outlined in Phillips and Phillips, *The World of Christopher Columbus*, pp. 157–70.

their current and potential possessions were in a global context. Competitors who did understand the price structure were those (considered to be for the most part Muslim) who were regarded as profiting inordinately from the status quo. Distance, intermediaries, the political order of an imagined India—none of these were discouraging if the bottom line was a tremendous, preferably fantastic supply.

Curiously enough, as it turned out, the most fanciful expectations of profit were fulfilled, if not quite in the ways anticipated. Da Gama's second voyage in 1502–3, for example, reaped a 400 percent profit.⁷³ The gleaming roofs of Cipangu were unfindable, but the gold and silver of Peru and Mexico proved to be of a quantity to satisfy the most extravagant dreams of avarice. That such good fortune did not in the long run benefit Portugal or Spain all that much is no more significant in terms of the imagination of riches than the maldistribution of oil revenues in the contemporary world. Wealth is temporary (the Portuguese were losing their advantageous position in the spice trade by the 1530s), or wasted (the Spanish financed futile European wars with their New World revenues), or goes to the wrong people, but it is real nevertheless. European colonial profits and their attendant disastrous consequences moved much of world history in the modern era. The realization of these profits was the result of peculiar ideas of rarity and plentitude that combined ancient and medieval legends of the marvelous with the practical wisdom of experience.

⁷³ Pierre Delaveau, *Les épices: Histoire, description et usage des différents épices, aromates et condiments* (Paris, 1987), p. 72; Jardine, *Worldly Goods* (as above, n. 12), pp. 289–90.