

Whether used in cooking, medicine, religious ritual, or to enhance an aristocratic lifestyle, spices were considered necessary luxuries, necessary not for mere subsistence, but for conferring status, a sense of social as well as physical well-being. Spices were items of what would come to be called conspicuous consumption, consumer goods whose display accounts for part of the gratification they confer. Around the year 1200 Jean de Hauteville mocked the courtiers of the king of France for judging the worth of a culinary preparation by the cost of the spices used rather than on the actual flavor of the dish.ⁱ This is a common criticism of the taste for vulgar ostentation and of the people (often the newly-rich) who indulge in it. However much the moralists and advocates of the sensible or simple life may complain, the flaunting of what are perceived as fashionable, expensive, and in some sense hard-to-acquire goods is a constant social fact since a man is a creature of desire rather than need, according to Gaston Bachelard.ⁱⁱ Desire is augmented by rarity or the difficulty of acquisition. Jean of Hauteville in the remarks just cited goes on to say that the extravagant desire for spices spurs men to search the universe for these products.

When people are fortunate enough to have secured the basic means of survival, they tend to look for ways to obtain additional (and on some level superfluous) or more refined possessions that carry social prestige. The purpose for such acquisitions is not exclusively to impress other people: individual taste and comfort are certainly important, but often such items as automobiles or watches simultaneously confirm self-regard and give pleasure. Cars and watches may be necessary in the modern world, but expense is not really related to reliability. A \$100 watch keeps as accurate time as a \$50,000 one. Aesthetics and the shared knowledge that an item is fine and costly reinforce each other.

Spices were not quite as conspicuous as clothes, fine horses, tapestries, or other aristocratic consumer objects. They form part of an overall atmosphere of luxury, confirming and enhancing what was considered a gracious and elegant way of life. Spices could be used rhetorically as symbols of a good life enjoyed by the few at the expense of those who labor, so that during the English Peasant Rising of 1381, one of the most serious revolutionary moments of the Middle Ages, the peasant leader John Ball gave a kind of sermon to his followers near London in which he asked by what right the lords enjoyed such privileges while those who work for them are impoverished. The nobles dress in velvet and furs while the peasants are poorly clothed; the lords have wine, spices and good (i.e. white) bread while the peasants survive on chaff and water.ⁱⁱⁱ We have already mentioned the scenes of fine dining presented by the authors of *Sir Gawain and the Green Knight* and *Perceval*, in which spices flavor the main courses and are eaten as sweets and included in after-dinner cordials. A fourteenth-century moral tale exemplifying gluttony by the Catalan Franciscan writer Eiximenis describes the eating habits of a worldly and rather fussy cleric. Spices are ubiquitous, but not in themselves heavily emphasized. The cleric likes spiced sauces, especially those made with ginger. He often nibbles on a bit of grilled or fried cheese with sugar for dessert along with sugared spices. He drinks spiced wine (here called *piment*), perfumes his clothes with spices, and is especially partial to quasi-medical confections such as gingerbread with jam, a spiced candy called *Ahand of Christ*,[@] and various electuaries. After his baths, this gourmand has a bizarre concoction of egg yolks with cinnamon and cubeb (probably intended as an aphrodisiac). The cleric is made to look ridiculous, greedy and hypochondriacal, but he is contemptibly fashionable in surrounding himself with spices to enhance and prove a refined style of life.^{iv}

The particular objects that give status and pleasure tend to change from one historical

period to the next. True, there are some consistently important categories of luxuries such as beautiful clothes and jewelry. These retain prestige and mark class distinctions even if specific fashions change. Other things, however, enjoy a vogue and then fade in importance, such as tobacco (Cuban cigars or expensive pipes), hot chocolate (the rage in the late-eighteenth century, now a children's drink), fondue sets. In the Middle Ages spices were clear and even requisite proofs of taste and success, but obviously today showing off cloves and nutmegs confers less sense of competitive accomplishment than owning a home theater or a Bentley.

It is easy to understand why, for example, diamonds were highly prized in the Middle Ages because they have retained their allure, but to comprehend why spices were more than mere condiments or medicines requires an exploration of medieval perceptions of rarity, value and status. We will look at three questions: why were spices considered such desirable luxuries? how expensive were spices? How rare were they? These are interrelated, but not simply aspects of the same thing. In order to impress other people, there has to be agreement as to what commodities are stylish, and this aura of fashion has to balance exclusivity and accessibility.

Not everything that is expensive confers status. If this were the case, people would boast about complicated medical problems or fixing their plumbing. Not everything that is expensive is rare: Hermès scarves and Cartier watches are elite brands and their quality and distinct look are carefully nurtured, but are available, not just at their stores but in airports everywhere.

Conversely, there are things that are rare but inexpensive. Mastic, for example, is a particular kind of resinous gum commonly used in the Middle Ages as a cosmetic, perfume ingredient, medicine and even occasionally put in food. The mastic plant grows only on the southern part of the Aegean island of Chios and so it was rare and extremely expensive, so much so that Columbus in his first exultant letter to the king and queen of Spain about his first discoveries singles out

mastic as among the treasures he was sure (wrongly) he had found. Today mastic is still rare, its habitat is still confined to Chios, but it has lost its prestige as a healthful or luxurious substance and is used to make various Greek and Turkish desserts and sweets. It remains rare, but is no longer particularly expensive.^v

In order for a product to become perceived as an expensive and prestigious luxury, it has to be rare enough so that it is not widely available, yet common enough to be recognized (people have to know what a Bentley looks like). To achieve real success, such a commodity must be not only a casual or occasional luxury but a necessary component of an enviable lifestyle. Exotic travel may enhance a sense of personal accomplishment, but is not on the same order of expected attribute of wealth as driving an appropriate vehicle (although perhaps it is on the way to becoming so if there really is a trend towards intangible advantage). An exemplary medieval meal would include spices, as with those dinners provided for Gawain and Parsifal, and some of the sense that spices must be present in such circumstances comes simply from gastronomic taste. However, on some level spices were prized because they were expensive and rare and if these do not exhaust their attractive meanings for people in the Middle Ages, they are important for any answer to the major question we are exploring: what fueled the extraordinary medieval demand for spices?

What did Spices Cost?

On the one hand it's easy in a general way answer this question: spices were undoubtedly expensive. Prices fluctuated with availability and there was also some long-term shift in demand. As remarked earlier, the price of pepper may have declined a bit because of more reliable supply and a perception that it was so readily available as to have lost its

exclusivity. Grains of Paradise took France by storm in the thirteenth and fourteenth centuries, but lost favor towards the end of the medieval period. We can trace the prices on the wholesale as well as retail markets fairly accurately. The Venetians and Genoese have left records of what they paid for spices they bought in quantity at eastern Mediterranean entrepôts, and there are also surveys of retail prices and valuations of supplies for many European cities. The problem is translating medieval monetary figures into meaningful modern equivalents. Weights and measures varied considerably as did money values, so that an ounce or a penny was not the same in London as it was in Florence.

The household accounts of John de Vere, Earl of Oxford for the years 1431-1432 show that his steward paid one shilling, twopence per pound for pepper, but what does this really amount to? It is not just a question of inflation over centuries, but of such things as what consumers could spend money on alternatively and how much of the product they needed or thought they needed. Much of what medieval aristocrats spent went to horses, hunting, clothes, servants and retinues, largesse (hospitality but also gifts, bribes, and ceremonial generosity including charity). Very little in comparison to our budgets was spent on transportation, machines, entertainment, travel to say nothing of insurance, taxes, brokerage fees, private schooling. Spices were thus one of a fairly restricted number of luxury categories, so that they played a much more important role than, say truffles do now. Even though truffles are fabulously expensive (surpassing \$1,000 a pound), they are not widely appreciated, nor for those that do like them are they, even at this price, a significant dent in their incomes.

Here we come back to the large quantities of spices consumed. After all, in some sense spices are still quite expensive. If one wanted to buy a pound of nutmeg, it would cost about \$100, but that amount will flavor an awful lot of eggnog. The price of nutmeg is irrelevant

because so little is used even by the most innovative cook, whereas in the Middle Ages, considerably more was used in food (and as medicine and perfume), and a significant amount of upper-class household income went to procure spices. Antoni Riera and Christopher Woolgar have shown for Catalonia and England respectively that a substantial amount of the expenses for food to supply noble and royal entourages went towards the purchase of spices. The kings of Aragon-Catalonia and their nobles were particularly partial to spiced wine, while sauces were the preferred vehicle for spices in England. Records of the court and of important aristocrats are particularly extensive for their travels, because purchases had to be made locally. These accounts show frequent purchases of pepper, often two or three times a week thus as common a shopping item as onions or meat^{vi}

The expenditures for spices are perhaps best comprehended in terms of comparisons with prices for other goods. When John de Vere's steward bought pepper at one shilling, two pence a pound, this fact that this represents a significant expense is evident when we see that according to the same account book, a carter hired to transport goods was paid a shilling a day, so that a pound of pepper represented more than a day's wages.^{vii} Other spices were quite a bit more expensive. The steward of the Earl of Oxford paid nearly three times the price of pepper for cloves and mace (3 shillings, three pence per pound). Saffron, then as now the most expensive culinary spice, cost twelve shillings per pound.

John Munro, an economic historian at the University of Toronto, calculated the price of spices in England for the year 1439 using as the basis of comparison a skilled craftsman's daily wage which he gave as eight pence in London and sixpence in Oxford or Cambridge (so substantially less than what the Earl of Oxford's carter received). Using the London wage as the basic measure, it would have taken three days' wages to buy seven yards of wool cloth (English

(English worsted), but between 200 and 300 days= earnings to acquire the same amount of velvet. For a penny one could buy a gallon of milk, a pint of butter or 1 and 1/4 bushels of coal, all representing fractions of the craftsman=s average daily pay. We can compare these figures with the price of sugar which at sixteen pence per pound (= $\frac{1}{4}$ 1, 4d) represented two days= labor. The price pepper was slightly higher, of ginger slightly lower. A pound of cloves required four and 2 days, and a pound of cinnamon three. A pound of saffron (over $\frac{1}{15}$) meant about one *month*=s labor, but then again, Munro estimates the current price of saffron at \$1,800 lb.^{viii}

A group of royal household accounts with comparative data comes from the small kingdom of Navarre in the central-western Pyrenees on either side of the modern border between France and Spain. Between 1408 and 1412, the price of pepper per pound doubled in relation to the wages of a journeyman carpenter (from eight *sueldos carlines* to sixteen). Ginger was more expensive than pepper, but at 3.5 times the carpenter=s wages, it remained steady while the price of pepper temporarily soared. Cloves were five time the daily wage in 1408 (17.5 *sueldos* per pound) and rose to a multiple of six in 1412 (21 *sueldos*).^{ix}

comfortable captivity of

Records kept during the luxurious captivity of the French King John II in the Tower of London (mentioned in the previous chapter), provide another source of comparative price information. who had been taken prisoner by the Black Prince at Poitiers, one of the great battles of the Hundred Years= War. The king bought spices for medicinal and culinary purposes according to the surviving record for the years 1359 and 1360. Unfortunately, we don=t have the price paid for pepper as a basis for comparison, but it is possible to distinguish between the

relatively reasonable prices for ginger, cinnamon, nutmeg and sugar (which ranged from one to two shillings per pound), the more expensive category of spices such as cubeb (3 to 5 shillings) or long pepper (five shillings). Here camphor was more in line with other spices, a little of five shillings per pound.^x

Other sources of information for the comparative prices among spices are commercial records and post-mortem inventories such as those for the pharmacists mentioned in the previous chapter. The Manresa apothecary and spice merchant had a stock that was valued by his executors (conveniently for us) in price per pound. Pepper was estimated as 5.5 *sous* per pound, a bit more expensive than might have been expected in relation to cinnamon, for example, which was four *sous*. Saffron was relatively cheap, however, at ten *sous* per pound and opium was considered to have the same value. The semi-precious stone lapis-lazuli, used as an artist=s pigment, drug and dye-stuff, went for eight *sous*. Mummy was a relative bargain at five *sous*.^{xi} Opium, one of the few medieval pharmaceutical substances still thought of as an effective drug, might have a comparable price to saffron still, but lapis-lazuli is now very rare and greatly prized, hence considerably more expensive.

The other Catalan spice merchant, Francesc Canes, left accounts from his shop in Barcelona for 1378 to 1381. Here, therefore, we have the retail prices actually charged to customers. Pepper was little changed from its 1348 price estimate from the Manresa account: five *sous* per pound. Saffron, on the other hand, had increased tremendously, to 80 *sous* per pound as compared to ten in 1348. Cloves were also greatly inflated and equivalent in value to saffron. Ginger in its various grades ranged from an economical four *sous*, four pence for AMecca@ ginger to seven *sous*, ten pence for the whiter ABelledi@ variety. The price of camphor, as always, was among the highest, here a spectacular 176 *sous* (↘15.5).^{xii}

If we look at wholesale prices, the range of prices is similar, allowing for the obvious discount for bulk purchases made for re-sale. The wholesale markets were in Mediterranean port cities (Genoa, Venice, Barcelona, Marseilles) whose merchants acquired them usually from eastern Mediterranean centers (Alexandria, Acre, Cyprus, Beirut). There were no regular direct connections between Europe and India or the other Asian lands that the spices came from and the whole point of expeditions such as that of Columbus or Da Gama was to bypass the Muslim intermediaries of the Near East to find the source of spices in the Far East.

At Genoa in 1396, a one-hundred pound sack of pepper cost one pound, ten shillings so five shillings per pound. This seems expensive when compared with some of the retail prices given above, but the fluctuating price and local variation in weights and money account for this. Again we are forced to consider the spices in relative terms. Sugar was a little less than twice as expensive as pepper in Genoa in 1396.^{xiii} The Belledi grade of ginger was twelve shillings per pound, while Colombino ginger was slightly cheaper and Mecca (AMecchino@) ginger at 6s, 5d was just over half the price of Belledi. As with pepper, these spices were sold in one-hundred pound units. Rarer spices were sold wholesale by the pound and came in boxes of about 20 kilograms wrapped with canvas (typically cinnamon), or jars (cloves which were more perishable and expensive), or small metal containers for valuable perfumed substances. Prices for the exotics range from mummy at four shillings a pound to ambergris (here carefully described as *ambra di balena*, Awhale amber@ so as not to be confused with the semi-precious stone) at 120 shillings (↖10) per pound. Camphor and musk were quite expensive, both at 75 shillings (↖6, 3s) per pound. A similar price distribution is found at Venice in 1393 and in Barcelona in 1383. There seem to have been four price categories of spices: 1) basic spices

(pepper, ginger, sugar with ginger having greater variation in terms of quality); 2) what might be called, with slight internal contradiction, common luxury spices such as cinnamon, long pepper or galanga; 3) cloves, nutmeg and mace from the Molucca Islands, the most expensive of what we would consider edible spices; and 4) saffron and the precious medical spices ambergris, camphor, aloe-wood and musk.

If we want to see what sort of markup merchants from Genoa, Venice or Barcelona obtained, we need to compare wholesale prices in these ports what their merchants paid in the eastern Mediterranean markets. Here we face the problem of translating money and measurements across commercial and cultural boundaries. Weight units such as the *sporta* (225 kilograms at Alexandria) and the fluctuating ratio between currencies make this a difficult task. A study of Barcelona merchants shows that in 1343 they bought spices in Famagusta (Cyprus) and sold them in Barcelona at 25% more for pepper, 41% for cinnamon, and 20% more for cloves. Eliyahu Ashtor estimated the Venetian markup for cloves in the early fifteenth century at a rather higher rate, 72%. Near the end of the fifteenth century the Venetians managed to charge four times what they paid for nutmegs in the Levant. In general, however, the Venetian spice markup for the entire fifteenth century has been estimated at 40%.^{xiv}

Various snapshots of prices at particular moments and places show, when put together, a considerable amount of volatility in what spices cost. For a *sporta* of Alexandrian pepper, the price in the fall of 1355 was exceptionally highB 163 *dinars*. Eleven years later, the price had dropped to less than half that amount, between 75 and 86 *dinars*. In 1386 pepper cost a quite reasonable 60 *dinars* for a *sporta*, but by April of 1392 it was up to 88 and then suddenly in August it was 129 *dinars*. It hovered between 60 and 100 for the remainder of the 1390s and reached its apogee in 1412 at a breathtaking 200 *dinars* per *sporta* before beginning a lon

decline.^{xv}

Prices were affected by many factors: harvest conditions in Asia, transport problems (especially those created by warfare or instability), and fluctuations in demand. These last were affected not only by fashion trends but by major changes in the European economy and consumer patterns which were among the many consequences of the terrible epidemic of 1348-1349, the Black Death (as it was later referred to). This disease appears to have killed something on the order of one-third of the population of Christian Europe and to have had similar effects in the Muslim Middle East. One might expect this imaginable catastrophe to have reduced economic activity hence demand, but for luxuries such as spices demand in fact rose precipitously even though there were dramatically fewer consumers (i.e. people alive). Those who survived the epidemic had more money and property since, unlike war, the disease left wealth completely intact. The mood of these survivors oscillated between penitential renunciation to placate God and a willingness to spend quickly and recklessly so as to enjoy the all-too-fleeting pleasures of the moment.

The Rarity of Spices

Underlying all the price fluctuations was the basic fact that spices were costly. They were not impossible for reasonably well-off people to afford fairly regularly or for even the better off peasants and artisans to afford occasionally, but they were certainly luxuries and expensive ones at that. Why were they expensive? To be sure, they came from far away, so far that their actual origins were either completely unknown or were the object of very inaccurate and often fanciful lore. Despite all the difficulties created by distance and the relatively slow communications of the time, in fact a lot of spices arrived in EuropeC most of them were by no

means rare on the order of gems, gold, unicorn horns or other treasures. On average in the late fifteenth century, Venice seems to have obtained at least 400 tons of pepper per year from Alexandria, and 104 tons from Beirut. On some occasions much higher quantities are attested: in November 1496, on the eve of the Portuguese discovery of the sea-route to India, four galleys arrived in Venice from Alexandria carrying over two million kilograms of various spices, mostly but not exclusively pepper (1,363,934 kilograms with most of the rest ginger). Another convoy arrived that same year with another million kilograms of spices, about one-half of which were pepper. The scene upon arrival might have resembled an admittedly much later account given by Samuel Pepys in his diary for 1665. His duties as a customs officer included examining spice incoming spice cargos and he describes going through the hold of a captured Dutch vessel from the East Indies whose hold was filled with Apepper scatter[ed] through every chink, you trod upon it; and in cloves and nutmegs, I walked above the kneesB whole rooms full. . .@ The ship would have been larger than a Venetian galley, but the quantities are similar, although we can assume the Venetians organized their containers better.^{xvi}

Whatever the availability or total volume of spices imported, their price was always elevated. Form the medieval observer's point of view, there could be three basic reasons for this: intrinsic rarity (despite appearances there just wasn=t that much spice in the world), circumstantial rarity (spices might be difficult to harvest, or grow in unfavorable climates or locations), or artificial rarity (trade monopolies or other forms of intermediation). This is more than merely theoretically important but affected the perceived feasibility of voyages of discovery. If spices were rare in the lands they originated in, there was not much point to seeking them out. Why try to find a route bypassing the Egyptians or Syrians to reach India and the other spice lands directly when they=d still be expensive when you got there? This is what

might be thought of as the Truffle model: because white Alba and black Perigord truffles are truly rare, even in Piedmont and the Dordogne they are very costly the discount for purchasing on the spot is minor. Saffron, on the other hand, is not a difficult plant to grow and so is not intrinsically rare, but because only the stigma of the flower is usable and it requires thousands of these to make up even a small quantity of saffron, gathering it is difficult. Saffron is rare by the circumstance of its harvest. If, on the other hand, spices were cheap and plentiful in India and expensive in Europe only because of the enormous profits gained by middlemen, then the risks (and they were daunting) and expense of getting to south and east Asia might indeed be worthwhile. The impetus to European exploration was not simply to seek out the source of spices, but to find what were assumed to be immense quantities that could be had for little or nothing and that would command not just a comfortable but a fabulous profit on the European market. Less than half of Vasco Da Gama's crew survived the first voyage to India in 1497-1499. The first circumnavigation of the globe by Magellan's ships set out with 240 sailors, but only 18 made it back to Lisbon. Yet from a strictly economic point of view, both voyages showed a profit even though the quantity of spices acquired was small, such was the tremendous price differential.

At this point, near the chronological end of our story, the European explorers and their financial backers were convinced that Asia abounded in spices and other precious products, but this had not always been the universal belief. The focus on the voyages of discovery represents the tip of the proverbial iceberg and tends to obscure the centuries of debate and ways of thinking about spices and scarcity. It should also be pointed out that these considerations weighed less in the minds of the actual merchants involved in the spice trade (such as the Venetians or the Genoese. They already made substantial profits and benefited from the

difficulty of anyone else setting up to compete with them given their knowledge, contacts, and fleets. They benefited from the inaccessibility of India or the other spice territories, so that while the knowledge of a Genoese such as Columbus was valuable in a competitive sense, it's value was particularly important to those such as the Spanish rulers who wanted to enter the market and take it over.

Knowledge in the context of the medieval spice trade includes both what we would call good (accurate) and bad knowledge. There was always a lot of inaccurate lore, and its importance is often under-appreciated because of an historically incorrect belief that good information drives out bad. If we go back to the seventh century and the learned polymath Isidore of Seville, author of an etymological encyclopedia of knowledge, we find that pepper grows in India and the trees are guarded by poisonous snakes that make it impossible, under normal circumstances, to harvest the berries. The natives, therefore, set fires among the trees to drive away the snakes and this also has the effect of turning the originally white peppercorns black and shriveled. **[see side material 15]** The association of dangerous creatures with precious substances goes far back into classical antiquity. According to Herodotus, frankincense is guarded by snakes, the spice cassia (related to cinnamon) is patrolled by perilous bat-like animals, while cinnamon grows in inaccessible Arabian mountains. Men can obtain this last spice only by a ruse. Birds gather the cinnamon for their nests and once these nests have been built, the natives of Arabia leave out pieces of meat, tempting the birds who drag them back to the nests, but the weight of the slabs of meat breaks the cinnamon nests and the fallen sticks can then be collected. In his account of Greek wonder, antiquities and religious sites, the classical writer Pausanias said that in Arabia vipers build nests around balsam plants (which produce a powerfully aromatic resin thought to have all sorts of curative powers). These snakes are driven

away with sticks, the more extreme method of setting fire to the plants not being necessary because, as it turns out, the vipers are not so dangerous after their diet of balsam. Pausania is unusual among ancient authorities because he actually gives a reason for the snakes= love valuable plants. They eat the balsam and become so docile that their bite is no longer even poisonous!^{xvii}

These stories and others like them are not just random wonders or authoritative if dubious bits of lore. They imply that pepper and other spices are rare, hence expensive, because of the circumstances of its harvest. Spices are not intrinsically or absolutely rareC Isidore, for example, says there are entire pepper *forests (silvae)* in IndiaC but the difficulty of gathering pepper, or cinnamon, or balsam, explains a high price that obtains even in their country of origin. Some writers, such as the naturalists Pliny and Theophrastus dismissed the account of the burning pepper trees as fables. Pliny went so far as to suggest it was made up by people from India in order to elevate prices.^{xviii} Medieval authorities pointed out that if the pepper was burned black, the entire tree and indeed the pepper groves were burned, an unlikely event on the face of it. Yet despite such criticism, the difficulty of harvesting pepper in India would appear repeatedly in travel literature, books of curious facts, geographical notes to maps, and natural history encyclopedias.^{xix} The story flourished because it was attractive to consumers of spices, not just a marketing ploy.

The reason for this attraction is on the one hand a deep and abiding linkage between the dangerous and the valuable or between medicine and poison. A medicine that is valuable, such as digitalis, is also poisonous in just slightly larger quantities; the symbol of the medical profession is the wand of Mercury entwined with snakes, the Caduceus. In medieval manuals of pharmacy, many medicines (including pepper) are shown along with (poisonous) serpents.

Jewels were thought to come from remote and strange places, the beautiful lands of gems and spices were inhabited by the so-called monstrous races of strange humanoids with faces in their chests (Blemmyae) or the heads of dogs (Cynocephali). At the same time, the lore itself and the knowledge and discrimination required to understand the intricacies of a luxury product are part of its appeal.

Wine is the most obvious example of the importance of technical and geographical knowledge joined to connoisseurship. Single-malt scotch is more appealing than blends by reason of its artisanal production and many varieties. Things that are handmade, made in small quantities, made by the (so-called) last of a line of artisans, or that require many steps to achieving are not only rare, but their desirability is enhanced by the *lore* of rarity surrounding them. This is not to say that these categories are meaningless. Handmade shoes by John Lobb of St. James, London, are certainly superior to ordinary leather shoes, but their basic \$4,000 a pair cost is not explicable simply on the basis of craftsmanship or rarity. John Lobb's publicity material describes the many steps and esoterically named artisans who put the shoes together. Interestingly enough, the Lobb name, except for the original store, is now owned by Hermès, and not only are their branches of Lobb's only notionally related to the original, but men's shoes there can be had for just under \$1,000.

Lore and difficulty were even more involved in the allure of precious or expensive objects in the Middle Ages than now. This is partly because of a prevailing view of the natural world and of God's plans as revealed through it. Medieval books of animal lore, bestiaries, describe not only wonderful if fanciful creatures such as the unicorn, but also routinely ascribe extraordinary qualities to what might seem to be ordinary animals: female pelican was believed to sacrifice her blood (and life) to sustain her young (hence the pelican is a symbol of Christ);

bears give form to their babies by licking them. That the perfume and medicine castoreum was thought to come from the testicles of beavers (it actually is from a different gland that secretes a waterproofing substance) gave rise to the belief that beavers had detachable genitalia which could be easily thrown to hunters in an emergency, allowing the beaver to escape. As we have seen, the most expensive and appealing medical remedies were like castoreum, exotic or at least difficult to obtain: tutty (chimney scrapings), ground up gems, Amummy@, ambergris and the like. Diamonds were thought to come from ravines in India where, it was said (as an embellishment to Herodotus= account of the gathering of cinnamon), they could only be acquired by training birds to fetch pieces of raw meat thrown into the gorges. The diamonds stuck to the meat and so the birds brought the stones as a by-product of their feeding. This piece of marvelous information had wide cross-cultural appeal. First found in an allegory of the religious symbolism of gems by Epiphanius of Constantia, a fourth-century bishop, it was taken up by the author of the Sinbad tales of the *Arabian Nights* and by Chinese writers as well as forming part of Marco Polo=s description of India.^{xx} In Epiphanius the only difficulty in getting at the diamonds is the impenetrability of the ravines, but most subsequent writers added poisonous snakes as a further deterrent that nevertheless fails before human ingenuity.

No one can say that medieval scholars were unimaginative, but beyond the anecdotal interest of these stories, their accounts of how valuable goods are found form a series of what might be called Amyths of scarcity@ applicable both to diamonds (which are difficult to find) and pepper (which is in fact not rare in its native habitats). They are enduring and appealing and so whether or not related to the marketing efforts of merchants or reflections of a desire to obscure the true origins of imports, the tales describe a coherent world of wonders.

The Wealth of the East

Other, more optimistic concepts were available, however. Spices might actually be plentiful far away where they grew and their harvest there might be routine, unremarkable. Or perhaps there were lands where gold, silver, jewels or spices were so common that they were virtually free. Complementing myths of scarcity were myths of abundance. Marco Polo, the first medieval European known to have visited India, breathed new life into the old legend about the diamond gorges. Closer to actual practice, he also describes how whales were hunted with harpoons in the Indian Ocean in order to extract ambergris from their carcasses. Diamonds and ambergris are thus presented as requiring tremendous skill to acquire. Marco Polo also presents fables of abundance. He was the first European to describe Japan (Cipangu). Marco Polo never claimed to have visited Cipangu (whose distance from China he greatly overstated), but he had what he believed to be reliable accounts of its extraordinary wealth in gold. Gold is found in such large quantities that the palace of the ruler of Cipangu is roofed in gold just as lead is used in the roofing of European buildings. The rooms of the palace, moreover, are paved in gold two fingers in thickness. Contrast this with the venerable European belief that while there were entire mountains of gold in India, these could not be exploited because dragons, giants and/or gryphons dwelt there.^{xxi} These are not so much contradictory (Japan isn't the same place as India and conditions might differ), as complementary. The immense value of gold in Europe might be related to the difficulty of getting it or to another kind of inaccessibility of distance. The crucial difference is that if one ever figured out where the Indian gold mountains were, the gryphons would still pose problems, whereas if one arrived at Cipangu, the gold would be there for the taking.

In between these extremes of scarcity and abundance were theories that seem more sensible and naturalistic. From very early on certain myths of scarcity were criticized and doubted. In his pharmaceutical manual *Circa instans* (ca. 1160), Platearius points out the problem of setting fires to the pepper groves to drive out the snakes would also mean destroying the plants, making it impossible to harvest any more pepper for years. Marco Polo's account of pepper contrasts with his version of the marvelous diamond gathering. Avoiding any mention of snakes or fire, Marco Polo simply says that pepper is a domesticated crop that grows in Malabar and is harvested from May through July. Some further detail is given by Odoric of Pordenone, a Franciscan friar who visited southern India in 1321. Pepper is a vine, he says, with leaves resembling ivy, planted between trees in the manner of grape vines, and its fruit is dried in the sun. So far, so good, but in all versions of Odoric's voyage crocodiles (here considered a kind of serpent) are supposed to infest the rivers that wind through the pepper groves, and in one manuscript version these creatures have to be driven away by setting fires.^{xxii}

In another early fourteenth-century account, the Dominican Jordan of Sévérac says pepper grows from a vine that winds around trees like the wild grape. The fruit is green when unripe, but eventually turns black and wrinkled (Jordan doesn't say anything about drying the peppercorns). Although Jordan was as fond of marvels as anyone of his time (indeed his travelogue is entitled *Mirabilia descripta*), he contemptuously disposes of the story that pepper is burned or cooked, saying it's simply a lie. Widely considered the most fanciful medieval travel writer, the mysterious author who called himself John Mandeville is similarly dismissive. Although his derivative and fictional voyage abounds in wonders, Mandeville becomes almost indignantly naturalistic (if not actually accurate) when it comes to the venerable problem of pepper in India. Mandeville doesn't deny that there are serpents guarding the pepper plants, but

he says that all it takes be protected from them is an ointment containing lemon or snails and unspecified Aother things@ smeared on the hands and feet. The snakes flee from this repellent.^{xxiii}

In 1353, the Franciscan John of Marignolli returned to Europe after a long stay in both India and China. Despite, or perhaps because of his extensive travels, John had a tendency to towards natural, non-miraculous explanations for phenomena, thus the Sciopods (supposed in the monstrous-races tradition to be one-footed men who use their huge single foot to shade themselves from the equatorial sun) are a misunderstanding of the umbrellas people in India carry to ward off both sun and rain. He reported that all the pepper in the world comes out of the Indian port of Quilon on the Malabar Coast. In fact India was not the only source of pepper nor was Quilon the only point of export. Apart from this, John of Marignolli tends to be the most realistic observer of how pepper is harvested. He echoes Jordan and others in stating that pepper grows from a creeper resembling European grape-vines. It is gathered in a perfectly ordinary and routine way. No burning is required, nor are courage, training or special tools necessary. Pepper grows in regular orchards, not in the middle of the desert as some believe. John states that he himself has seen pepper being harvested and that the lack of exotic surroundings extends to the natives who are neither monstrous or even religiously alien: they are Christians. The implications of this account are that the world=s pepper supply has certain limits (it supposedly all comes from one place in India), but within this large territory its harvest is unremarkable, hence the reason for its high price in Europe is not some supposed danger or difficulty in collecting it.^{xxiv}

If this seems like a victory of rationality or observation over fancy, it was hardly definitive. Two of the main sources for Columbus= theories, Pierre d=Ailly and Aeneas Sylvius

Piccolomini (who became pope as Pius II) repeated the story of the serpents guarding the pepper trees. Serpents still infest the diamond-gorges according to Niccolò de Conti who actually visited India between 1435 and 1439. A mixture of marvelous and the unmarvelous is found in the annotated globe made by Martin Behaim in Nuremberg in 1492. Diamonds and gems in India abound, but are watched over by snakes. On the other hand, in what amounts to the most focused contemporary statement about the international economics of the spice trade, Behaim attributes the elevated prices in Europe not to any danger or even great distance but to the artificial conditions imposed by economic exploitation. Spices, according to Behaim, are not rare, either intrinsically or circumstantially. Quite correctly he notes that they grow elsewhere besides

India, in places such as Java, Indochina and Sumatra (and, less accurately, Japan and the Nicobar Islands of the Indian Ocean). The reason spices are expensive is the accumulated transaction cost imposed by government regulation and private profits made at the many points of transfer.

There are no fewer than twelve steps, according to Behaim, that spices pass through from their origin in the East Indies until they reach Germany. First the inhabitants of the island of Java Major (probably Borneo), collect spices from other islands which are bought by merchants from Ceylon. In Ceylon they are in turn sold to traders from the territory known as the Golden Khersonese (perhaps a dim reflection of the Malay Peninsula), and then to merchants from Taprobana (Sumatra?). This realistic but in fact wrong description of the meandering of spices through East Asia becomes more accurate as their journey brings them to the west via the Heathen Mohammedans from Aden who carry the spices to Cairo. The remaining steps involve the distribution of spices in Europe by way of Venice, Frankfurt, Bruges and finally to retailers in Germany.

All these stages are taxed and involve some private profit as well. The customs levies alone account for a substantial share of the ultimately astronomical markup. AOne must know that the spices from the islands in East India spices must pass through many hands before they come here to our land@ as Behaim summarizes the situation, Ano wonder spices for us cost their weight in gold.@^{xxv}

There was certainly was an inducement to those not already profiting from the Mediterranean spice emporia go after the product directly by finding their native habitats, bypassing the largely Aheathen@ middlemen and in the process acquiring immense profits. In itself, however, this idea of moderate commercial plenty would not necessarily have overcome the frightening scale of the risks involved in the voyage. We are accustomed to thinking in terms of scientific progress and the replacement of a marvelous view of the world by a naturalistic one more amenable to human intervention. Certainly advances in navigation, ship construction, map-making, and weapons technology contributed to the surprising success of European expansion in the fifteenth and sixteenth centuries, but equally important were wildly inaccurate, illusory notions of the extraordinary, hyperbolic wealth of the East. People are motivated, even stampeded into investing not by rational calculations of risk versus reward, but by excesses of optimism accompanied by a fear of losing out while others profit. The famous tulipomania of seventeenth-century Holland or the dot-com bubble of 1998-2001 were ephemeral, but the same frenzy and miscalculation characterized more substantial developments such as the building of the Suez Canal or the American railroads or the postwar housing boom.

Myths of abundance were built into the medieval European ways of imagining Asia. Along with strange animals, terrible deserts and monstrous races, an enduring feature of the image of the East was its profligate wealth. Historically these impressions of vast wealth came

from Greek histories and legends of Alexander=s conquests combined with Biblical lore about the Garden of Eden or the gold mines of Ophir to which Solomon=s fleet traveled, to which were added post-Biblical legends concerning the Three Kings who paid tribute to the Christ-child. The specifically medieval contributions were based on two persistent and fascinating personages: the imaginary Christian ruler of @the three Indias@ known as Prester John, and the splendid (if somewhat exaggerated) image of Kublai Khan. Prester John was supposed to be both priest and king. His rich and immense empire east of Islam reflected an intermittent awareness that there were Christians beyond the boundaries of Europe and the legend of the apostle Thomas who was believed to have made many converts in India. The land of Prester John represented the wish and hope for an ally against the infidel that became increasingly urgent and alluring as the crusades started to fail and the Muslim forces took back the Holy Land, but more generally he ruled over a utopian realm of peace, justice, and benevolent autocracy.^{xxvi}

A letter purporting to be sent from this monarch to the Byzantine emperor circulated in Europe beginning in 1170. In a haughty and boastful tone Prester John informs the Emperor Manuel that he rules the Three Indias where the body of St. Thomas rests. Seventy-two kings (mostly pagans) are subordinate to him and pay tribute. His empire is located near the earthly Paradise and indeed many of the plethora of gems found in his territories are taken out of a river that flows out of Eden. In the palace of Prester John, 30,000 people are fed daily. No one ever lies, robs or commits adultery in this empire. Basic commodities are plentiful (milk, grain, leather, cloth), but nature is not merely generous but profligate: Aour magnificence is overflowing and resplendent with all the riches of the world.@ There are exotic animals (centaurs, the phoenix) and humans (pygmies, giants, the dog-headed Cynocephali). Gems

abound and are used in the columns, walls, even windows of the palace. Prester John owns jewels that are not only magnificent but that possess occult properties. Spices are less obsessively emphasized in the letter than are jewels, although the palace lamps run exclusively (and extravagantly) on burning fragrant balsam. Pepper grows here, but in forests full of snakes, so that fires have to be set to drive them away. In the realms of Prester John, gems proliferate, but spices are still limited by environment and circumstance.

Crusade hope, utopian dispenser of justice, or even anti-papal propaganda (there is no quasi-independent church authority here), Prester John might be downgraded by some writers (Marco Polo says he was a minor Central Asian ruler defeated by the Mongol Khan), but the reality of his existence was maintained throughout the Middle Ages and beyond. The site of his realm moved, and by the fifteenth century he was more likely to be identified with Ethiopia (a Christian realm in Africa) than with India or China, but collaboration with Prester John was important in putting together Portuguese plans for arriving at India by circumnavigating Africa.^{xxvii}

The Mongol conquest of Central Asia and Russia brought them to Eastern Europe in 1241, but the death of Ögödei halted their westward progress and as they turned their attentions to the remnants of the Islamic caliphate, sacking Baghdad in 1258, the Mongols appeared in the West to be possibly the Christian or at least *potentially* Christian saviors they had long hoped for from the East. The high tide of Western optimism on this score was over by 1300, but the Mongol conquest of China and the rule of the cultivated Kublai Khan (1260-1294) was seen, largely through Marco Polo's account, as an exemplification of the just absolutism already anticipated by the Prester John legends. While early travelers to the Gobi desert headquarters of the khans had been appalled at the emptiness and poverty of the Mongols, the empire of Kublai

Khan had many of the fabulous attributes of Prester John=s realm. The khan ruled over a gigantic and extraordinarily populous kingdom or really group of kingdoms; he disposed of phenomenal wealth; although he was not Christian, he was not beholden to any religious figures and he is depicted by Marco Polo as dispensing justice and administering his realm in a manner both conscientious and magnificent.

An important difference between Prester John=s imaginary realm and the real empire of Kublai Khan is that the wealth of China was depicted as the product of human labor, not of a recklessly generous natural environment. Marco Polo retails numerous wonders and, as we=ve seen with the diamonds and ambergris, occasional myths and facts of scarcity. The predominant impression, however, is of wealth acquired through human ingenuity. The Chinese are presented as skilled and industrious artisans. If Marco Polo cannot exactly be credited anachronistically with free-market notions of motivation, he nevertheless sees Asian productivity as the result of human talent, cultural propensities, and beneficent government. The reason Marco Polo was not always believed in Europe was not that his account was full of dubious wonders, but that he discounted or ignored the already established marvels (monstrous races, Prester John, unicorns, the enclosed nations of Gog and Magog) in favor of things never heard of before: the immense and numerous cities of southern China, the use of paper money, or the existence of thousands of islands east of India (i.e. Indonesia). In Marco Polo=s account, spices grow in places besides India and in large quantities. For every shipload of pepper that arrives in Alexandria destined for the European market, 100 times that amount is off-loaded in the port of Zaitoun (modern Quanzhou) along with gems, aloe-wood, sandalwood, pearls, and precious stones. The customs duties imposed by the Great Khan are high, but the profit is nevertheless large and so the supply is uninterrupted. Here we have an economy running on the gargantuan scale of Prester John=s

realm, but with a minimum of miraculous intervention and with an understanding of the necessary economic and logistical realities.^{xxviii}

We therefore have three medieval explanations for the high price of spices in Europe: they are rare where they grow; they are not rare, but are difficult to harvest or acquire; they are not rare and easy to acquire where they grow, but artificially inflated in price to profit foreign middlemen. There are also three different ways of looking at the basis for the wealth of Asia: that certain extremely desirable things flourish there, but in limited quantities or in limited exploitability (the snakes interfering with the diamonds and the pepper); that for some reason (proximity to Paradise, for example) nature has blessed certain Asian realms with extraordinary quantities of precious goods (the gold of Cipangu), or finally that Asia's riches are the product of human justice, industry and density of population (China under the khans).

All of this may seem rather complicated and theoretical, but it is an intrinsic part of the mental associations, overtones and allure of spices. Moreover there were a series of calculations about wealth, risk and rewards that stood behind the organization of the voyages to find the spices in their homelands. Approaches to the problem of scarcity versus abundance could be combined, so that the seemingly exaggerated quantities of Asian wealth could be depicted, nevertheless, in naturalistic terms. It is common in travel literature to compare seemingly unusual practices to what is more familiar to the reader, so that medieval narratives about Asia compare Buddhist to Christian monks or describe the size of Chinese cities in terms of Italian cities (Marco Polo's statistics for the pepper imports in Zaitoun is in this tradition). Or similarly a way of understanding difference is by a kind of cultural relativism: Awe@ like wine, while the Mongols enjoy fermented mare=s milk (*koumis*) which might be unbearable (according to John of Plano Carpini), or not at all bad (William of Rubruck). This rhetorical trope of Aparallelism@

can be extended to include items that are rare in one part of the world but common in another.^{xxix}

Gold is used as a roofing material in Cipangu, according to Marco Polo, just as lead is used in Europe. In an Italian version of Odoric of Pordonone's travels he says that pepper in Malabar is as common as grain is in Europe. Conversely a familiar European commodity might seem valuable to people in Asia. It was plausibly, if inaccurately, believed that olive oil was a prized rarity in China. Relative degrees of rarity could be understood as a basis for economic comparison. According to St. Jerome (and repeated by Isidore of Seville, among others), the common European herb pennyroyal is more expensive in India than pepper. In a poem on gardens, the ninth-century monk Walafried Strabo varies this slightly to say that the price of pennyroyal in India is the same as the price of pepper in Europe.

The French noble Jean de Joinville wrote an account of the life of Louis IX, the king of France from 1226 to 1270 whom Joinville survived by many years, sufficient to see him canonized. St. Louis led two failed crusades, efforts that deepened rather than subtracted from his aura of sanctity. The first was an attack on Egypt that was initially successful, but ultimately resulted in the capture of the king in 1245. Joinville describes this failed Seventh Crusade and includes a brief description of Egypt. The Nile is described as bringing down spices from the earthly Paradise where it originates. Genesis 2:11-14 says that four rivers have their source in the Garden of Eden including the Geon which, since the time of the Biblical commentator Josephus, was identified with the Nile. According to Joinville:

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, 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 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.^{xxx}

Inaccurate though it is, this statement shows many of the ways of thinking about why spices are so valuable. Africa is not Asia, but in the medieval European geographical conception, the Nile was the border between Asia and Africa, so that the fact that Egyptian cities served as entrepôts for spices could plausibly be related to an eastern origin. The idea that spices float intact down rivers is not by any means Joinville's invention but has a venerable history going back at least to St. Jerome's remarks about India. It is based on an assumption that spices resemble gems, because it was the case until relatively recent advances in mining that most precious stones were found in alluvial river deposits rather than mines. That the Garden of Eden is the true home of spices is a notion we will explore in the next chapter, but obviously its position in the East and its status as the terrestrial Paradise made it an appropriate abode of all manner of precious substances. Joinville uses the trope of parallelism that we have been describing: in Paradise cinnamon and the like fall into rivers and are carried downstream just like prosaic regular tree branches back home. Spices are thus of quasi-miraculous origin, but the natives of the land below Egypt don't have to go through anything resembling the heroic efforts of the whale hunters or diamond snatchers or Marco Polo's narrative. All they do is spread out their nets and, presumably after a peaceful night's rest, show up in the morning to find all manner of spices sold at already elevated prices to European by merchants in this country (i.e. Egypt). How plentiful these spices are Joinville does not say explicitly. They may not require much work to accumulate, but on the other hand it would seem that relying on flotsam brought down from Paradise imposes certain basic limitations. We have reached the neighborhood of Paradise but are not yet at the fulfillment of the most extreme optimistic dreams of wild abundance.

i. Quoted in Antoni Riera, *A>Transmarina vel orientalis especies magno labore quaesita, multa precio empta=: especias y sociedad en el Mediterráneo noroccidental en el siglo XII,@ Anuario de estudios medievales* 30, no. 2 (2000), 1030.

ii. Quoted in Timothy Morton, *The Poetics of Spice: Romantic Consumerism and the Exotic* (Cambridge, 2000), p. 8.

iii. John Ball=s Asermon@ in Froissart=s Chronicle, excerpted in *The Peasants= Revolt of 1381*, 2nd ed. (London, 1983), ed. R. B. Dobson, p. 371.

iv. Francesc Eiximenis, *Com usar bé de beure e menjar*, ed. Jorge J. E. Gracia (Barcelona, 1983), pp. 43-47.

v. Andrew Dalby, *A Mastic for Beginners,@ Petits Propos Culinaires* 65 (2000), 38-45; *A Synoptic Edition of the Log of Columbus= First Voyage*, ed. Francesca Lardicci et al. (Turnhout, 1999), pp. 67, 86, 224.

vi. Riera, *A>Transmarina vel orientalis especies=,@ pp. 1031-1049; C. M. Woolgar, *The Great Household in Late Medieval England* (New Haven, 1999), p. 129.*

vii. Professor Christopher Dyer of the University of Leicester kindly provided me with information, as above, Chapter 1, note 15.

viii. John H. Munro, *A The Consumption of Spices and their Costs in Late-Medieval and Early-Modern Europe: Luxuries or Necessities?@ (lecture given in 1983, revised in 1988 and 2001), available at www.economics.utoronto.ca/munro5/lecnot201.htm.*

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- ix. Peter Spufford, *Power and Profit: The Merchant in Medieval Europe* (New York, 2002), p. 313.
- x. Leslie G. Matthew, 'King John of France and the English Spicers', *Medical History* 5 (1961), 65-76.
- xi. Tarragona, Archivo Histórico Provincial, manual 3669/1, fols. 224v-227r.
- xii. Carles Vela i Aulesa, *L'obrador d'un apotecari medieval segons el llibre de comptes de Francesc ses Canes (Barcelona, 1378-1381)* (Barcelona, 2003).
- xiii. Federigo Melis, *Documenti per la storia economica dei secoli XIII-XVI* (Florence, 1972), tables 86, 87, 90 (pp. 298-300, 304-306, 312).
- xiv. Josep Planes i Borràs, 'The Accounts of Joan Benet's Trading Ventures from Barcelona to Famagusta, 1343', *Epeteris* 19 (1992), pp. 105-118; Eliyahu Ashtor, 'Profits from Trade with the Levant in the Fifteenth Century', *Bulletin of the School of Oriental and African Studies* 38 (1975), 256-257, repr. Ashtor, *Studies on the Levantine Trade in the Middle Ages*, (London, 1978); Spufford, *Power and Profit*, p. 312.
- xv. Eliyahu Ashtor, *Histoire des prix et des salaires dans l'Orient médiéval* (Paris, 1969), pp. 324-325.
- xvi. Eliyahu Ashtor, 'The Volume of Mediaeval Spice Trade', *Journal of European Economic History* 9 (1980), 753-763, especially p. 757, repr. Ashtor, *East-West Trade in the Medieval Mediterranean* (London, 1986); K. S. Mathew, *Portuguese Trade with India in the Sixteenth Century* (Manohar, 1983), p. 22; *The Diary of Samuel Pepys* for 16-17 November, 1665.

xvii. Isidore of Seville, *Etymologiae*, *Livre XVII*, 8. 8, ed. and trans. Jacques André (Paris, 1981), p. 147; Herodotus, *Histories* III, 107, 110-111; Pausanias, *Description of Greece*, IX. 28.

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xviii. Pliny, *Natural History*, XII. 85; Theophrastus, *Enquiry into Plants*, IX. 5. 1.

xix. For example, the Old English *Wonders of the World*,[@] described in Andy Orchard, *Pride and Prodigies: Studies in the Monsters of the Beowulf Manuscript* (Cambridge, 1995), p. 188;

the purported letter of Alexander to Aristotle, *Epistola Alexandri ad Aristotelem*, ed. W. Walther Boer (The Hague, 1935), p. 53; Honorius Augustodunensis, *Imago mundi*, ed. Valerie Flint, *Archives d=histoire doctrinale et littéraire du moyen âge* 57 (1982), p. 53; Gervase of Tilbury, *Otia Imperialia: Recreation for an Emperor*, ed. and trans. S. E. Banks and J. W. Binns (Oxford, 2002), pp. 187, 697; Thomas of Cantimpré, *Liber de natura rerum*, ed. H. Boese (Berlin, 1973), pp. 289, 339; *Broader Horizons: A Study of Johannes Witte de Hese=s Itinerarium and Medieval Travel Narratives*, ed. Scott Westrem (Cambridge, Mass., 2001), p. 138.

xx. Christel Meier, *Gemma spiritalis: Methode und Gebrauch der Edelsteinallegorese vom frühen Christentum bis ins 18. Jahrhundert*, part 1 (Munich, 1977); Berthold Laufer, *The Diamond: A Study in Chinese and Hellenistic Folk-Lore* (Chicago, 1915), pp. 6-28.

xxi. Marco Polo, *Milione*, *Le devisament dou monde: Il Milione nelle redazioni toscana e franco-italiana*, ed. Gabriella Ronchi (Milan, 1982), p. 532. The inaccessible golden mountains are found in: a letter of St. Jerome (no. 125); Isidore of Seville, *Etymologies* XIV. 3. 7; Hrabanus Maurus, *De universo*, IV. 4 (in PL 111, col. 335); Honorius Augustodunensis, *Imago*

mundi (as above, note 19), p. 53; and on the Hereford Map (Athe golden mountains guarded by dragons@), Scott D. Westrem, *The Hereford Map* (Turnhout, 2001), p. 33.

xxii. Marco Polo, *Milione*, p. 579; Odoric of Pordenone, *Relatio*, ed. Anastasius van den Wyngaert, *Sinica Franciscana* 1 (1929), pp. 439-440; and another version in *Cathy and the Way Thither*, ed. Henry Yule and Henri Cordier, vol. 2 (London, 1913), p. 295, note 8.

xxiii. *Mirabilia descripta B Les merveilles de l=Asie par le Père Jourdain Catalani de Sévérac*, ed. Henri Cordier (Paris, 1925), p. 116; Mandeville, *Le livre des merveilles du monde*, ed. Christiane Deluz (Paris, 2000), pp. 318-320; *Mandeville=s Travels*, ed. and trans. Michael C. Seymour (Oxford, 1967), pp. 123-124.

xxiv. *Relatio Fr. Johannis de Marignolli*, ed. Anastasius van den Wyngaert, *Sinica Franciscana* 1 (1929), p. 530.

xxv. E. G. Ravenstein, *Martin Behaim, His Life and His Globe* (London, 1908), pp. 84-90.

xxvi. On Prester John, Friedrich Zarncke, ADer Priester Johannes,@ in *Abhandlungen der königlichen Sächsischen Gesellschaft der Wissenschaften, Phil.-Hist. Class.* 7 (1879), 827-1028; Vsevolod Slessarev, *Prester John: The Letter and the Legend* (Minneapolis, 1979); Hilario Franco, Jr., ALe construction d=une utopie: L=Empire de Prêtre Jean,@ *Journal of Medieval History* 23 (1997), 211-225; István Bejczy, *La lettre du Prêtre Jean: une utopie médiévale* (Paris, 2001); Michael Uebel, AImperial Fetishism: Prester John Among the Natives,@ in *The Postcolonial Middle Ages*, ed. Jeffrey Jerome Cohen (New York, 2001), pp. 261-282.

xxvii. The movement of Prester John=s realm is described by C. F. Beckingham in articles collected in his *Between Islam and Christendom: Travellers, Facts and Legends in the Middle*

Ages and Renaissance (London, 1983).

xxviii. For European impressions of China and on Marco Polo, see Folker E. Reichert, *Begegnungen mit China: Die Entdeckung Ostasiens im Mittelalter* (Sigmaringen, 1992); John Larner, *Marco Polo and the Discovery of the World* (New Haven, 1999).

xxix. A point made by Michèle Guéret-Laferté, *Sur les routes de l'Empire Mongol: ordre et rhétorique des relations de voyages aux XIIIe et XIVe siècles* (Paris, 1994), pp. 241-244.

xxx. Joinville, *History of Saint Louis*, in *Chronicles of the Crusades*, trans. M. R. B. Shaw (Harmondsworth, 1963), p. 212.