

CHAPTER 18

THE MEDIEVAL SPICE
TRADE

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THE insatiable European demand for spices in the late Middle Ages (A.D. 1200–1500) is perhaps the most important and best-known example of great historic change brought about by consumer preference. The fateful European voyages of discovery and subsequent colonization were launched not to locate basic, vitally important commodities such as grain, but for aromatic products to provide flavor and an aura of healthful and gracious refinement to food and drink in order to enhance what we would term “lifestyle.” The journeys of Columbus, Da Gama, and their successors were organized with a number of goals in mind, including the quest for gold and silver and the possibility of finding Christian rulers beyond the realms of Islam who might aid in combating the Turks. But among the principal motives was to find where spices came from and to obtain them for a price far below what the Venetians or Genoese supplied via the market ports of the Muslim Middle East. A considerable amount of lore, learning, navigational technique, financial backing, and economic theorization were mobilized to acquire what were thought to be extremely desirable exotic fragrances and condiments which, it was widely believed, were far more plentiful in their magical and mysterious countries of origin than in the constricted markets of Europe.

The importance of the spice trade to the history of food is not simply in the commercial routes and speculation about how to expand them, but in the reasons for the extraordinary demand in the first place. It is obvious that modern European cuisine does not require or even tolerate very much in the way of tropical spices. The development of what became classic French cuisine in the seventeenth and eighteenth centuries was defined in part by a rejection of an earlier highly flavored and complicated spectrum of tastes imparted by cinnamon, cloves, saffron and

the like. Medieval and Renaissance cuisine was dismissed as “Arabic” and “childish” and a richer more intense type of sauce was developed made with distillates of meat juices and flavored not with hot or sharp spices but with shallots, truffles, and European herbs. In North Africa, the Middle East, India, or Indonesia, spice dealers handle what seems to Europeans an astonishing variety and quantity of spices, and consumers buy on a routine day what might be a lifetime’s supply in France. Outside of desserts (a kind of home in exile for spices such as cinnamon, cardamom, or nutmeg), there are only a few European niches for particular spices. Saffron is necessary for some types of paella, or *lotte au safran*, or *risotto Milanese*, but these are very specific preparations, not part of a generalized culinary practice. Pepper managed to survive as a common spice (although even here European usage is small), and sugar, considered a spice in the Middle Ages, would have an unusual and prosperous future, but for the most part the success of European discovery of the spice lands and control of the spice routes would be followed by the increasing irrelevance of spices. This evanescence of the taste for a piquant cuisine impedes our present understanding of the basis for the earlier popularity of spices.

Understanding the medieval demand for spices involves describing medieval preference in cuisine and an appreciation for its fairly radical difference from European taste of the last several centuries. Medieval spices would have other uses, however, besides cooking. In addition to their role in sauces and other edible uses, spices were regarded as healthful. They were important ingredients in drugs. Equally important, spices were useful to bring equilibrium to the body’s humors which were prone to imbalance. Depending on individual temperament, the four vital fluids constituting the humors were easily thrown out of harmony by such things as the properties of different foods. Blood, bile, black bile (melancholia), and phlegm corresponded to combination of hot, dry, moist and cold. As many kinds of meat and fish were cold and/or wet, the generally hot and dry properties of spices balanced their humoral influences.

As part of their gastronomic and medical aura, spices were above all exotic. They came from far away; their wonderful fragrance evoked received ideas about India derived from classical learning. To this image of the Orient was conjoined a Biblically derived Christian conception of the fragrant earthly Paradise and its Eastern location. Spices conferred a kind of social prestige and status was closely joined to the ability to provide a fragrant environment including, but not limited to, food. They were in some sense magical, not merely mundane cooking ingredients. The most expensive spices such as ambergris, musk, or camphor were used in perfumes, as preventive medicines to ward off disease emanating from pestilential smells, and as fragrances to scent rooms or adorn wealthy persons. They might also have some use in cuisine, especially in formulae for spiced wines. This versatility was part of the allure of spices, but it was a heightened, otherworldly utility that conferred a kind of well-being, spiritually as well as physically. The closest modern parallel might be the sense of “wellness” that constitutes a kind of health and freedom from ambiguous diseases difficult to describe, a malaise such as “stress” as opposed to calm, purity, fragrance, and harmony. In particular the notion that

fragrance is both mentally and physically healthful, the underlying idea behind aromatherapy, is close to a medieval picture of the broad significance and meaning of aromatic luxury products.

Inclusion of fragrant but only marginally edible exotica such as musk or ambergris leads one to ask what was meant by "spices" in the Middle Ages if this category was prized for reasons that went outside of cooking. The Florentine merchant Francesco Balducci Pegolotti in about 1340 listed no fewer than 288 spices in his handbook *La pratica della mercatura*. Allowing for different types or grades of the same substance (three grades of mastic, three of ginger, for example), there are 193 different substances mentioned. What they have in common is that they are imported, not perishable, and have a high unit value (a small amount is valuable and so, unlike iron, timber, or wheat, spices do not require bulk transport to make a profit). Pegolotti includes a number of dye products, wax, and cotton, but the vast majority of his *speziere* are aromatic. They may require some grinding or scraping to reveal their fragrance, but this is what gives them value.

Spices are distinguished from herbs because they are imported and are much more valuable. Herbs were also used in preparing food and were featured in medical lists of remedies, but they were locally cultivated or gathered and so were thought of as green, even if they were sometimes saved in dried form. They might be sold in markets, but by farmers or foragers, rather than appearing in the urban shops of apothecaries, spicers, or grocers. Herbs were not inferior to spices in flavoring food and had some medicinal and quasi-medicinal uses that spices could not duplicate. Poisons, witchcraft, and love potions required herbs, not spices, but herbs were either non-commercial or at the low end of mercantile value. They were domestic, not imported.

SPICES IN MEDIEVAL GASTRONOMY

Spices were ubiquitous in medieval gastronomy and also in medieval pharmacology. They were condiments but also cures and preventives for disease. The fields of cooking and medicine are always related in the sense that good health is associated with adhering to dietary rules and bad health is often thought to be due to dietary abuse or imbalance. At various times the proximity of food consumption to perceptions of illness and its causes is more or less. In the mid-twentieth century, it was assumed that drugs could (or soon would) treat any kind of disease or nutritional insufficiency. It was even a common belief of food industry planners that home cooking would soon be eliminated in favor of well-balanced, nutritionally enhanced frozen or concentrated meals. In this setting food and medicine were widely separated and the sole purpose of dietary advice was to lose or manage weight. By the late twentieth century anxiety over obesity, food processing, the practices of the food industry, and changes in attitudes towards freshness, seasonality, and

the environment encouraged the return of a more historically typical association of food with health and, more especially, of illness with poor dietary practices. Not only are certain foods regarded as dangerous (those processed with high fructose corn syrup, for example) or beneficial (oat bran, flax seed), but ideas of imbalance versus equilibrium or of toxicity versus purity affect the perception of a blurred frontier between medicine and food. This makes it easier than in the recent past to imagine something of the medieval view of the world in which spices were not only flavoring ingredients but healthful, balancing, and prestigious as well. Their contribution to wellness and refinement was enhanced by their exotic origins, their high price, and their association with the sacred. If the Garden of Eden abounded in spices, if the bodies of saints could be identified by their aromatic fragrance (as opposed to the usual stench of decay), then food that was perfumed with spices and aromatic medicines must have powers that favorably influenced the body, mind, and even the spirit or soul.

Nevertheless, all this elite versatility notwithstanding, spices were real flavors. Medieval cuisine was richly piquant not because of medical or nutritional lore or the desire to display wealth but because of a taste for the spices themselves. The culinary aesthetic of medieval Europe was synthetic rather than analytic, to use the terms Massimo Montanari has outlined in a general discussion of culinary categories.¹ Synthetic in the sense that what the cook strives for is a palate or spectrum of flavors in each dish rather than enhancing the basic ingredients. Modern European cuisine is analytic and has broken with this medieval tradition by exalting the quality of ingredients, maintaining their integrity and identifiable look and taste throughout the preparation process, and by intensifying rather than covering or blending the principle constituents. Most cuisines of India are synthetic in that the sauce is what distinguishes a dish and it might be applied to different kinds of meat or vegetables so that the taste of the dish is determined more by a complexity of ingredients and savors than by its primary basis. When in 1656 Nicolas de Bonnefons wrote that "a cabbage soup should taste entirely of cabbage, a leek soup of leeks, a turnip soup of turnips," he was asserting the primacy of the basic ingredients over the seasonings, the easily separable components of analytic cuisine, over the blended mysteries of the synthetic. He concludes quite clearly: "food should taste like what it is."²

The excessive use of spices (which eventually came to mean almost any use of spices) was a capital offence according to the new authenticity championed by French chefs in the seventeenth century. The novelty of this culinary philosophy and the backwardness of the rest of Europe can be seen in the accounts of travelers such as the marquis of Coulanges who found German cuisine in 1657 marred by peculiar spice, fruit, and meat combinations, or Gaspard d'Hautville's impressions of Poland at around the same time where the food was redolent of nutmeg, cinnamon, saffron, and sugar. Advocates of the new style rejected not only foreign backwardness but also their own earlier French traditions. The anonymous L.S.R., author of *L'Art de bien traïter* (1674), dismisses even his innovative predecessor La Varenne for excessive use of spices and for too many flavors, a practice "more

willingly tolerated among the Arabs . . . than in a refined atmosphere such as ours, where propriety, delicacy, and good taste [reign]."³ In all these examples there is an explicit or implicit denunciation of what had been the fashion—the medieval taste for highly spiced, sweet, and complicated sauces.

The modern French chefs' contempt for medieval cuisine based on its supposedly "Arabic" character is understandable to the extent that medieval European recipes seem to partake of an Arabic, Persian, and even Indian aesthetic. The use of perfumed ingredients such as rosewater, a fondness for dried fruit, sugar in sauces and sugared confections, or almond milk, seem to indicate borrowings from the Near East. New vegetables such as spinach and artichokes or the bitter oranges and pomegranates of Andalusia were clearly introduced from the Muslim world. Yet there is substantial disagreement about how direct was the dependence of European medieval preferences on the cuisine of Islamic cultures. It is hard to find North African, Near Eastern, or Persian dishes transferred or picked up by European recipe books. Even where reference is made to "Saracen style" or "Saracen sauce," there is no connection, or perhaps the color red is associated with Islam. Concoctions dubbed "Saracen" might even include pork or other clearly non-Muslim ingredients.⁴

With regard to spices, the peculiarities of medieval recipes do in a general sense reflect an Eastern aesthetic. Spices are used in mixtures and combinations, not singly in the modern Western manner. They appear across the menu, in savory as well as in sweet dishes and often in combination with sugar and vinegar so the savory/sweet contrast is, from a modern standpoint, blurred. And finally, spices are used in large quantities in medieval recipes. While recipes don't usually specify amounts and it won't do to exaggerate and think of medieval cuisine as simply overwhelmed indiscriminately with spices, the accounts of households and provisions for individual meals show that spices were not subtle or barely visible but rather major flavors in a majority of recipe collections. For the totality of medieval cookbooks (about 150 survive, all from the thirteenth through fifteenth centuries), 75 percent of the recipes call for spices and no less than 90 percent of English medieval cookbooks require spices.⁵

The widespread use of varied spices fits with an overall set of medieval culinary preferences. In general, medieval cuisine emphasized artifice rather than simplicity and complex taste combinations (sweet and sour, for example) rather than intense concentration on primary elements. It took delight in special effects including not only perfumed and piquant flavors but color, *trompe l'oeil*, and magnificence. Pepper, saffron, cinnamon, and ginger and sugar were the most common spices used in medieval cooking and made up the bulk of what was imported from the East into the Mediterranean. However, one of the remarkable aspects of the medieval fondness for spices was the variety of piquant ingredients called for by the recipes and supplied by the merchants. Nutmeg and cloves were imported from tiny islands in the Moluccan archipelago of what is now eastern Indonesia. They were highly prized and quite expensive. Other spices commonly used are all but unknown in Europe in North America today outside Asian ethnic enclaves.

Galangal, zedary, and long-pepper (an Indian spice not in fact related to black pepper) were well-known in medieval Paris but have been absent there now for centuries. Malagueta pepper, which came from West Africa and not from East Asia, was called "grains of Paradise" in what must be considered an early example of successful marketing or "branding." It took France in particular by storm in the thirteenth and fourteenth centuries before dying out completely by the sixteenth century.

Both the royal cook Taillevent and the upper bourgeois author of *Le Ménagier de Paris* employ about twenty different spices in their recipes, and Taillevent gives a list of what the cook needs to have on hand. There were also different spice mixtures such as *poudre noir* or *poudre marchant* that resemble Indian masalas or North African and Middle Eastern multiple spice combinations such as the Moroccan *ras el hanout*.

Some aromatic ingredients that we think of as perfume or medicine were used in cooking. Musk and camphor scented confectionaries, for example. But this became more current in the Renaissance where even ambergris, the most precious spice of all and used for medicinal purification for the most part, was used to scent and flavor banquet dishes.

SPICES AND HEALTH

The sharp or fragrant smell and taste of spices provided not only delight but was supposed to impart health benefits to medieval food. There is no current equivalent to the dual appeal of spices since for the most part delightful foods are now deemed unhealthy and what is healthy is not particularly expensive or searched after. The beneficial health effects of spices were thought to be twofold. They were in the first place considered medicines and supposed to have curative properties for various disorders. At the same time, however, their culinary and pharmaceutical uses overlapped more closely than this as spices were thought to provide a necessary balance to many kinds of meat and fish and were associated with good digestion, the prevention of illness, and bodily equilibrium.

Medieval pharmaceutical manuals list hundreds of basic medicinal ingredients, known as "simples." All spices used in cooking also appear in lists of effective drugs and in many instances, as with sugar for example, their medicinal use preceded their diffusion as culinary ingredients. According to a twelfth-century manual, pepper helps reduce chest congestion and relieves asthma. Cinnamon soothes digestive problems and when heated in wine heals decaying gums.⁶

Pharmacists also dispensed combined medicines that consisted of several or even dozens of aromatic products. Among the most celebrated drug mixtures was *theriac*, a panacea that consisted of no less than eighty-three ingredients according to the recipe of Montpellier, a town with a famous medical faculty?

Pharmacists had a great variety of aromatics as well as mineral and animal products. A postmortem inventory of the contents of a pharmacist's shop in Barcelona dating from 1353 includes over a hundred spices, herbs, and compound preparations such as lapis lazuli, crushed pearls, musk, and dried squid. (Even contains what was termed "mummy," which was exuded from embalmed (preferably Middle Eastern) corpses and had the consistency of pitch and, not surprisingly, an unpleasant smell.⁸) It was indicated in the treatment of bleeding and the healing of wounds.⁹ Thus relatively ordinary cooking spices were deemed effective, along with stranger ingredients.

Fragrance in itself was considered a preventive to the spread of disease. To the extent that illness was thought to spread by foul odors, attractive perfumes and aromatics were used to create a healthful environment. Bad air—"miasma" from swamps, sewage, dead animals, and industrial effluents and processes (notably from tanning or smelting)—was to be repulsed by perfumed substances (including edible spices such as nutmeg as well as ambergris, camphor, musk, and the like. Rooms were scented with fresh or burned herbs, spices, and incense. There were portable fragrance compounds that could accompany the cautious and affluent citizen into the insalubrious streets. Pomanders (from *pomme d'ambre* = "ambergris apple") were metal open-work balls that could contain mixtures of spices and they were carried around on a chain or in the hand. Doctors and pharmacists recommended different pomander mixtures according to the disease to be guarded against. Even the terrible Black Death was thought to be at least to some extent weakened by the beneficent scent of mace, sandalwood, myrrh, storax, and, above all, ambergris.¹⁰

Spices also had a disease-preventive role in the preparation of food and were important in achieving the balance of humors considered necessary for health. The four bodily humors were supposed to be in balance so that none of them predominated. Illness resulted from disproportionate humor interaction and theories of the influence of humors were derived from Greek and Roman medicine. Everyone had a slight tendency or *temperament* that produced some excess of phlegm, yellow bile, black bile, or blood. Thus a person might be phlegmatic, sanguine, bilious, or melancholic by nature. Doctors, in order to recommend diets to fit their patients, needed to know these temperamental facts to be able to adjust for them. A person with a slight tendency towards melancholia (favoring black bile) should be careful about foods that were humorally cold and dry, for it was not only human physiology but the food consumed by humans that had humoral tendencies and imbalances. Beef, cold and dry food, should either be avoided by those of a melancholic temperament, or cooked in such a way as to neutralize the humoral bias of the basic ingredient.

Cooking methods and added ingredients such as spices served to advance or temper humoral properties. Roasting and frying made foods warmer, so pork should be prepared in one of these ways as it was cold and moist, but roast beef was considered less healthful than boiled beef as it was already dry enough to begin with.

Spices were in general regarded as hot and dry and as meat tended to be cold and moist, spices were ideal accompaniments. The spices were most often delivered in the form of sauces. Although meat broths might be used in the cooking process and in making some sauces, it was more common for the sauce to be prepared separately from the meat it accompanied. This was, in part, in order to make the counteracting humoral effect of the spices stronger. It was therefore a key innovation of what was to become classic French cuisine to enshrine the reduction of meat juices as the key to sauce preparation, a break with medieval practice. Medieval sauces were sharp rather than rich, thin rather than velvety, complex rather than intense.

There is some intuitive logic to the complicated world of humoral theory found in the appeal of notions of equilibrium, as can be seen in contemporary schemes of balance as well as traditional Chinese and Indian dietary lore. The fundamental attributes of cold, hot, moist, and dry also can be seen to correspond to the nature of certain foods, and thus it is not surprising that fish would be considered, for the most part, cold and wet. But there are many basic ingredients that might seem similar but that were thought to have rather different humoral characters. Grape products had contrasting humoral qualities depending on their preparation so that white wine was warm and dry, vinegar was very cold and mildly dry. Must was warm and moist while verjuice (the juice of unripe grapes) was the opposite: cold and dry. Within the overall properties of dryness and heat, spices differed in degree. Nutmeg was hot and dry to the second degree but pepper was very hot (fourth degree) but similarly dry to the second degree. Ginger was unusual in that it was moist as well as hot.

The use of spices in cuisine and medicine by no means exhausts their significance in the Middle Ages. As already stated, spices were unusually versatile luxury products in that they were both tasty and healthful, elegant in secular settings yet linked with the sacred. Their aura was enhanced and closely related to their distant and often mysterious origins which justified their high price and significance as markers of social status. In the remaining sections of this essay we discuss the origins, routes, and prices of these precious yet widely diffused commodities.

ORIGINS AND IMAGINED ORIGINS

As already mentioned, spices were defined, or at least conceived, as aromatic products imported from far off, indeed from lands not very clearly perceived by their European end users. Spices obtained some of their aura of exotic desirability because they came from India, but where "India" actually was remained mysterious, part of a complicated but not consistently articulated "East." The conquests of Alexander the Great and tenuous though continuous Hellenistic and Roman communication with India bequeathed to the Middle Ages a strong if largely fanciful impression of India as a land of fabulous wealth, as well as sinister wonders

of nature. Jewels, gold, and spices abounded in India, but so did monstrous semi-human peoples, poisonous snakes, and off-putting customs. The alluring and the perilous were side by side, so that pepper was reputed to come from Indian forests where snakes "guarded" the trees. In order to drive away the snakes and harvest the pepper, the groves had to be burned. This explained both the high price of pepper and the wrinkled, desiccated appearance of the peppercorns. Similarly, diamonds were plentiful in certain gorges in India, but could not be retrieved by men because of the presence of snakes. Instead, eagles were trained to fetch meat thrown down into the gorges, to which the diamonds supposedly stuck.¹¹ Such stories might function as merchants' tales to obscure the actual origins of precious commodities or to justify and enhance their value. They also reflect some sense of the exotic as a combination of the precious and the dangerous, a feeling sufficiently deep that it was not limited to distorted European notions of India but proliferated in India itself in thinking about valuable substances.¹²

Combining Biblical and classical lore, the medieval era produced a considerable body of "wonders of the East" literature which was enriched rather than supplanted by accounts of travelers who actually managed to reach India, beginning with Marco Polo in the late thirteenth century. On world maps the farthest eastern reaches were usually occupied by the earthly Paradise (inaccessible to humanity after the Fall, but still a terrestrial place) and India. On one of the most famous of these maps, the Hereford Map drawn in about 1300, Paradise is an island off the eastern edge of the world and India occupies the nearest part of the mainland. It has 5,000 cities and peoples of "unbelievably various ritual practice and dress" including Pygmies and one-legged humanoids. There is a pepper forest, an abundance of jewels and precious metals, but also all manner of wild animals including dragons.¹³

The ancient and Christian geography of Asia was gradually undermined, or at least complicated, by the unanticipated consequences of the Mongol invasions of the thirteenth century. Once the terrifying threat of annihilation by an irresistible enemy faded, Europeans started to take advantage of the sway held by one set of rulers over thousands of miles of territory. The so-called "Pax Mongolica" made it possible to traverse the route from Europe as far as China and the Pacific Ocean. An ultimately fateful if at the time unremarked discovery of one of these early travelers, the Franciscan William of Rubruck, was the relative positions of India and China. Reporting on his journey which had lasted from 1253 to 1255, William noted that envoys from India at the court of Möngke Khan said that their home was west rather than east of the Mongol capital of Karakorum. He confirmed this by riding westward with the emissaries for a considerable distance before their ways diverged.¹⁴

Marco Polo visited India on his slow return from China and he not only gave an accurate (if rather vague) sense of India's location in relation to the rest of Asia but was the first to observe that many spices originated further east of India and that Indian ports were centers of both local spice harvests and aromatic products that came from even further away (from a European perspective). In the fourteenth

century there were a few adventurous European traders resident in India as well as China, Persia, and what is now Turkestan.¹⁵ Information about the islands east of India, which came to be known as the "Indies," became sufficiently precise so that even individual islands of the Moluccas were identified with particular spices. Relying on an account of the voyage of Niccolò de' Conti, the Florentine humanist Poggio Bracciolini describes Banda (an island "near the shadow") as the source of cloves.¹⁶

Certain spices, such as nutmeg and cloves, had a very restricted habitat, in this case eastern Indonesia. For others there were perceived quality differences so that the best camphor came from Bornéo and the best cinnamon from Ceylon. The medieval European impression that India was the source of spices was accurate to the extent that most of what came to Europe went through India if it did not originate there.

There were some exceptional spices that did not follow this pattern. Mastic, a resinous product of a plant in the pistachio family, is to this day produced only on the Greek island of Chios. Saffron grew in many parts of Europe including England, Spain, France, and Italy. Its high value was related to the laborious process of harvesting it rather than the rarity of the plant or the distance of its natural habitat. Malagueta pepper or "grains of Paradise" grew in West Africa as the Portuguese discovered in the mid-fifteenth century. Nevertheless, the main spice routes were from East and South Asia to other points. Europe was by no means the largest buyer of spices and in terms of the actual trade routes, India must be regarded as central rather than distant, in Janet Abu-Lughod's phrase, "on the way to everywhere" instead of at the world map's extreme margin.¹⁷

ROUTES

From India, Indochina, and Indonesia, spices were exported to China, the Middle East, Central Asia, and Europe. The latter was a relatively small player in this global (or at least old-world global) commerce. Marco Polo claimed that for every ship that left Alexandria loaded with pepper for Europe, one hundred ships arrived in China through the port of Caïton (Quanzhou).¹⁸ This is not useful as any sort of exact measure of trade volume but does put Europe in a modest perspective. Notwithstanding the superior population and economy of China, a considerable volume of spices did arrive in Europe, usually but not always via the Red Sea and Egyptian ports. Archaeological excavation has shown how important the Red Sea coast was for the Roman Empire's monsoon trade with India, which was principally organized around the importation of pepper.¹⁹ The Cairo Geniza documents provide evidence for the activities of Jewish merchants of the eleventh and twelfth centuries who brought all manner of spices from India to Egypt with Aden as the most important intermediary port.²⁰

From the West coast of India, especially Malabar and Gujarat, spices were exported to Mediterranean Europe most often via the Red Sea or Persian Gulf. From the ninth until the twelfth century Constantinople was an important center for the supply of spices to Western Europe. These arrived at the Persian Gulf and were then shipped overland through Baghdad or other Persian cities. With the triumph of the First Crusade in 1099, eastern Mediterranean ports in Christian hands, notably Acre, obtained some of this trade. In both the Byzantine and crusader cases, there were Muslim intermediaries but the ports of entry into the Mediterranean were Christian cities. This ceased to be the case after the fall of Acre in 1291 and the consequent end of a crusader presence on the mainland. Christian Cyprus was still an important destination for spice merchants from Barcelona and other western port cities. But now Alexandria, Beirut, and Damascus handled the transfer of spices from Islamic to Christian worlds and the Christian merchants defied, or more often skirted, papal prohibitions on commercial dealings with Islam.

There was some fluctuation in routes, however, especially because of the impact of the Mongols. In the late-thirteenth and early-fourteenth centuries, the near destruction of the Islamic states of Western Asia and the Mongol control over Central Asia encouraged an overland trade in spices, silks, and other eastern commodities. At this point the trade in spices followed the western parts of the famed Silk Road, joining it not in China (which was not a supplier but rather consumer of spices) but rather via Tabriz, Bokhara or Samarkand. The slowness and effort of land transport was offset by the security provided by the Mongol rulers. For this overland commerce, the Black Sea became the site for transfer to European merchants, specifically such places as sub-Byzantine Trebizond or the Genoese base at Caffa in the Crimea.

The eclipse of the Mongols was evident by the second part of the fourteenth century. They lost their hold over China to the resurgent Ming emperors and they assimilated their religion and rulership in Persia to Islam and local powers during the course of the fourteenth century. By 1400 Europeans were completely dependent on Islamic potentates, such as the Mamluk sultans of Egypt or the Ottoman rulers of the northeastern Mediterranean, for the trade in spices. This was more than satisfactory to the Venetians and Genoese who simply passed on to European consumers whatever prices the market or the rulers imposed. The high cost of spices and the control of the trade by Muslims did excite the interest of commercial and religious strategists to figure out ways of either defeating Islam by, for example, a blockade of the Red Sea, or by going around the Muslim-controlled zones to reach India and the Indies directly. The rulers of these lands were widely assumed to be either pagans, or sympathetic to Christians, or perhaps already Christians. Legends of Prester John, the Christian priest-king of "the Three Indias," combined tales of the fabulous wealth of the East with wishful thinking about an alliance of Christian powers that would outflank and surround Islam. In the first part of the fifteenth century, Emmanuel Ploiti argued that Alexandria and Cairo were the key to the entire economy of the Levant because of the spice trade. If they could be conquered (a task Ploiti considered not very difficult if the Venetian navy could be enlisted), the entire Muslim

economy would collapse. Ploiti argued that the spice trade was so important and Cairo's role as its entrepôt was such, that whoever held the city could be considered the effective lord of Christendom as well as the indirect ruler of the places where the spices came from.²¹ This bellicose strategy to claim the spice trade would not, in the end, find powerful backers. The schemes that launched Columbus and Da Gama were to bypass Islam and corner the spice trade at its source. They involved an equally imaginative but far more flexible sense of geopolitical strategy, but also a similarly grim view of commerce as potentially a form of strangling one's adversary. When the Portuguese located the Moluccan "Spice Islands" in 1511-1513 and conquered Malacca on the Malay Straits, there was a new appreciation of the routes and vulnerabilities of the global spice trade, summarized by the pithy observation of Tomás Pires: "whoever holds Malacca has his hands on the throat of Venice."²²

PRICES

Spices were expensive commodities, routinely likened to precious metals and gems although they were more ephemeral than these as they were consumed either in food, as medicines, or as scents. They were non-perishable products of a high unit value so that it was profitable to carry them in relatively small quantities over immense distances. How profitable is difficult to determine as is everything connected with ascribing a price for spices comprehensible in our contemporary terms. An additional difficulty is that the vast spaces traversed by the spices imported into Europe meant that the number of transfers and middlemen increased the total difference between price at origin and the price for retail customer, and distributed profits in a way that makes them even more difficult to reckon. At the end of the Middle Ages, specifically from 1496 to 1498, the price of cloves in Venice was on the order of one hundred times the cost of purchasing them in the Moluccan islands where they grew.²³ Venice in turn flourished because it charged considerably more than what it had cost its merchants to purchase things such as cloves in the Levant. For the early fifteenth century the Venetian markup for cloves was 72 percent.²⁴ Spices sold in northern Europe, or in fact anywhere beyond the Mediterranean ports, would have been subject to further transport and profit-taking charges. The Nuremberg cartographer Martin Behaim, who designed a world globe in 1492, posited twelve stages in the journey made by spices from their East Indian origins to "our land." His sense of trade routes and entrepôts is quite unreliable as regards East Asia—the says spices move from Java or Borneo to Ceylon and are then handled by merchants from Malaya and Sumatra—but his sense of the distance and complexity involved and their commercial consequences is perceptive. With each change in carriage and jurisdiction new charges were added so that between the customs duties, real transport costs, and realized opportunities for profit, Behaim observes, it is "no wonder spices for us cost their weight in gold."²⁵

All spices were luxuries, but individual spices differed greatly in cost. Pepper, ginger, cinnamon, and sugar were the least expensive. Cloves and nutmeg were considerably more valuable, perhaps three times the price of pepper. Saffron was ten to fifteen times the price of pepper and the most extravagantly expensive spices were medicinal perfumes such as ambergris, musk, and camphor.

Perceptions of the relative value of different spices seem to have changed, at least to the extent that pepper came to be seen as so widely available that it lost some of its aristocratic image. In a fifteenth-century medical treatise wrongly attributed to Arnau de Vilanova, pepper is described as appropriate for rustics, and this is confirmed by the poet Eustache Deschamps, writing in 1404, who complains about rural inns where they serve unpleasant and lowly cabbage and leeks seasoned with copious amounts of black pepper.²⁶ Was pepper really so inexpensive that peasants routinely seasoned their meager fare with it? We know that spices were available in small towns and markets, not just in large cities, and agricultural tenants were sufficiently tied to a market economy so that they occasionally paid small but not insignificant quantities of pepper to their landlords as tokens of their tenancy or as rent.

In addition to the differential in value among spices, there were considerable fluctuations in prices due to changes in supply and in conjectured supply (i.e., perceived shortages, future hedging and, speculation). Thus at the great wholesale center of Alexandria in 1355 pepper sold for 165 gold dinars per *spota* (the equivalent of about 500 modern pounds), but in 1386 the same quantity was priced at only 60 dinars. These shifts in turn affected retail prices, which were equally unstable.²⁷

In a meticulous and exhaustive study of prices in late-medieval and early-modern Antwerp, Herman Van der Wee charts the price of an Antwerp pound of pepper at the annual St. Bavo's Fair between 1385 and 1400 in a range between 9.50 Flemish groats (and 9.50 Brabant groats) at the low end, and 19.00 Flemish groats (21.08 Brabant groats) at the upper. Ginger cost from 10.67 Flemish groats (12 Brabant) to 36 Flemish groats (66 Brabant) per pound. Cinnamon and sugar are in a similar price range while cloves for the same period were never lower than 31 Flemish groats (31 Brabant) and reached a maximum of 57 Flemish groats (95.33 Brabant). Saffron had a striking fluctuation: a low of 70 Flemish groats in 1395, down from a high of 198 in 1389 and 110 Brabant groats in 1395 to 291.33 just three years later in 1398.²⁸

Attempts to chart a long-term trend in spice prices have proved intriguing but controversial. Frederic Lane, the great historian of Venice, claimed that the price of pepper rose during the reign of the Mamluk sultan of Egypt al-Ashraf Barsbay (1422-1438) as he severely limited the supply in order to impose a price hike. After his death, however, prices fell throughout the rest of the century. This calculation has been questioned, but not definitively refuted.²⁹ At any rate, at the time of the early Portuguese voyages to India, the differential between point of origin and European wholesale price was still such that Da Gama's second trip (1502-1503) netted a 400 percent profit for 1,700 tons of spices, mostly pepper.³⁰

It is difficult to get a sense of what the retail price of spices meant in terms that can be related to modern prices. It won't do simply to come up with a conversion of a medieval transaction extrapolated into our currencies. This is because of the inconsistencies of not only medieval prices but also of medieval coins and values as well as the availability of other options and the cultural significance placed on spices. Thus spices are still expensive, but they offer no particular social or cultural benefit to the consumer, whereas in the Middle Ages such things as spices, clothes, horses, or silver utensils were prominent as items of status and ostentation. One approach is to figure out the price of spices in comparison with other goods and measured against the purchasing power of an average wage earner. John Munro has undertaken the task of comparing the average daily earnings of a master craftsman such as a mason or carpenter with the price of luxury commodities over a very long time span.³¹ Using spice prices in Antwerp and London, Munro has found that in 1200 it took nearly fourteen days' pay to buy a pound of pepper and 8.6 days for a pound of ginger. Compare this to 1875, when the figure for a pound of pepper is a mere 0.1 days (although ginger was still relatively high at 1.6 days). At the present, it requires a mere fifteen minutes to earn the price of a pound of pepper, ginger, or cinnamon. The craftsman's daily wage of approximately eight pence in London in the year 1439 could buy eight gallons of milk or two bushels of coal. Seven yards of good wool cloth cost ten days' salary while a pound of cloves required four and a half days' work.

Naturally spices weren't purchased in such large quantities except by the wealthiest and largest households, anymore than they would be now. A medieval person of moderate affluence could afford a certain number of judiciously determined luxuries, including, if he or she wished, an assortment of culinary and medicinal spices. The most dramatic decline in spice prices occurred from the late Roman Empire (when according to Munro's data spices really were extravagantly expensive) to the establishment of regular Mediterranean trade with the temporary success of the crusades and the longer-term accomplishments of the Italian and other merchant entrepreneurs.

CONCLUSION

I have tried to suggest that the popularity of spices in the Middle Ages was more extensive and had other bases than their use in cooking. This is not by any means intended to obscure their importance to the peculiar aesthetic of medieval cuisine but rather to indicate how food choices are influenced by ideas about health, sophistication, and the exotic. The spice trade is often and rightly considered a prime example of the way in which commercial quests can drive historical shifts of immense and reverberating significance. What is often ignored is why in this case there was such a powerful demand in the first place, for which any number

of efforts would be made to overcome the limitations (and expense) of the supply. Readers of this handbook do not have to be convinced of the importance of the history of culinary taste and innovation, but the historiographically well-plowed subject of the spice trade deserves to be looked at in greater detail in terms of the influence of taste, luxuries, and even a species of frivolity and erroneous speculation on historical change.

NOTES

1. Alberto Capatti and Massimo Montanari, *Italian Cuisine: A Cultural History*, trans. Aline O'Healy (New York: Columbia University Press, 2003), 86–87.
2. Susan Pinkard, *A Revolution in Taste: The Rise of French Cuisine, 1650–1800* (Cambridge: Cambridge University Press, 2009), 62.
3. *Ibid.*, 125–26.
4. Bruno Lauritoux, “Le goût médiéval est-il Arabe? A propos de la ‘Saracen Connection,’” in Lauritoux, *Une histoire culinaire du Moyen Âge* (Paris: Honoré Champion, 2005), 305–35; *The Neapolitan Recipe Collection*: Cuoco Neapolitano, ed. and trans. Terence Scully (Ann Arbor: University of Michigan Press, 2000), 68.
5. Bruno Lauritoux, “De l’usage des épices dans l’alimentation médiévale,” *Médiévales* 5 (1983): 16–17.
6. *Das Arzneidrogenbuch ‘Circa instans’ in einer Fassung des XIII. Jahrhunderts aus der Universitätsbibliothek Erlangen*, ed. Hans Wölfel (Hamburg: Preilippoc, 1930), 33–34, 91–92.
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12. James McHugh, “The Incense Trees of the Land of Emeralds: Exotic Material Culture of *Kamsāsāstra*,” *Journal of Indian Philosophy* 39 (2011): 63–100.
13. Scott D. Westrem, *The Hereford Map* (Turnhout: Brepols, 2001), 27–33.
14. William of Rubruck, *The Mission of Friar William of Rubruck*, ed. Peter Jackson and David Morgan (London: Hakluyt Society, 1990), 247.
15. Robert Lopez, “Da Venezia a Delhi nel Trecento,” in Lopez, *Su e giù per la storia di Genova* (Genoa: Università di Genova, 1975), 137–59; *idem*, “European Merchants in the Medieval Indies,” *Journal of Economic History* 3 (1943): 164–84; *idem*, “In quibusdamque mundi partibus,” in *Miscellanea di storia italiana e mediterranea per Nino Lamboglia* (Genoa: N.p., 1979), 345–54.
16. Poggio Bracciolini, *De L’Inde: Les voyages de Niccolò de’ Conti*, ed. and trans. Michèle Guéret-Laferté (Turnhout: Brepols, 2004), 117. In fact Banda produced nutmeg rather than cloves. Niccolò said nutmeg came from an unidentified island called “Sondai.” This information would be reproduced in the world map of Fra Mauro of

- Venice, completed in 1459, Piero Falchetta, *Fra Mauro’s World Map* (Turnhout: Brepols, 2006), 210, 305–7.
17. Janet L. Abu-Lughod, *Before European Hegemony: The World System, A.D. 1250–1350* (New York: Oxford University Press, 1989), 260–86.
 18. Marco Polo, *Le devisement du monde*, ed. Jean-Claude Delcos and Claude Rousset, vol. 5 (Geneva: Droz, 2006), 129–30.
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 26. Arnau de Vilanova, *Opera hippocratica revisa . . .* (Lyon, 1520), folio 137^v, col. A; *Bustache Deschamps, Oeuvres complètes*, ed. Marquis de Queux de Saint-Hilaire and Gaston Raymond, vol. 7 (Paris: Fernin Didot, 1891), 88–90.
 27. Elyshah Ashfor, *Histoire des prix et des salaires dans l’Orient médiéval* (Paris: S.E.V.P.E.N., 1969), 324–25.
 28. Herman Van der Wee, *The Growth of the Antwerp Market and the European Economy (Fourteenth–Sixteenth Centuries)*, vol. 1 (Louvain: Nijhoff, 1963), appendix 26, 306–31.
 29. Frederic Lane, “Pepper Prices Before Da Gama,” *Journal of Economic History* 28 (1968): 590–97; Jeffrey G. Williamson and Kevin H. O’Rourke, “Did Vasco da Gama Matter for European Markets?” *Economic History Review* 62 (2009): 655–84.
 30. Sanjay Subrahmanyam, *The Career and Legend of Vasco da Gama* (Cambridge: Cambridge University Press, 1997), 184.
 31. John Munro, “The Consumption of Spices and Their Costs in Late-Medieval and Early-Modern Europe: Luxuries or Necessities?” *Rev.* 2005. [Online]. Available: <http://www.economics.uutoronto.ca/munro/SPPCES1.pdf>, [February 9, 2011]. This lecture was revised from earlier talks given in 1983 and 1988 as noted on the first page of the latest version. See also the Munro’s chart of spice prices and craftsmen’s wages in *Silk Roads, China Ships: An Exhibition of East-West Trade* (Toronto: Royal Ontario Museum, 1983), 162.

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MILLER

CHAPTER 19

THE COLUMBIAN
EXCHANGE

REBECCA EARLE

"Before the Columbian Exchange, there were no oranges in Florida, no bananas in Ecuador, no paprika in Hungary, no tomatoes in Italy, no coffee in Colombia, no pineapples in Hawaii, no rubber trees in Africa, no cattle in Texas, no donkeys in Mexico, no chili peppers in Thailand and India, no cigarettes in France, and no chocolate in Switzerland."¹ Thus a well-known online encyclopedia summarizes the significance of the Columbian Exchange, the flow of plants, animals, and microbes across the Atlantic Ocean and beyond, set in motion by Columbus's arrival in the Americas in 1492. Clearly, a world untouched by the Columbian Exchange would look (and taste) very different from the world we know.

The term "Columbian Exchange" was coined in 1972 by the historian Alfred Crosby to designate the process of biological diffusion triggered by Europe's colonization of the Americas. Crosby's *The Columbian Exchange: Biological and Cultural Consequences of 1492* detailed the wide-ranging consequences of the transfer of diseases, plants, and animals that followed in the wake of 1492. The book, essentially a series of interlocking essays, examined the impact of old-world plants and animals on the Americas, the global dissemination of new-world foods, and the ways in which European colonization was entangled with the transmission of pathogens. Crosby traced the routes that introduced paprika to Hungary, horses to the Apache, and syphilis to unfortunate lovers, while at the same time championing the importance of attending to such exchanges. He argued forcefully that the most significant consequences of European colonization of the New World were biological in nature.

Early reactions to the book reveal that the novelty of Crosby's approach and the unfamiliar nature of his material posed challenges to readers. Struggling to process