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# Tropical Babylons

Sugar and the Making of the  
Atlantic World, 1450-1680

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## The Expansion of the Sugar Market in Western Europe

*Eddy Stols*



At the palace of Brussels, on 18 November 1565, on the occasion of the festivities of the marriage of Alexander Farnese with Princess Maria of Portugal, a gallant company of great lords and ladies, surrounding the regent of the Netherlands, Margaret of Parma, crowded around a long table to admire crystallized fruits from around the world, from Spain, Portugal, Genoa, and Naples, from Africa and the marvelous Indies, laid out on dishes, in jars, in cups, and on plates, with matching and paring knives and napkins amidst chandeliers and candelabras.<sup>1</sup> Everything, except the cloth on the table, was made of sugar.

Even more impressive was the set in a neighboring room, four or five times larger, where on another, even longer table were set scenes of the voyage of the Portuguese princess. One saw at the start the Pillars of Hercules and the imperial eagle, the squadrons of ships, the unfurled sails marked with the arms of Portugal and Spain, the raging ocean with its whales, dolphins, and sea monsters, the wreck of one boat and another in flames, the passengers throwing themselves in the water or drowning, the arrival in Zeeland, the reception at Middelburg and then in Gand, the river with its barges, the celebrating people, and, on the road to Termonde, packed with cavaliers and carriages, the princess surrounded by her ladies and black slaves in livery—and all was this in a region where custom prohibited slavery. A great carriage led to the entry gate of the city of Brussels, which enclosed the city's churches and its towers, its roads and houses full of people, the palace with Her Highness the Regent, and an animal park, with lions, antelopes, and a herd of elephants ridden by Indians. The scene lacked neither card and dice players in taverns nor a theater of comedies. Behind some windows there were parakeets in cages, apes, and tiny cats.

There were more than three thousand pieces made from the finest sugar, and

they looked so natural that they could fool some people. Nevertheless, the guests were not at all embarrassed to eat sugar and fill their pockets with more. Soon there remained nothing but the heaviest pieces that one hardly dared to touch. The people and horses weighed up to nine or ten pounds a piece. It required no fewer than four men to carry each of these cities, three feet high and six long. Never had the Italian observer Francesco de Marchi seen a spread in sugar as splendid as this, except perhaps in Naples in 1536, at the marriage of Margaret of Parma and Alexander de Medici.<sup>2</sup> These pieces were displayed by the magistrate of Antwerp and the cost was estimated at more than three thousand ducats.

As extravagant as these expenses might appear, they no doubt justified themselves to the head of these municipal authorities. They provided evidence of the abundance of sugar and established Antwerp as its principal European market, while they also brought the city closer to its principal Portuguese supplier. The display of such colossal quantities of sugar, which could probably be estimated at more than 6000 pounds, defies the imagination, yet became very familiar and beloved by these lands of plenty. In the past, sumptuous banquets with gigantic, soaring pieces were seen at the court of Burgundy, but they had been created from nearly inedible substances such as beef fat or wax. However, after 1530s, following the sugar sculptures invented in Italy for several wedding banquets of the Este, Sforza, Montefeltro, and Medici families between 1473 and 1539, the new hype in festivities in northern Europe swept to a similar conspicuous use of sugar. On 12 December 1531, celebrating in Brussels the birth of the infant Manuel, successor to the Portuguese throne, the Portuguese ambassador Pedro de Mascarenhas regaled his invitees, the Emperor Charles V himself, his sister, Queen Mary of Hungary, and the high-ranking nobility of the Low Countries with the new tempting delicacies, the sweets of Madeira. A rich midnight "*bancquet de confitures et de succades*" closed on 26 October 1544, after the splendid feast and dance at the Brussels's Palace on the occasion of the visit of yet another sister of Charles V, Leonore, widow of King Manuel of Portugal and at that moment queen of France through her marriage to François I. At the end of August 1549, Queen Mary of Hungary offered her nephew, the hereditary Prince Philip II, on his maiden tour through the Low Countries, several days of splendid and memorable festivities at the castle of Binche. The apotheosis came with an astonishing banquet in the *Cámara encantada* (enchanted chamber), where with lightning, thunderbolts, and a hail of *confits*, three tables descended successively from the ceiling, richly laded with all kinds of preserves. One carried a rock of candy sugar with five trees full of sugar fruit. Already on the outward journey, the prince had been treated to several *collazione de zucchero* in Barcelona and Milano.



Decorative display made of sugar for the wedding of Johann Wilhelm, heir to the ducal seat of Jülich-Kleve, from an engraving by Frans Hogenberg in Diderich Graminaeus, *Beschreibung derer fürstlicher Juelichscher Hochzeit* (Cologne, 1587). From Giuseppe Bertini, *Le nozze di Alessandro Farnese* (Milan, 1997).

During the same period at Hampton Court Palace, King Henry VIII also succumbed to the costly new taste for sugar. His cooks furnished the royal table and receptions with all kinds of confectionery, spices coated in sugar, marmalades, marzipan, sugar plates, and subtleties such as figures of soldiers, saints, and even a St. George on horseback or a St. Paul's Cathedral. Under Elizabeth and James I, the sugar banquet evolved into a standard element in court entertainment. Other examples of sugar collations are registered in the city of Paris for the entry of Elizabeth of Austria in 1571 and at the marriage of the heir to the duchy of Jülich-Kleve in 1587.

#### *From Sugar-Spice and Sugar-Medicine to Colonial Commodity*

Many authors, including Fernand Braudel and Immanuel Wallerstein, still underestimate the importance of the sugar trade in the rapid expansion of large-scale capitalist commerce; instead they privilege the trade in pepper, grains, wool, and textiles. Like Sidney Mintz, they argue that the creation of a large

sugar market and its mass consumption was closely linked to the spread of tea and other sugared drinks toward the end of the seventeenth century.<sup>3</sup> The story of the Brussels table of 1565 seems to suggest that one could advance the beginning of the sugar boom and that the overabundance of sugar was already a fact from the middle of the sixteenth century, or even earlier. Its consumption was no longer restricted to minute quantities for medical use or as a luxury spice, but rather it gradually became an entirely separate and important foodstuff, a veritable colonial commodity. André Thevet in his *Cosmographie de Levant* (1554) wrote and Abraham Ortelius in his *Theatrum Orbis terrarum* (1570) repeated "What in times passed was scarcely found but in Arabia Felix [Yemen] or India; and [which] the Ancients used only in medicines; today the confectioner knows well how to apply it to our use." This vulgarization, which had already occurred at the end of the Middle Ages in the Mediterranean basin, moved, from that point on, to the Atlantic coast of Europe and increased along an axis from south to north, from the Iberian peninsula to the Netherlands by way of France, to reach all of western and northern Europe.

The quantities of sugar increased considerably with its use in the conserving of fruits and jam making. This method of preserving fruits was admittedly not unknown in the Middle Ages, but it spread from royal and princely courts to the kitchens of more modest and more numerous social groups such as shopkeepers, artisans, and peasants. Later, the making of these preserves became a supplementary job, a rather important one for this new bourgeoisie, often of rural origin, that still possessed several acres of pleasure gardens and orchards at the gates of the city. Women, especially the wives of merchants, found in it a worthy occupation that could only enchant their husbands and visitors. The new cultural prestige of preserves was well summarized in the work of the French agronomist, Olivier des Serres: "Thus it will be here where the honorable lady will find pleasure, continuing the proof of the subtlety of her spirit. So she can secure pleasure and honor, when, on the unexpected arrival of her relatives and friends, she will cover the table for them with diverse jams carefully prepared."<sup>4</sup> Other women, more modest, widows or women deserted by some sailor who left for the Indies, or else servants, found the sale of these preserves a supplementary or compensatory income. On these grounds the feminine work of jam making can be compared to lace making, which also developed as a specialty of women's work in countries that were already well known for their jams and marmalades. Moreover, in Portugal, women accompanied their preserves with unique papers cut out in lace work. Although male *confeiteiros* (jam makers) in Lisbon organized themselves, very early in 1539, in their *Casa dos Vinte e Quatro* (House of Twenty-Four), under the banner of São Miguel, and with professional regula-

tions in 1572, there were at least 200 women who publicly sold their products in 1644.

It was precisely in Portugal and Spain that Olivier de Serres voluntarily conceded the merit of the invention of new methods and recipes of confectionery. In his *Singularités de la France Antarctique* (1557), André Thévet reputed especially the people of Madeira "for the best and most delicious conserves shaped as men, women, lions, birds and fishes, beautiful to see and even better to taste." Without a doubt, the Mediterranean world, especially those countries under Islamic influence, had specialized for a long time in this practice of preservation.<sup>5</sup> What appears particular to Portugal is that the abundance of sugar permitted the use of those fruits and legumes that were heavy and bulky, inexpensive and bland, and did not lend themselves to the use of honey, much too expensive and difficult to use in such large quantity.<sup>6</sup> Thus, the Portuguese did not hesitate to conserve in syrup the omnipresent chestnuts, known as the fruit of the poor, or to cook in sugar the astringent quince or different varieties of squashes and gourds, the *cabaças* [calabashes], *jirimuns*, and *chila*. These, similar to the *doces de abóbora* (Brazilian sweet pumpkins) and relatives of the Mexican *camotes* (sweet potatoes), seem almost unique in Europe and do not appear as abundantly elsewhere. *Le cuisinier français* (1651) mentions only sugared pumpkins and *marrons glacés* (iced chestnuts).<sup>7</sup> In addition, in Portugal, sugar even served to salvage leftover rice as *arroz doce* (sweet rice), or slices of stale bread as *rabanadas* (French toast). Although the poor north of Portugal resigned itself at first to adopting cornmeal for breadmaking, judged inferior to wheat, it also dared to mix this almost flavorless grain with sugar to make tasty *broas de santos* (saint's bread). Because of their early contact with India, the Portuguese would have been able to develop techniques of conservation and preparation with vinegars and *achar* spices, but it remains obvious that it was sugar that was preferred as nowhere else.

More than others, the people of Portugal, Andalusia, and other Spanish regions developed and maintained a surprising ingeniousness and an almost disturbing creativity to vary and differentiate their sweets in all forms and colors and under the most evocative names, such as *toucinho celeste* (celestial lard), *tutano do céu* (heaven's marrow), *papos de anjo* (angelic Adam's Apples), and *barriguinhas de freira* (little nun's bellies). If it is impossible to date in a precise fashion the origin of all these wonders, one can perhaps attribute this sugary explosion to the beginning of the sixteenth century, the archetypal Portuguese golden age, with its society of plenty and leisure, more clement weather, more generous nature, the absence of strong barriers of social distinction, the omnipresence of black slaves and servants from the beginning of the sixteenth cen-

tury on, or even the persistence of a more pagan religiosity fixed on the cult of fertility, that protected Portugal from the Christian fundamentalism of Protestants from the north. One could pretend that Portugal, together with southern Spain, became one of the first European regions in which sugar formed a part of the popular diet.

It is likely that convents, which were at that time multiplying in Portugal and Spain at a wild rate, while they were menaced or closed in England and the Netherlands, acted as the instrument of mediation *par excellence* of this descent of sugar to the lower levels of society.<sup>8</sup> These convents, lavishly provisioned with dozens of eggs and supplied with alms given in sugar, competed among themselves to welcome, with *mimos* and *tabuleiros de docēs* (trays of sweets), royal or princely visitors who could dispense new favors. At the same time, they found in sugar confectionery not only their own material subsistence but also a form of redistribution and the appreciation of their fellow citizens. Simultaneously, several Portuguese religious writers developed a distinctive spirituality based on a symbolic and spiritual valorization of fruits and flowers.<sup>9</sup> Confronted with the Reformation spirit, traditional faith justified itself in a certain way by a veritable confectionery debauchery that could even combine with the famous *amor freirático*, that rather strange predilection for cloistered women cultivated by several Portuguese and Spanish kings and princes. Shortly thereafter, the convents of Puebla and other Mexican towns would develop this association of religion, the feminine, and sugar to the point of the paroxysm of a cultural *chrisme*.<sup>10</sup>

While Lisbon seemed to be the capital of this rapid expansion of the new art of preserving that was at once aristocratic and more quotidian, the first, more concrete indications of the art's economic and social importance were also found in the Portuguese capital.<sup>11</sup> In his inventory of the economic riches of the city in 1552, João Brandão counted no fewer than thirty *tendas de confeitores* (confectionery shops), each employing four to five people, amounting to a hundred fifty in total, including fifty women, making marmalade (*açúcar rosado e laranjadas*), which they sold to those going to the Indies or Guinea.<sup>12</sup> There were ten more *tendas de pastéis* (pastry shops), where more than thirty people busied themselves with making small pastries or morsels, often lightly sugared. Two weeks before Christmas, at the Ribeira and at Pelourinho Velho, some thirty women installed their table covered with a white cloth and filled with *gulodices* (delicacies) or sweets and preserves such as orange marmalade, *sidrada* (apple jelly), and *fartéis*. Their estimated sales were at least 2,000 *cruza-dos*, and together with the expenses paid in noble households for fruit preserves, they perhaps amounted to more than 20,000 *cruza-dos*. Fifty women sold the

*arroz doce* (sweet rice) that nourished and warmed so well the bellies of children and made them cry for it as soon as they woke up.

The city also had at its disposal a *casa de refinar* (refinery) that employed more than twenty people. There were even forty carpenters who made cases for the various compotes and marmalades, each of whom made 1,000 to 2,000 pieces a year. As one case was already worth twenty to thirty *réis*, and was filled with 300 to 400 *réis* worth of merchandise, the whole was worth at least 11,500 *cruza-dos*. If included in that were cases of *rosado* (rosy) sugar, they were worth 23,000 *cruza-dos*. The total value of the sugar importations from Madeira, São Tomé, and Brazil, excluding the Canaries, was calculated by the *alfandega* (customs house of Lisbon) at 45,000 to 50,000 *cruza-dos*, while Brandão estimated it at 70,000.

This humming sugar activity was confirmed by the humanist Damião de Góis, who in his description of Lisbon called attention to the vast *terreiro* (de-barkation square) that served as much as a market for fish as for preserves and where fishmongers, market gardeners, preserve sellers, bakers, and confectioners gathered to sell their wares.<sup>13</sup> During their passage through Lisbon in 1585, the Japanese pupils of Portuguese Jesuits were amazed to discover a street where sugared preserves were sold in sufficient abundance as to satisfy easily the needs of the people of Lisbon as well as to export to numerous cities in Europe.<sup>14</sup> Passengers embarking for the East Indies bought in large quantities *comer feito*, prepared meals often consisting in large part of *ovos moles*, egg yolks lightly cooked in sugar. Well-wrapped preserved foods of all kinds did very well on board the ships, relieved illness, and lasted long enough even to sell well in the Indies, where people did not seem familiar with cherry and plum marmalades.<sup>15</sup> Some brought more than 100 kilos.

In particular, the preparation of quince jelly, had considerable economic impact on the sugar market because it required enormous quantities of sugar. A recipe in the cookbook that Maria of Portugal took with her to the Netherlands required three to four kilograms of sugar for an equal weight of quince. The accounts of Queen Catarina of Portugal, whose confectioner, Cornelio Izarte, was Flemish, include in an entry for 24 July 1554 an order of payment for no less than fifty-one *arobas* and nine *arratéis* of conserves.<sup>16</sup> The taste for these marmalades widened in a manner characteristic for this period of perfumed gloves, gilded leather, jewels, clocks, glass, parrots, genre painting, and devotional images. Preserves were thus carted off in large quantities to the markets of northern Europe. King Phillip III, visiting his Portuguese kingdom in August 1619, had sent to his sister in Brussels, Archduchess Isabelle, two large shipments that

included thirty-six cases of *conservas cubiertas* and twenty-six kegs of preserves in syrup.<sup>17</sup> French poet Vincent Voiture, returning in 1632 by sea from Lisbon, complained that the boat was so filled to the brim with sugared preserves that he feared being candied.

In the sixteenth century, the Spanish still visibly recognized the superiority of the Portuguese. Francisco Martínez Montañó, the author of *Arte de cocina, pastelería y vizcochería y conservería*, a classic Spanish cookbook, undertook his apprenticeship in the service of Dona Juana of Austria, the sister of Phillip II, widow of the Portuguese heir Dom João (prematurely deceased in 1554), and regent of Spain from 1554 to 1559, and he borrowed several recipes from his Portuguese tutor.<sup>18</sup> In 1543, at the time of the marriage of the prince and future king, Phillip II, with his cousin Princess Maria Manuela of Portugal, her estate included a *confitero*, the Portuguese Francisco Machado.<sup>19</sup> Upon the death of the princess, he received 42,000 *maravédís* to abandon the court. It was probably the first time that such a function was mentioned in the Spanish court in the sixteenth century. At any rate, Phillip II continued to receive his daily ration of *pasteles ojaldrados* (sugared pears and peaches), and three times a week *manjar blanco* (white pudding).<sup>20</sup>

In fact the Spanish were themselves already experienced in sugaring and no less conscious of their *savoir-faire*. As for the Italians, since the fourteenth century, they had been referring to several handwritten Catalan manuscripts such as the *Libre de sent soví* and the *Libre de totes maneres de fer confits* (Book of the methods of making preserves). In the sixteenth century they added to it a rather extensive and varied printed bibliography with, among others, the *Libre del coch* (1520), by Ruperto de Nola, translated into Spanish as *Libro de guisados* (1525), and the *Libro del arte de cozina* (1599) (Book of the art of the kitchen) by Diego Granado, who was accused of plagiarism by Martínez Montañó.<sup>21</sup> In 1592 Miguel de Baeza published in Alcalá de Henares one of the first specialized cookbooks, *Los quatro libros del arte de la confitería* (Four volumes on the art of confectionery). He carefully described the process of sugar production and the different types of jams and preserves. He also explained the method of making sugar-candy, by which sugar was reduced to half its weight in round pitchers made in Seville. He classified the sugars of the Canaries, by quality, ahead of those of the coast of Granada and those of Gandia on the coast of Alicante. For preserves he preferred two-year-old sugarcane to one-year-old sugar (*alitas* in Santo Domingo).

Several Spanish treatises on health and medicine evince an appreciation for sugar, fruits, and preserves, as in the famous *Banquete de nobles caballeros*, by Luis Lobera de Avila (the surgeon to Charles V), who based his work on the

principles of Galenus and preferred refined sugar to honey and, in particular, preferred small sugar pills, though he clearly warned against excess in case of fever or choleric temperament.<sup>22</sup>

Highly esteemed for their medical knowledge, the Portuguese, strangely, had to wait until 1680 for the publication of their first cookbook, *Arte de cozinha* (The art of cooking), by Domingos Rodrigues.<sup>23</sup> This delay should not be interpreted as a lack of interest in cooking, but rather as proof of the vitality of the practice and the oral, visual, and handwritten transmission of recipes. Moreover, there existed, in addition to the *Arte de cozinha*, another manuscript, drawn up by Alvaro Martins, chef of Dona Juana of Austria, mentioned by Barbosa Machado in the *Biblioteca lusitania*, but presumed lost. It is also necessary to recall that in France no new cookbook was published between the French translation of Platina's *De honesta voluptate* (1505) and *Le Cuisinier François* (The French chef) (1651), despite the definite progress and the growing prestige of French cooking throughout this period.

Meanwhile, the success of preserves spread to France, where jam making, according to Olivier de Serres, had remained "for a long time ignored in this kingdom, having been kept secret, as if a cabal." We must remember, however, that since the fourteenth century, the city of Bar in Lorraine was very famous for its jam made with currants from which women and young girls carefully removed the seeds with a feather before cooking them in sugar syrup.<sup>24</sup> Nevertheless, the secrets of the preparation of other kinds of preserves were disclosed rather early with the publication of the *Petit traicté contenant la manière pour faites toutes confitures, compostez, vins* (Short treatise containing the method of making all preserves, compotes, wines) (1545), by Jehan Longis, and *Pratique de faire toutes confitures* (Practice of making preserves) in Lyons in 1555.<sup>25</sup> In the same year appeared the first edition of *Le vray et parfait embellissement de la face . . . & la seconde partie contenant la façon et manière de faire toutes confitures* (The true and perfect embellishment of the face . . . and the second part containing the way and manner of making all kinds of preserves), by the celebrated physician and diviner Michael Nostradamus.

Many other treatises on home economics, agriculture, pharmacy, and chemistry address more closely food preservation with sugar, as in the very popular *L'agriculture et maison rustique* (Agriculture and the rural household), by Charles Estienne and Jean Liébault, with numerous editions after its first appearance in Paris in 1564, or *Les éléments de chymie* (Basics of chemistry), by Jean Béguin (1637). The great agronomist Olivier de Serres condescended to dedicate an entire chapter to the method of jam making, and, parsimonious like a true Frenchman, he even instructed his readers to reuse the sugar from old

preserve to make new ones, though only for "the dark walnut and almond" preserves, and not for jellies.

Recipes are found scattered throughout the most diverse books. Thus Jacques Pons offered in his *Sommaire traité des melons* (Summary treatment of melons) (1583) details of the preparation of melon compote with brown sugar. In *Discours contenant la conférence de la pharmacie chymique* (Discourse containing a lecture on chemical pharmacy) (1671), Jacques Pascal devoted a chapter to the role of sugar in the preparation of *alkermès*, a cinnamon- and clove-based liqueur much valued at that time.

Conversely, certain historians of food who, somewhat shocked, ponder this strange absence of French cookbooks lose sight of the fact that in the sixteenth century many French books were printed outside France, mostly in Antwerp, which nevertheless could circulate within France without suffering censure. This was the case with the Nostradamus book printed in 1558, by Plantin, in Antwerp. The chef of the bishop-prince of Liège, Lancelot du Casteau, included in his *Ouverture de cuisine* (Work on cooking) (1604) several sugared desserts, *gaufre sucrée*, *succades liquides*, *pastez de coing*, *marmelade en forme*, *grand biscuit sucré* (sugared waffles, sweet liquids, quince paste, molded jelly, sugared cookies).<sup>26</sup>

It is, therefore, clear that a long period of experimentation supported *Le cuisinier français* when, in 1653, it distinguished very clearly among the different manners of cooking sugar, "à lisse, à perle, à la plume et au brûlé" (smooth, beaded, feathery, and burnt), or revealed the secret of the clarification of sugar.<sup>27</sup> The entirety of French knowledge on the matter attained the highest degree of perfection with the 140 pages dedicated to *Confiturier royal*, attributed to Massaliot, as part of the summary of gastronomy of the age of Louis XIV, *L'école parfaite des officiers de Bouche, contenant le vray maistre d'hôtel; le grand Escuyer-Tranchant; le sommelier royal; le cuisinier royal et le pâtissier royal* (The perfect school of the officers de bouche, including the actual maître d'hôtel, the escuyer-tranchant, the royal sommelier, the royal chef, and the royal pastry chef) (1662; 1676). It would be impossible to omit many other publications, often published in the Netherlands, such as *Le pâtissier français* (1655), *Le jardinier français, qui enseigne les arbres et herbes potagères avec la manière de conserver les fruits et faire toutes sortes de confitures* (The gardener, who raises trees and edible herbs, including the method of preserving fruit and making all kinds of jams), by Nicolas de Bonnefons (1660), and *Traité de confiture, ou le nouveau et parfait confiturier* (Treatise on jam making, or, the new and perfected jam maker) (1698). In *Le nouveau recueil de curiositez rares et nouvelles des plus admirables effets de la nature et de l'art* (The new collection of rare curiosities

and news of the most admirable effects of nature and art) (1685), Nicolas de Memery integrated the knowledge of candy making with the knowledge of the perfect *honnête homme*. It must be emphasized that in France these delicacies were no longer limited to the royal household. In 1662 F. P. de la Varenne published in Troyes the famous *bibliothèque bleue*, *Le pâtissier français*, which spread throughout France on the backs of traveling book peddlers (*colporteurs*). That a physician of the poor, Philbert Guybert, devoted several pages of his *Les œuvres charitables* (Charitable works) (1630) to preserves, sugar, brown sugar, and syrups gives pause for thought.

Although Portuguese and Spanish influences are undeniable and perfectly possible by means of dynastic alliances (we must not forget that marriage of Queen Leonore, sister of Charles V and widow of Manuel, with François I), as well as increasingly regular commercial relations and the arrival of numerous New Christians at Bayonne, Bordeaux, Nantes, and Rouen, new refinements in French cooking are traditionally attributed to the Italians. Their cookbooks such as *Liber de coquina* introduced the custom of powdering dishes with sugar, substituting for the more traditional honey in the German kitchen, and the preference for a more sour taste in the French cuisine. Most notably the Italians figured as precursors in the matter of confectioneries, at that time still close to the arts of the apothecary, pills, and bonbons.<sup>28</sup> Quirico degli Augusti gathered in his *Lumen apothecariorum* (1504) no fewer than thirty-one notices on recipes using sugar and was the first to use the word "marzipan," while in the same year his fellow Italian Paolo Suardi gave even more recipes in his *Thesaurus aromatariorum*. In 1564 *L'empirie, et secrets*, by Alessio Piemontese, alias Girolamo Ruscelli, was published in Lyons; the Latin original appeared in 1555 in Venice, and with an English translation, *The Secretes of the Reverend Maister Alexis of Piedmont*, in 1562. In addition, the Italian princely courts, as much if not more than the Burgundian courts, set the tone for social events and public festivities. Thus Cristoforo da Messisburgo, chef at the court of the Duke of Ferrara, of Flemish origin and ennobled by Charles V, delivered in his *Banchetti, composizioni di vivvande e apparecchio generale* (1549) the model of a banquet offered to the counselors of the emperor, consisting of no fewer than six luxurious courses that ended with an apotheosis of sugary desserts.<sup>29</sup> His model, however, could be adapted to the purse of more modest lords who would expend a third less sugar and spices.

It is necessary to recall that this Italian influence extended also to Germany, above all the southern part, from Frankfurt to Augsburg, which still maintained very close commercial ties with northern Italy. These ties manifested themselves in the translation of the famous *De honesta voluptate*, by Bartolomeo Sacchia (alias Platina), Walter Ryff's *Von der eerlichen zimlichen auch erlaubten Wolust*

*des leibs* (1542)—which inspired such masterpieces as the *ConfectBuch und hauss apoteck kunstlich zubereiten, einmachen und gebrauchen* (1544)—and Marx Rumpolt's *Ein neu Kochbuch* (*A New Cookbook*) (1581).

In terms of France, the historical record has always emphasized, and no doubt too exclusively, the decisive role of Catherine de Medici, who from the time of her marriage with Henri II in 1535 dominated the French court for almost half a century. Indeed, during her son Charles IX's journey through France in 1568, she accompanied him, followed by two pack animals intended to carry fruits and preserves.<sup>30</sup> Aside from the royal court, one can assume that after the wars of religion convents similarly functioned as veritable laboratories for the perfecting of new recipes. In this way, the Ursulines of Flavigny, borrowing a Benedictine recipe, developed the famous crystallized anise, an aniseed surrounded by sugar and scented with orange blossom water, still for sale today in a small, colorful box.<sup>31</sup> The sugar-crystallized stems of the *angélique* flower of the Sisters of the Visitation in Niort owed their reputation as a panacea against the plague most notably to the recommendations of Madame de Sévigné. According to *Le cuisinier françois* there were also *pets de putain* (whore's farts).

In Flanders, in the Spanish Netherlands, these were known under the name of *nonneschetten*, or *pets de nonne* (nun's farts). The term refers to the fact that, from the end of the sixteenth century on, after the excesses of the *gueux*, the Calvinist Protestants, the very dynamic agents of the Catholic Counter-Reformation indiscriminately covered the country with numerous new convents. Several were founded and populated by religious women from Spain, and thus they adopted the new Carmelite reforms of Teresa of Avila. Several indications allow the supposition that these nuns similarly introduced to the Netherlands the art and practice of the *dulcertas conventuales* or, at the very least, enriched the existing traditions of the *Béguines* (religious women who resided communally in *béguinages* without taking vows).<sup>32</sup>

In the main cities of the southern Netherlands, the *béguinages* repopulated themselves with dozens, or even hundreds, of *Béguines*. Although devotional literature constructed for them an aura of great abnegation and alimentary sacrifice, the popular voice saw them, instead, as both lazy and *gourmandes*. Even amongst themselves a legend presented a *Béguine*, Beatrice of Brussels, who tarried too long in the chapel before supper, but who in returning to her kitchen found at the table a handsome young man, none other than Jesus himself, stirring the soup with a spoon.<sup>33</sup> In their naive imagination heaven became the place where one ate *rijstpap*, or rice pudding, with golden spoons. In fact, these religious women had to contribute to the cost of their maintenance, and hence busied themselves with all kinds of work, especially embroi-

dery, cutting out *découpage* figures from lace, or making artificial flowers or small dolls. Nothing could be more natural for those women who invented, in addition to waffles, other cookies and sweets, all the more so as they gladly combined them with the meticulous observation of religious festivals such as the Saint-Martin, the Feast of the Kings, and *Den graaf van half vasten*, or *Micarême* (a festival held more or less at the midpoint of Lent).<sup>34</sup> The *Béguines* of Antwerp distinguished between "*crakelingen, weggen, marsepijn, spans suiker, amandelen, bacades, mostasollen, muskesletteren, busquit*." They ate them communally, reserved them for the ill in the infirmary, or threw them at random to children. At the *béguinage* of Diest the laywomen distributed at funerals so much *lijkmikken*, or bread lightly dusted with sugar, that the bakers of the city took offense and protested this disloyal competition with their livelihood. Although sugary comestibles lent themselves marvelously to rites of distribution, the religious women could not claim to monopolize them. Previously, in the thick of the religious wars, Spanish soldiers distributed fruits and sweets during their carnival festivities.<sup>35</sup>

In effect, outside this small world of religious Flemish women, sugar products had long since acquired the status of a commercial commodity and became an important market product in the epicenter of the Netherlands. In 1561, in Antwerp, they already took center stage in the allegorical plays presented at the time of *Landjuweel* or the theater festival of the *Rederijkerskamers* or *Chambres de rhétorique*. Their characters frequently undertook promotion of sugar products: *Préparez moi pour le banquet de douces succades / des conserves, des sirops et des marmelades / des savouereuses gelées / des vins de Romanie bien sucrés* ("Prepare me for the banquet of sweet drinks / of conserves, syrups and marmalades / savory jellies / sweetened Romani wines").<sup>36</sup> Aside from the book of Nostradamus, confectioners in the Spanish Netherlands could also make use of the recipe books, in Flemish translations, of Alessio Piemontese, *Die secreten* (1558); of Charles Estienne, *De landtwinninge ende hoeve van M. Kaerle Stevens* (1566); or, better yet, the *Secreet-boeck* (1600), by Carolus Battus, a surgeon in Antwerp, exiled in 1585. The professionalization—or rather, in contrast to the female predominance of the practice in Portugal, the *masculinization* of the *suikerbakker*, or candy maker, and *pasteibakker*, or confectioner—seems obvious and appears in the public acts of the period, even though those working with sugar lacked their own guild; this is how the sugar economy appears in the Antwerp chronicle of Godevaert van Haecht with his "*Peer de suykerbakker*."<sup>37</sup> It is probable that this new profession based itself on relatively simple products and the almost obligatory bourgeois consumption of sweets. An Italian collection, written between 1585 and 1625, refers to a recipe for *confetto di Fiandra*, a sugar-

based paste, molded with *gomma adragante* (a kind of gum), musk, and cinnamon, that served as table decoration.<sup>38</sup> From that point on, bookkeeping of all kinds of feasts in the milieu of the *Chambres de Rhétorique*, such as the *Brabantse Olijftak*, and among merchant families and *Béguines* reserved considerable sums for confectioners' expenses. Even in inns, in Flanders every meal ended with sweets, and in particular small candies, according to one French traveler, the Jansenist Charles Lemaître.<sup>39</sup>

During this invasion of preserves and sweets, sugar did not disappear as a spice from the main dishes of Flemish cuisine. To the contrary, it seemed to impose itself more and more on all sorts of preparations of meat and fish, as one last resurgence of medieval tastes before the arrival in the second half of the seventeenth century of the new French cuisine and its stricter separation of sweet, salty, and bitter flavors. One finds this proliferation of sugar in all cookbooks, of which the Spanish Netherlands had no lack, either in copies or new editions, since the premier of Thomas Vander Noot's *Een notable boexken van cokerijen* (1510), and the subsequent *Eenen nyeuwen coock boek* (1560) by Gheeraert Vorselman, Carolus Battus's *Eenen seer schonen excellenten gheexperimenteerden nieuwen coc-boec* (1593), *L'ouverture du cuisine* by Lancelot du Casteau, and *Koock-boeck ofte familieren Keuken-boeck* (1612; 1655) by Antonius Magirus.<sup>40</sup> Similarly, a manuscript from Antwerp, from the end of the sixteenth century, recommends sugar as well for roast rabbit, veal pâté, mutton, or carp as for beef tongue, *poivrade de lièvre* (hare in pepper sauce), or dressing a capon.<sup>41</sup> Lancelot du Casteau used sugar most notably in a dish of minced carp and in a *tourte de Portugal* (Portuguese pie) with veal.<sup>42</sup> Sugar appears similarly in one of the most favorite dishes of the period, the *blanc-manger*, *witmoes op zijn Catalaans*, or *manjar blanco* of the Spanish, the white meat of chicken breasts served with rice creamed with the milk of crushed almonds. There was even sugar in another highly appreciated sauce, the *sopa dorada* or *vergulde soep* that accompanied roasts and fish. In each case the recipe did not skimp on the quantities of sugar used, often reaching or even easily surpassing a pound of sugar. Frequently, sugar was mixed with cinnamon, almonds, and oranges, all of which were also imported in large quantities. Popular drinks such as *l'hypocras*, a kind of mulled wine flavored with cinnamon, vanilla, and cloves, also contained much sugar. Moreover, even new wine, often of poor quality, was drunk sugared.

The popularization of sugar and its spread into more common cooking remains to be investigated. According to Pierre Belon, the naturalist specializing in ichthyology, sugar served to improve the bad taste of large fish obviously destined for the masses, such as tuna or dolphin, whose gustatory qualities he promoted in his *L'histoire naturelle des estranges poissons marins* (The natural

history of strange marine fishes) (1551). Even today in Flanders as in many regions of northern Europe one willingly puts sugar in such very popular dishes as *boudin* (blood sausage), *carbonnade* (a beef and onion stew popular in Ghent and northern France), red cabbage, or apple compote. Sugar mixes more easily with dairy foods such as butter or cream cheese than does honey and similarly improves such rather insipid and heavy pasta and stews such as *mastellen*, fruit tarts, or rice puddings. In Holland, *wentelteeffe*, similar to the American but misnamed "French" toast, or the Portuguese *rabanada*, has become very popular, as have *poffertjes*, fritters sprinkled with powdered sugar (similar to the *beignet* of New Orleans). These are probably identical to the *snoeperije en bancketsuycker*, sweet baked goods of this type that were sold, according to the Antwerp chronicle of Godevaert van Haecht, from sheds erected next to the frozen Scheldt at the end of December 1565.

However, it is very difficult to find precise information on the purchase and use of sugar among more common people. Accounts very often mention *stroop*, a molasses-like by-product of sugar refining that was often of dubious quality. It could replace honey, whose production remained very limited, or compete with or supplement honeycombs. An appellation that appeared rather early was that of *broodsuiker* or *pain de sucre* (sugar molded into a large, round shape similar to that of a loaf of bread, whence the name "sugarloaf"). The term may indicate both the spherical shape and the coarse, inferior quality for its most common use with bread. The slices of bread sprinkled with brown sugar still eaten in Flanders may also date from this time period, just as the traditional gingerbread, the so-called *pain à la grecque*, is an old specialty of the Brussels bakeries. For the preparation of such edibles, one can picture a practice similar to that of a merchant in Segovia, Juan de Cuellar, in which a sugarloaf was hung in the kitchen and flattened with a warm glass or plate, then garnished with several dribbles of melted sugar.<sup>43</sup> Such a sugarloaf appeared in *La visite à la ferme* (Visit to the farm), by Pieter Breughel the Elder, and was recaptured in the paintings and engravings of Jan Breughel the Elder and Pieter Breughel the Younger around 1597–1625. In the images are visitors, probably bourgeois landowners, giving as a gift to their tenant farmer a large sugarloaf, wrapped and tied with paper, just as they are still sold today. Some years later, the Antwerp Franciscans received two sugar loaves as a New Year's present.

#### *The Cultural Promotion of Sugar*

The diffusion of sugar was not only a question of alimentary innovation; it also appealed to the pleasures of the senses, especially sight. Sugar, because it is so

easy to manipulate, color, carve, and file, lends itself marvelously to all sorts of decorative fantasies in the typical taste of the Renaissance and the early Baroque for arabesques, grotesques, and fantastic creatures that inhabit and animate the borders of carpets, paintings, and the wainscoting of the period.<sup>44</sup> Sugar was perfectly suitable to developing this ephemeral art, and confectionery emerged as the major branch of architecture, as Antonin Carême would define it two centuries later. Better than papier-mâché or calcified materials, sugar served to articulate fantastic constructions in miniature, temples, and *arcs de triomphe* that exalted the power and glory of antiquity. It facilitated an almost encyclopedic miniaturization at once admiring and possessive of the surrounding world. In this aspect, sugar had the advantage of being edible, and thus that it could potentially satisfy cannibalistic fantasies, common in the imagination of the period.<sup>45</sup> Furthermore, the sumptuous displays remained fashionable for a long time, like the one offered in 1640 by Cardinal Borja (president of the Supreme Tribunal of Aragon), which featured a château of marzipan and sugar worked in filigree, with a remarkable likeness of the cardinal in the portico of the entry.<sup>46</sup> In 1667 in Amsterdam, the grand duke of Tuscany, Cosimo de Medici, during his visit to the Netherlands, was presented by a delegation of the community of the Portuguese Jews with “a triumph of sugar, representing a ship, finely worked with its decks and inner rooms in fullest detail. There was a mausoleum made in the grotesque style with many little statues, and a bowl of a pastiche of ambers, and one of little pieces of chocolate . . . Four kinds of Portuguese-style confections.”<sup>47</sup> One may note both the rather precocious association of sugar with chocolate and the persistence of Portuguese specialties.

Sugar, more than bread, appealed to the popular imagination and produced figures of all kinds—people, animals, and even devils, sugared and easy to crunch.<sup>48</sup> It is not astonishing that a victim of the Inquisition in Goa, Charles Dellon, set up a strange comparison between sugarloaves and the *sanbenitos* worn by the condemned: “Paper hats rising like a sugar loaf covered with devils and flames.”<sup>49</sup> One can also write one’s name or initials with the famous *lettres d’Hollande* (Dutch letters) or *lettergebak* (an almond and sugar pastry). Such smaller letter cookies were apparently used for fostering literacy among children.

Although it remains almost impossible to trace the origin of the first sugary fantasies, one can easily establish the chronology of their appearance in scientific or artistic iconography. Initially, the fabrication of sugar, along with gold and silver mines, represented colonial technology and wealth as much as the exploitation of slaves. It was largely divulged through the engravings of Théodore de Bry from 1590 onward and did not cease to haunt the imagination through numerous imitations and reinterpretations, as well as the drawings and

paintings of Jan Van der Straeten (Stradanus), Crispijn van de Passe (see his *Hortus floridus* [1914]), and Frans Post, among other witnesses of the Dutch occupation of Brazil.<sup>50</sup> Such works, painted on the cabinets of the Antwerp furniture workshops, depicted the painful job of cutting sugarcane.<sup>51</sup> It seems unlikely that at this point in time this evocation of hard labor and slavery could have provoked the strong consumption anxieties that were later addressed in the eighteenth century.<sup>52</sup> In the *Schat der Gesontheit* (1636) by Johan van Beverwyck, however, next to an engraving of sugar extraction, there appears an early commentary in this vein by the poet, moralist, and polymath Jacob Cats: “What suffering of fierce blows today in torrid Brazil / To harvest the fruits in this distant land.”<sup>53</sup> In contrast, neither the *Temptations of Saint Anthony* by Jerome Bosch, nor the Breughel allegories of coarse and scant food, nor the numerous Flemish *quermesses*, nor the *arcimboldique* fantasies, include depictions of sugar or confectioneries.<sup>54</sup> From the engravings of Pieter Breughel the Elder and his son’s, one could perhaps with effort mention the *mise-en-scène* of the *Lutte entre le Carnaval et le Carême* (Struggle between Carnival and Lent), in which Lent is coiffed with a hive of live bees, while Carnival seems to wear sugar tarts. To view this tableau as a representation of the confrontation between traditional honey and imported sugar is a far stretch. The hive appeared again in *L’âne à l’école* (The donkey at school), in which a child sticks his head in an overturned hive, and in *L’espérance* (Hope), in the “Seven Virtues” series, which presented a virgin crowned with a hive. In the drawing *La prudence* (1559), preserves arranged in pots figure as a symbol of domestic foresight.

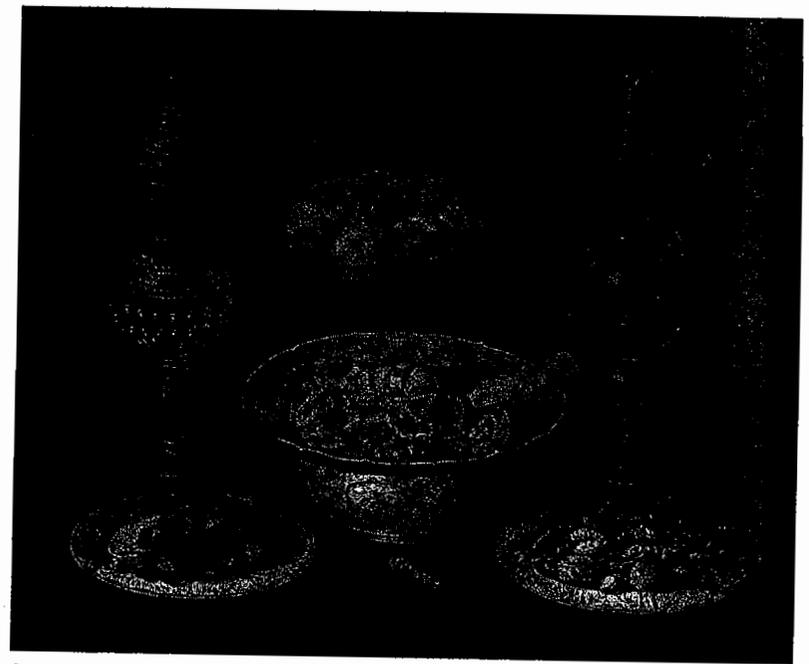
Even stranger is the absence of sugar products in the exuberant scenes of the market, the kitchen, the table, and genre paintings, made popular in the sixteenth century by Flemish painters such as Joachim de Beuckelaer and Pieter Aertsen.<sup>55</sup> Of the latter’s work, however, there survives the *Wafelbakster* (1560), a painting of a woman selling waffles with butter, but without the visible syrup or sugar of the actual *lacquemant* waffle. In the festive meals painted by Jerome Francken (1540–1610), several sweets can just barely be made out. It is probable that, in contrast to fruits and vegetables or bloody meats and chops, heavily charged with symbolic significations and erotic suggestion, the painting of confectioneries and preserves, much more innocent and without their own symbolic value, fascinated and gratified the eye of the spectator to a much lesser extent. They lacked the beauty of form, a strong color, and a very pictorial substance. Additionally, it must be remembered that in the Netherlands, confectionery had become a man’s business, while women sold fruits and vegetables.

Not until the end of the sixteenth and beginning of the seventeenth century did confectioneries make a more marked appearance in still-life paintings. It is

not surprising that the precursors in this record were Italian painters such as Vincenzo Campi, Ludovico di Susio, and Jacopo Chimenti da Empoli, followed by Giovanna Garzoni and Bartolomeo Arbotoni around 1660.<sup>56</sup> To the north of the Alps, a student of Lucas van Valckenborch, Georg Flegel, who was active in the same city of Frankfurt as the De Bry family and where the first sugar refiners suddenly appeared with the influx of Flemish immigrants, appears to have been one of the first to appreciate confectioneries and to give them a place in his *Schauessen* or still-life paintings. With their bizarre forms and their white color, sticks of spun sugar and candied nuts contrasted very well with plates of olives, of preserved fruits and nuts, glasses, shellfish, or butterflies. Almost simultaneously, around 1610–20, the theme surfaced in Antwerp, in Jan Breughel the Elder's allegories of taste, but above all in the works of Osias Beert, an expert in this matter. Amsterdam followed immediately with David Vinckboons, Pieter Claesz, and Clara Peeters, originally from Antwerp, who introduced sugar in the *bancketjes*. Shortly thereafter, around 1620, confectioneries appeared in Spain in the *bodegones* of Juan Sánchez Cotán, Juan van der Hamen y León, Antonio de Pereda, and Francisco de Palacios. Van der Hamen willingly added the round though austere forms of *cajas de dulces*, while Pedro de Medina even showed a piece of cane sugar. Confections also appeared in the works of French painters such as Lubin Baugin in 1635. It is not surprising that Portuguese painter Josefa de Ayala de Obidos's still lifes from 1660–80 were so realistic that they tempted the viewer with the most varied confectioneries.<sup>57</sup>

This genre of paintings played a role comparable to modern publicity and remained popular, at least, until the end of the seventeenth century. One could perhaps object that this pictorial exaltation of confectionery concerned only an elite minority, relatively wealthy to be able to permit themselves the purchase of such tableaux. By way of response it must be stated that many Flemish and Dutch paintings served as a matrix for engravings printed by the hundred and widely distributed through the lively trade in images, or else in books.<sup>58</sup> They inspired a whole imagery, such as that of Abraham Bosse.

Sweets, and above all *galette* cakes, perfectly expressed the fragility of temporal things and of existence; they appeared mostly in portraits of children. They held the sweets in their hands or had them just out of reach, as they did with other attributes of innocent carelessness such as flowers, small birds, or *sjiboletts*.<sup>59</sup> At the same time, these sweets served to entice or reward children, turning them into inveterate consumers. By 1490 the *cortes* of Évora complained of the *al-feloeiros*, who came from Castille to sell these caramels of twisted sugar that made children cry in front of their parents to obtain the money necessary to buy them.<sup>60</sup> Shortly thereafter Dom Manuel forbade their sale by men, reserving it



Sugar and sweets became regular elements in *bodegones* (still-lives). A considerable market for these existed in Spain. This example was painted by Juan van der Hamen or one of his students in the seventeenth century. Courtesy of the Museum of the Royal Academy of Fine Arts of San Fernando.

for women, widows, and children. Michel Montaigne advised to “sweeten with sugar the meats healthy for children and make bilious those harmful to them.”

The childhood feast-days par excellence, those of Saint Thomas, Saint Martin, and the Three Kings, persisted with ease in the period of the Catholic Counter-Reformation, while even the most recalcitrant Calvinist Dutch could not bring themselves to strike off the calendar the feast of good Saint Nicholas, who brought to good children their candies and to recalcitrant ones the blows of *père fouettard* (similar to the American “boogeyman,” that is, a mythical character used to frighten misbehaving children; in the French version, he carries a whip, “fouet,” thus the name). Nothing manifests this better than the famous painting of Jan Steen.<sup>61</sup>

More secretly, many adults, melancholic because of religious conflict and incessant wars, sought and found consolation in a bonbon. Amorous discourse and relations often borrowed references from sugar, as in the poems of Jan van der Noot or the “*Mijn life . . . mijn suycerdoos*” (“My love . . . my box of sugar”)

in *De gecroonde leers* (verse 466) of Michiel de Swaen. Cristóvão Godinho's book *Poderes de amor em geral, e obras de conservação particular* ("The procurement of love in general, and how to maintain it") (1657) discussed at length the links between the erotic and sugar.<sup>62</sup> In the comedy *De Spaanse Brabander* (1617), by the successful Dutch author Gerbrand Adriaensz Bredero, the main character, Jerolimo from Antwerp, a poor wretch with the look of a great lord, presents his mother as "the wife of a poor confectioner, but she knows how to bring the tarts and marzipans right quick to captains, colonels, and grands pagadores."<sup>63</sup> Thus, a whole body of literature contributed, even before and certainly following Rabelais in the *Quart Livre de Pantagruel*, to the enthroning of confectioneries at the height of extreme happiness in the mythic land of plenty, where the snow and hail are made of powdered sugar and sugared almonds and tarts cover all the roofs.<sup>64</sup> Finally the emblematic imagination took hold of sugar: in *Menselijk Bedrijf*, his survey of human action, Jan Luiken associated the *Suikerbakker* (confectioner) with "the divine sweetness of the blood of Christ" and advised that "those who would vanquish acrid sourness / must not begin with aqua-fortis / but rather sugar is the proper sword / o my God, how you have given / to bitter life your greatest sweetness / and thus prevented the Great Fall."<sup>65</sup>

Even cities began to identify themselves with all kinds of sweets, which became a new emblem, such as the *calissons d'Aix* (marzipan petit-four) or the *bêtises de Cambrai* (literally, "idiocies of Cambrai": rectangular, mint-flavored candies).<sup>66</sup> The latter owed their name to poorly made candies that Marguerite of Burgundy had distributed "to the common folk by her confectioner" on the occasion of her marriage.<sup>67</sup> As way of punishment he was paraded in a *carnavalesque* procession that was repeated each year, with a shower of candies. The municipality of Orléans offered to the king its *cotignac*, small cubes of quince paste (no fewer than thirty-eight dozens in 1576), Verdun its candies with musk and anise, and Metz its preserved *mirabelle* plums, to the point of arousing the jealousy and imitation of Nancy.<sup>68</sup> Already in 1565 in Toulouse the meal offered by the *capitouls* (municipal magistrates of Toulouse) consisted of "fifteen badges of the king, with collars of the Order and fifteen Fleur de Lys." Bruges was famous for its *Brugse mokken*, and Antwerp for the *Antwerpse handjes*, which refers to the hands that the mythical giant Antigone cut off shipmasters reluctant to pay their taxes and then threw into the River Escaut. Political connotations of certain sweets soon emerged: during the Fronde, the duc of Praslin mollified the most belligerent of the *jurats* (municipal magistrates of the Ancien Régime, especially in the Midi) of Bordeaux with toasted almonds. According to humanist and Protestant critics, sites of pilgrimage seemed equally associated with one

or another candy, which the devoted would buy there to recover their strength or to bring back as a souvenir of their proceedings. The painting *Les trois sens* (The three senses) (1620) of Jan Breughel the Elder, at the Prado in Madrid, illustrates the part dedicated to taste with an pile of sweets and cookies garnished with small pilgrimage flags on top.

Like pots of wine and other gifts, sugar confections served perfectly to support familial and friendly relationships and as recompense for favors. Thus, in 1554 in Venice, Flemish merchant Maarten de Hane, in his will, left to his sister Catharina, a nun in the convent of Woutersbrakel, an annual income of fifteen ducats, devoted "partially to good wine and sugar and spices according to her practice."<sup>69</sup> Almost a half-century later, one of the successors of his firm, Antwerp merchant Jan della Faille, facilitated the registration of his purchase of a lordship by distributing sweets to competent functionaries, no fewer than "4 brootsuyckers to councilor Gryspere."

The many new uses of sugar required the creation of new, appropriate utensils that incorporated confectionery more visibly in daily life and assured it a place among the domestic equipment and in the familial patrimony. Inventories of kitchens included stoves and copper saucepans, bells for cooking fruits, skimmers, graters for sugar, pie pans and cookie molds, while on the tables of dining rooms appeared sugar pots, shakers, boxes of sugar, and, most likely later on, the sugar spoon and tongs.<sup>70</sup> It appears that these objects of luxury were made first of silver, gold-plated silver, or earthenware and were not produced in fine porcelain until later.<sup>71</sup> It is worth noting that Chinese porcelain made its way to Europe through the same route as sugar, from Lisbon to Antwerp, and subsequently to Amsterdam. There were also goblets filled with small fruit-and-seed conserves that were left on the tables at the disposal of visitors, and candy purses or pocket boxes that could be worn on a belt, which would later evolve into the candy tin.

Finally, the increasing familiarity with sugar manifested itself in toponymy with roads that bore the name of sugar almost as often as the older *rues au beurre* (butter streets, that is, the streets on which butter was sold) or *rues aux harengs* (herring streets). Thus in Antwerp, since at least 1565, a *Suyckerroije* or *Suikerrui* (sugar street) was very well situated on a small stream recently covered over, very close to the new Hôtel de Ville under construction.<sup>72</sup> In Gand there is a *Suikersteeg*, and in Amsterdam a *Suyckerhuys*. Lisbon has its *Rua dos Confeiteiros*.

It seemed as though nothing could hold back the triumphant ascent of this colonial commodity. One finds few warnings or critical preoccupations concerning the excess of marzipan and preserves in *Miroir universel des arts et sciences en générale* (The universal mirror of arts and sciences in general) (Paris,

1584) by Leonard Fioravanti, though nothing comparable to the numerous and often vehement diatribes against alcohol and tobacco. For those with good manners, Erasmus advised in his *De civilitate morum puerilium* (1535) not to let children lick sugar or other sweets attached to a plate or dish: "Such is the behavior of a cat, not of a human." Religious prescriptions and restrictions during Lent, abstention, and sobriety addressed sugar only rarely, as many still considered it to be, in the tradition of Galenus and of Thomas Aquinas, a medication, not food. In *Il vitto quaresimale* (1637), Paulo Zacchia explicitly mentioned cakes and preserves as substitutes for meat and bacon during Lent. Certain physicians began, however, to denounce the ill effects of an excessive consumption of sugar. According to Henry IV's physician, Joseph du Chesne, in his *Le pourtrait de la santé* (The picture of health) (1606), candies and preserves heated and burned the blood, and rotted and blackened the teeth.

Some warnings against excessive expenditure on luxury items (silk, lace, and silver dishes) targeted the consumption of sugar. Already in Portugal, royal orders like those of João III (3 July 1535), Cardinal Henrique (8 June 1560), and King Sebastião (28 April 1570) sought to limit expense in accordance with resources, or to forbid *manjar blanco* or *bolos de rodilla*.<sup>73</sup> Madrid, too, attempted to forbid the *figones* or caterers from selling in public "neither manjar blanco, nor tortadas, nor pastellitos nor other sweet things."<sup>74</sup> It is evident that such prohibitions had little effect and impelled instead a more highly valued consumption. In the Netherlands, since the beginning of the seventeenth century, critics had denounced the growing mania for buying expensive sugar in order to show them to visitors and citizens.<sup>75</sup> Several moralists, including the poet Jacob Westerbaen in his *Minnedichten* (1633), and the painter Joseph de Bray, promoted good national dishes, simple and plain, such as cheese or pickled herring, attacked delicacies of foreign origin and, thus, indirectly sugar. However, burgo-master Tulp of Amsterdam, who promulgated the restrictive decrees, did not respect them himself.

### *The Great Antwerp Sugar Market*

How can we evaluate this unprecedented ascent and valorization of sugar in the context of the extraordinary commercial expansion of the sixteenth century? As Antwerp became the driving force in commercial capitalism, overtaking Venice, according to the Braudelian thesis, the role of sugar in the rapid expansion of the great northern market must be investigated. Did sugar attain the rank of important commodity, or that of a prime necessity, in the transactions of the period?

The first observation is that sugar by no means found a prominent place in the

still prevailing classical works on the growth of the Antwerp market. Although Herman Van der Wee published quite a long list of sugar prices, he did not spend much time on it in his analysis of the rise of the market, nor on the effects of the increase in sugar prices.<sup>76</sup> It is true that there were no other quantitative data comparable to the data set on pepper. Thus, the calculations were performed based on very approximate and debatable estimations. In 1560, according to one of the most prominent specialists of the economic history of Antwerp, Wilfrid Brulez, sugar imports reached 15,200 chests annually, with a value of 250,000 florins (guilders), as he based his calculations on Ludovico Guicciardini's description of the Netherlands and a general depiction of the economy undertaken by Gerard Gramaye.<sup>77</sup> This is truly a modest sum in comparison to the two million guilder value of the spice trade, and is almost insignificant in relation to the ensemble of commercial trade in the Low Countries, of which sugar represented less than 2 percent of the total imports. It is worth noting that, in general, Brulez tended to underestimate the role of colonial products in the commerce of Antwerp, while at the same time he emphasized the importance of more traditional commodities such as textiles and grains. Although his argument appears valid for the spice trade, he underestimated the role of other primary overseas materials, the rich trades, most notably pearls and precious stones, clandestine merchandise though they were, yet nevertheless decisive for the fortunes of a great commercial city and its luxury crafts. Likewise, it appears now that sugar occupied a much more important place among commercial transactions and the riches accumulated in Anvers, and that it even constituted an essential pivot.

However, Portuguese data, ignored by these Flemish historians (as is too often the case), suggested a much higher value. The sugar from Madeira reserved for Flanders, by Dom Manuel, reached 40,000 *arrobas* (nearly 460,000 kilograms) out of a total of 1,080,000 *arrobas*, of which almost half was destined for the Italian ports.<sup>78</sup> Almost definitely, these Portuguese sugar exports increased considerably, at least until the unleashing of hostilities in 1570 and the closing of the Scheldt in 1585. The fourth of June 1564 saw in Antwerp ten or eleven Portuguese ships filled with sugar. Aside from sugar, the rather significant quantities of conserves must also be considered. In 1517 Diogo de Medina, *confeiteiro* (confectioner) in Madeira, sent annually, by royal order, twelve *arrobas* of nothing but conserves to the *feitor*, the Portuguese factor in Flanders.<sup>79</sup> Later, after the crisis of 1566 and the departure of so many merchants, the solidity of the sugar trade played a greater role in the recuperation, however incomplete, of the economic prosperity of the city, in its "long Indian summer," lasting until the end of the seventeenth century, and in the survival of a rather numerous and

wealthy colony of Portuguese merchants.<sup>80</sup> Between 1590 and 1629 the latter imported almost 75,000 chests.

It is true that a more precise estimate of the sugar trade in Antwerp becomes all the more difficult for the sixteenth century, as the sources of supply increasingly diversified and continuously evolved. In contrast to spices, alum, Spanish wool, English cloth, and Baltic grains, sugar was not subject to any staple right, required warehousing, or monopoly in the matter of refining. Sugar chests were not negotiated as bulk goods on one or more ships, but could be imported as packaged goods in smaller or bigger amounts or even as personal luggage. However, because of its excessive weight and the difficulties of storage and conservation, it was always preferred to transport it directly to its destination for refining. Fortunately, the sugar trade was well suited for the new mercantile practices of double-entry bookkeeping, the commitment of information and regular epistolary correspondence between partners, the sharing of interests, and the mutual insurance. Thanks to their familiarity with the *Dispositionshandel*, the new type of merchants could negotiate their sugar chests without passing through Antwerp, or even through other ports of the Netherlands, but rather dispatch those directly to other ports on the Atlantic Coast, the North Sea, the Baltic Sea, and even the Mediterranean.

Jan Materné has tried to quantify the origin of the sugar traded in Antwerp.<sup>81</sup> Hence, he proposed for the years 1552–53 figures of 51 percent from São Tomé, 20 percent from Madeira, 10 percent from the Antilles, 9 percent from the Canaries, 6 percent from North Africa, and 4 percent of unknown origin. By 1570, São Tomé would furnish 70 percent, Brazil 15 percent, and North Africa 5 percent, with the remaining 10 percent of unknown origin. For 1590–99, he attributed 86 percent to Brazil and barely 2 percent to São Tomé, without being able to identify the remaining 12 percent. Although there appear in these statistics general trends, it is necessary to nuance this distribution and to complete it.

First, while writing a history of sugar supply in northern Europe, one should recall the precursory role of Bruges, where from the Middle Ages on, Italian, Andalusian, Catalan, and German merchants brought sugar from the Mediterranean, especially from Damascus, Egypt, Venice, and Málaga.<sup>82</sup> They provided for a local market in the middle of a comparatively wealthy region, but also reexported their sugar to England and Germany. The merchants of the Hanse and particularly the *Grosse Ravensburger Gesellschaft* may have opened the path to a more active participation of Flemish merchants in the commerce and production of sugar.<sup>83</sup> The access of the Bruges merchants to the exploitation of the new plantations of Madeira and to the production of new Portuguese sugars visibly resulted in interaction among Italians, Portuguese, Germans, and Flem-

ish. In parallel, the political and dynastic ties between the kings of Portugal and the counts of Flanders, and particularly the marriage of Isabella, sister of Henry the Navigator, with Philip the Good facilitated the establishment of a Portuguese colony in Bruges and a Flemish one in Lisbon, both greatly privileged.<sup>84</sup> Once Madeiran sugars arrived at the market in Bruges, nothing was more natural for the merchants native to the city or the neighboring region of the Artois, as well as those from Tournai (such as the Despars; the Nieulant or da Terra; the sons of Maarten Lam or Leme; Jean Esmenault or João Esmeraldo; and João Lombardo), than to engage themselves in the depth of this traffic to the point of acquiring land and constructing *engenhos* in Madeira.<sup>85</sup> Paradoxically, the growing difficulties and decadence of the Bruges market forced its merchants to take greater risks outside their homeport. At the same time, they also hoped to assure themselves a place in the new market of Antwerp. Shortly thereafter the Bruges merchants were also very active in the Canaries.

It was probably in Antwerp that Canary sugar achieved its entry into the supply of northern Europe. Again, as in the case of Madeira, there was interaction among German merchants from Cologne, Augsburg, or Ulm, and Italians, Spaniards, and Flemish through either synergy or competition. In 1509 a representative of Welser purchased and developed the first *ingenios* in Tazacorte, which subsequently passed in 1520 to the hands of Johann Bies of Cologne and Jakob Groenberg of Antwerp.<sup>86</sup> The latter became the ancestor of a large family, Monteverde, in the Canaries. Other Antwerpers, such as the Van Dale family, followed them.<sup>87</sup> It is important, however, to emphasize the simultaneous, if not prior, presence of Brugeois such as Lieven van Ooghe, Gilis Dhane, Juan Jaques, and, above all, Thomas and Jorge Vandewalle or Bendoval.<sup>88</sup> According to Emmanuel van Meeteren, the first Canary Islands sugar arrived in Antwerp in 1508. There it acquired an *appellation d'origine* and a reputation of high quality, as recipes explicitly prescribed *Canariesuycker* and its price appears to have been higher than those of other sugars. Note that these transactions still remained very important during the difficult decade of the 1580s.<sup>89</sup>

On the trade route from the Canaries, and hence often serving as a port of call, lay the *Cabo de Guer*, a name that covered in effect the entire Atlantic coast of Morocco, frequented by merchants in particular for the purchase of Moroccan sugar. The latter certainly made up a significant portion of the sugar market.<sup>90</sup> Aside from the Antwerpers, the French were equally active there, and in 1561 King Charles IX sought to obtain a monopoly from the Moroccan sovereign, while in 1570 a society of merchants from Rouen attempted to organize plantations.<sup>91</sup>

It was again experience acquired in the Canaries that impelled commerce-minded men such as the Welsers to develop an interest in the sugar plantations on the island of Santo Domingo, between 1530 and 1556, and their product passed steadily through the Antwerp markets and elsewhere in western Europe.<sup>92</sup>

Meanwhile, Portuguese sugars from Madeira remained in Antwerp, but they were substantially reinforced with arrivals from other Portuguese possessions, from São Tomé and Brazil. The relations between Antwerp and the third new important supplier of sugar, São Tomé, are clearly less well known or studied. There is, nevertheless, an occasional indication, such as a certain Antoinette Raes, wife of the merchant Louis le Candele, who claimed that by 1611 she had lived for eighteen years in São Tomé and knew of another Flemish man, Jan de Clercq.<sup>93</sup> It appears that Portuguese merchants, principally *crístãos novos* (New Christians), controlled São Tomé's sugar production.

In contrast, the Antwerp involvement in the tapping of the Brazilian sugar vein is better known. It revolved around a merchant of great skill, Erasmus Schetz, and his sons Gaspar, Melchior, Baltasar, and Conrad, and their links of family, business, and trust with a varied group of merchants of diverse origins, all active and established, in one way or another, along the Lisbon-Antwerp axis.<sup>94</sup> They found German sponsors through Erasmus's father-in-law, Lucas van Rechtergem (originally from Aachen), and German factors and servants in Lisbon, such as Guillermo del Reno or del Rey and Hans Ingelbertus. This explains why German soldiers, such as Hans Staden or Ulrich Schmidl, who had difficulties in Brazil, were welcomed in 1553-54 at the Schetz property in São Vicente. Through its other interests in metal, spices, gems, and even tapestries, as well as their loans to the king of Portugal, the Schetz family positioned itself at least at the level of the Höchstetter family, and not far behind the Fugger or Welser families. Afterward came Flemish or Antwerp relations and associates with the brother-in-law and nephew João van Hilst or Venist de Hasselt, the son-in-law Jan Vleminck, the Wernaert's, the Pruenen's, and Van Stralen. There were probably also overtures made to the wealthy merchants of French-speaking Flanders, of which Pedro Rouzée d'Arras would be their representative in São Vicente. The Schetz family's relation with the great Italian merchants was consolidated by the marriage of Baltasar Schetz with the widow of Jean-Charles Affaitadi, Lucretia. Later on, they would have in their service in Brazil a Jean-Baptiste Maglio and a Jeronimo Maya. We must not forget the relationships between Erasmus and the *converso* merchant of Burgos, Francisco de Valle, who became his brother-in-law, and his protection of the *crístãos novos* Gabriel de

Nigro and Diego Mendes, who had found refuge in Antwerp but were again threatened there in 1532.

Finally, the insertion of these merchants into the highest political and intellectual realms manifested itself in the lodging in 1549 of Charles V and his heir Philip in their splendid estate in Antwerp, *Huis van Aaken*; by the purchase of lordships and the concession of noble titles such as the lords of Grobbendonk, Wezemaal, and Hoboken; by the nomination of Gaspar as financial factor of King Philip II at Antwerp in 1555; through relationships and literary exchanges with humanists such as Erasmus of Rotterdam or the German Heliodorus Eobanus; and Melchior Schetz's patronage of the *Landjuweel* in Antwerp in 1561. Although the Schetz and their familiars certainly associated with influential people and followers of the Reformation, and shared somewhat heterodox ideas, they chose loyalty to the king and did not flee during the religious turmoil. Gaspar Schetz established good relations with the Jesuits, to whom he sold the family's *Huis van Aaken* and who visibly reciprocated through their spiritual assistance in controlling the behavior of their representatives in Brazil. Thus, in 1578 he even received a letter from Father José de Anchieta. The Schetz family also sent the Jesuits supplies, paintings, images, and a small harpsichord. It is not astonishing that, from that point on, they passed as partisans of the king of Spain, a reputation that undoubtedly instigated the Dutch, led by Joris Van Spillbergen (from Antwerp himself, but a rebel), to burn the *Engenho dos Erasmos* at the time of their passage in 1615.

The example of and rivalry with other notable merchants in Bruges and Antwerp, who established a pattern with the acquisition of estates on the Atlantic islands and who flaunted their royal titles, most probably impelled Erasmus Schetz to purchase, from his nephew João Veniste of Lisbon, a significant share in a new *engenho* in São Vicente in 1535. A short time later, the three other shareholders, Martim Afonso, Vicente Gonçalves, and Francisco Lobo, ceded their shares as well. From the 1540s on, Schetz sought to develop his *engenho* through direct management of his factor, probably Pedro Rouzée. Their first results may have incited other German merchants active in the Lisbon-Antwerp-Upper Germany axis to work through Brazilian channels. It was, most notably, Sebald Lins of Ulm and the de Holanda and Hoelscher families who established their *engenhos* at Pernambuco and Bahia.

Although from the beginning of the sixteenth century all these various Atlantic sources of sugar dominated the western European sugar supply, we cannot ignore the importance of the Mediterranean sugar, which maintained its hold over part of the market. For example, in 1589, the della Failles received mo-

lasses shipments from Palermo in Zeeland and in Amsterdam.<sup>95</sup> The Andalusian coast, along with Motril, remained in the seventeenth century a rather significant supplier to both Antwerp and Marseilles.<sup>96</sup> The port of Marseilles even continued to receive, on occasion, sugar from the Levant and from Alexandria in Egypt. It is significant that the *pepercoeckbackers*, or the gingerbread artisans, protested in the 1670s against an increase in taxes on syrups imported from Motril, which would affect the lower classes' consumption.<sup>97</sup> In Portugal, sugarcane, planted at Algarve, seemed to move up toward the north at Coimbra and Lisbon, where the Milanese financier João Batista de Rovelasca introduced it in his estate at Alcantara.<sup>98</sup> Moreover, attempts were made to extend sugarcane plantations to other regions of Europe, most notably in the Midi of France with an attempt in Hyères starting in 1551 and ending in failure in 1584.<sup>99</sup> According to botanist Mathieu de l'Obel, who noted another attempt in the Low Countries, the failure of the project was due to the extremely cold weather.<sup>100</sup>

In addition to this diversification in supply, the volume of transactions and its larger radius of resale also distinguished the Antwerp market from that of Bruges. Clearly, Antwerp was already a larger city, approaching 100,000 inhabitants, in which the local consumption of sugar was more considerable because of its relatively high standard of living. The fact that the daily salary for a ship's master was equivalent to 400 grams of sugar leads to the supposition that people of more modest means could occasionally afford to buy some sugar.<sup>101</sup> In the immediate vicinity of Antwerp was an exceptionally dense demographic area that enjoyed a rather high purchasing power or else benefited from a system of donations and occasional redistributions. The inventories of spice sellers in Tournai and Saint-Armand in 1568 attested to the diffusion of sugar as an ordinary commodity in the more average cities of the Low Countries.<sup>102</sup> It is not surprising that the Van der Meulen family had confections sent from Antwerp to Haarlem for a wedding.<sup>103</sup> The *tonlieu* (shipping tax) of Lith on the Scheldt for the period 1622 to 1630 was rather high for taxes paid for the passage of sugar upstream the Meuse.<sup>104</sup> Hans Pohl estimated the capacity of the Antwerp sugar market at an annual average of more than 2,000 chests for the period 1609–21, but a contemporary writer, Manuel Lopes Sueiro, reports a much higher amount of 6,000 during the war years before.<sup>105</sup> Later on, political and economic difficulties only moderately diminished these needs and imports of sugar into the Antwerp market for thirteen months starting in June 1655; in 1656 imports rose to almost 2,026 cases.<sup>106</sup>

After 1500 the Rhineland at Cologne opened up for the Antwerp merchants a very important market for local consumption and resale elsewhere in Germany.<sup>107</sup> The Antwerp merchants, however, also exported directly to more dis-

tant destinations in Germany, to Frankfurt, Ulm, Augsburg, and Breslau. In his *Livre d'arithmétique* (1587), Michel Coignet offered arithmetic exercises concerning the sugars sent to Nuremberg.<sup>108</sup> A second important market was situated in France, particularly in the northeast of the country.<sup>109</sup> Thus in 1572 Jehan de Boisy registered a debt of more than sixty-four Flemish pounds for sugars sent to the late Jehan Barlet in Arbois in Burgundy.<sup>110</sup> In contrast, due to their extensive Atlantic coastline, the numerous ports in the west favored direct trade with producing countries, or, at the least, with Lisbon, to such an extent that French consumption witnessed a strong increase. According to Henri Lapeyre, in 1550 France purchased 250,000 pounds of Portuguese sugar and 50,000 pounds of Spanish sugar, while the only market of Rouen absorbed in 1565 no fewer than 3,000 chests from Madeira and the Canaries as well as São Tomé and Barbary.<sup>111</sup> Nevertheless, a port such as La Rochelle continued to receive sugar from Antwerp, although it is true that it also occasionally shipped sugar directly to the northern port.<sup>112</sup>

If the Antwerp merchants maintained for a period of time an advantage in redistribution over their French and German competitors, it was because they profited from a more highly developed commercial infrastructure. Antwerp had at its disposal in the immediate vicinity a compound of ports frequented by hundreds of boats (Spanish and Portuguese as well as Breton and Dutch) and a bourse where the latest information, opportunities for credit, and insurance could readily be found daily. The city's merchants corresponded with a number of factors, associates, or individual participants throughout Europe and even overseas, and could always include sugar in their other more numerous and heterogeneous commercial operations. Thus merchants of a modest but solid scope such as Maarten and Jan della Faille sent sugar chests both on one sole ship to Narva in the Baltic, as they did in 1565, and in hundreds of ships to Venice from Cádiz, as they did with Santo Domingo sugar in 1585.<sup>113</sup> In this way, they practiced *dispositionshandel*, that is to say, long-distance commercial dealings between two cities distant from the merchants' base, well before the 1585 seizure of the city by the Spanish army, under Alexander Farnese, and the closing of the Escaut.

This political and religious crisis, with the obligatory imposition of Catholicism as the sole faith, provoked the departure of several hundred merchants and artisans. They sought refuge temporarily or permanently in Holland, England, and Germany. Obviously, such an exodus considerably weakened the sugar market in Antwerp. However, paradoxically, it was also sugar that contributed to the reestablishment (modest in comparison to the city's previous stature, but nonetheless rapid) of a not negligible prosperity and Baroque splendor in the city

on the Scheldt, which subsequently enjoyed the "long Indian summer." After 1590 the political situation gradually normalized, particular under the reign of the Archdukes Albert and Isabelle. During the Twelve Years' Truce, from 1609 to 1621, the sugar market recovered not only in Antwerp but also in all the other cities of western and southern Europe. One could even contend that the great sugar boom took place from 1590 to 1630. It remained in the hands of the Portuguese, but included numerous Flemish merchants. The latter formed part of the so-called diaspora of political, economic, and religious refugees in Middelburg, Amsterdam, Emden, Hamburg, Frankfurt, and London. Many Flemish families settled in Rouen, Nantes, and Bordeaux; in San Sebastian, Viana do Castelo, Porto, and Lisbon; in Sanlúcar, Cádiz, Seville, and Málaga; in the Canaries and Madeira; on the Brazilian coast at Pernambuco and Bahia; in Safi, Morocco; in Algiers; and in the Italian cities of Naples, Livorno, and Venice. There were fewer political and religious refugees than adventurers, pawns, agents, and emissaries of an immense network that extended to four continents.<sup>114</sup> Some worked hard to represent the great Antwerp merchant houses that were reestablishing themselves, while others labored alone and hastily amassed a small fortune, especially in Brazil, in order to return to Europe, to Amsterdam or Seville, with considerable capital. Take, for example, the case of the young Jasper Basiliers from Antwerp, who in 1600 engaged himself for five years in Bahia in Brazil in the service of a group of nine merchants from Antwerp, Amsterdam, Rotterdam, and Lisbon, each of whom invested 10,000 guilders in the business; he himself contributed 2,000 additional guilders to the project.<sup>115</sup> If a Pedro Clarisse in Lisbon handled only 100 chests a year, others such as the De Groots could extend their purchases to 500 chests or even more. Whether they resided in Antwerp or in the Iberian Peninsula, merchants could export just as easily to northern Europe or to Italy.

A large portion of this commerce took place in total legality following the normalization of relations of the Spanish crown with France and England after 1598 and 1604. However, in principle, the Dutch enemy remained excluded, and foreign merchants who shipped sugar to the north were required to produce *testimonios* or certificates stating that the sugar had been disembarked in friendly areas—La Rochelle, Rouen, Calais, London, or Hamburg.<sup>116</sup> Several examples illustrate the importance of this trade: Jorge Benson, a London merchant, presented on 24 December 1605 a *testimonio* for a total of fifty-four chests of sugar that arrived on three boats between May and December of that year; in La Rochelle, Michel Reau and Joseph attested on 20 June 1606 to the arrival of thirty-seven chests of partially refined sugar from Pernambuco and Bahia, received from Jacques Godin in Lisbon on the Marie de St. Gilles. On his return

voyage from the East Indies in 1610 the French traveler François Pyrard de Laval wondered how in the imbroglio of that sugar trade Flemish and Dutch merchants and shipmasters, having their residence as well in Lisbon as in Bahia, enjoying Portuguese nationality, owning a well-armed Dunkirk hulk, managed to associate themselves with New Christians in a loading valued at 500,000 *escudos* and shipped to Bayona de Galicia, a port on the frontier between Portugal and Spain well known for its smuggling facilities.

All these prohibitions, requirements, and precautions did not prevent Amsterdam from becoming one of the most important sugar markets of northern Europe in 1600. This port was able to consolidate its position because of a highly diverse supply of sugar, from the Canaries, Madeira, São Tomé, Santo Domingo, and Brazil, combining purchase with theft and confiscation. We must not exclude collaboration with Barbary corsairs, among whom were often found Dutch renegades. In 1626 the denizens of Lisbon complained of the loss of 60,000 chests of sugar as a result of the seizure of not fewer than 120 ships over three years.<sup>117</sup> After 1616, Asian sugar from China, Formosa, and Siam, negotiated by the V.O.C. (Verenigde Oost-Indische Compagnie or Dutch East India Company), was added. The latter did not hesitate to create in 1637 its own production system on its plantations, first in Bantam and later in the surrounding area. It is worth noting that the English were also interested in the possibilities of Chinese sugar; Asian sugar could compensate for the insufficiencies and failures of the Brazilian *engenhos*, which after the 1630 conquest of Pernambuco by the W.I.C. (West-Indische Compagnie) no longer delivered all the expected cases. After the restoration of the independence of Portugal in 1640, Brazilian sugar arrived again by way of Lisbon in Amsterdam, which shortly thereafter would vie with sugar from the Dutch islands conquered from the Spanish in the Caribbean.

Antwerp, despite the rise of Amsterdam and the Dutch conquest of Brazil, still maintained a significant commerce in sugar that arrived either by way of the Flemish coast and the ports of Ostende and Dunkirk or from an intermediate stop in Middelburg or Amsterdam, having paid if necessary the *licenten* or rights of trade with the enemy, at least until the conclusion in 1648 of the Treaty of Munster between Spain and Holland. Thus, from 1648 to 1660, the Moretus family of the powerful printing house Plantin did not hesitate to receive cases of sugar through Amsterdam in the return for their book shipments.<sup>118</sup>

#### *The Art and Technique of Refining*

The continuity and longevity of the Antwerp market cannot be explained solely by its central position for commerce and the resistance of the Spanish power and

supremacy in this part of northern Europe, but rather by its early mastery of the secrets of sugar refining and its technical perfection. Although the art and techniques of refining could not be safeguarded or monopolized indefinitely, they clearly ensured a certain lead as long as the consumption of refined sugar did not soar.

Although sugar did not lend itself to commercial monopoly and permitted the participation of a large number of merchants and shopkeepers, this social mobility of sugar was not realized as easily at the level of refineries and confectioneries.<sup>119</sup> Thus, in Lisbon between 1533 and 1545, the merchants solicited King João III to forbid or restrain the use of São Tomé sugar by the confectioners or refiners of the city.<sup>120</sup> They advanced as pretext the risks of exhausting the supply of firewood and of the adulteration of sugar destined for export. Moreover, it is necessary to distinguish between the numerous *suyckerbackers*, the keepers of simple booths, or small confectionary workshops, and the refineries of a proto-industrial character. The refineries themselves demanded during their initial phase considerable investments, equal to if not surpassing those of breweries: a relatively spacious workshop not too distant from the docks (in order to limit the very high costs of transportation), several ovens, large copper basins, and a collection of pottery sufficient for hundreds of sugarloafs. It is true that copper was rather readily available in Antwerp due to the brassworks of the Meuse and to imports from central Europe and Sweden, which, in turn, were exported to Africa in large quantities through the mediation of the Portuguese. It was especially important to guarantee a sufficient, regular, and inexpensive supply of sugar. As for professional and technological know-how, the merchants and artisans of northern Italy, of Cremona and Venice, were rather numerous and in all probability introduced the secrets of refining, just as they had done for glass making, double-entry bookkeeping, and other financial innovations. Sugar was boiled up to three times, skimmed carefully, and purified and clarified with lime, egg white, or even ox blood. Many aspects of sugar refining were similar to goldsmithery, an art trade that employed many craftsmen in Antwerp and other Flemish cities during this period. So it is not surprising that a Spanish craftsman at Malines, Bernardin Maroufle, accepted in 1535 an apprentice, Nicolas Saillot, to educate him for twenty guilders in the "art of preparing preserves, candied fruits and other preserves," in the "art of drawing gold and silver wires and fashioning buttons, chains, trimmings, and other baubles," and in the art of perfumery. It was most important to gain mastery of the boiling point and the precautions to protect the sugar from moisture. Including the rather long drying period, the entire refining process could last as long as nine months and could easily employ several workers.

Antwerp welcomed foreign refiners to register as *bourgeois* and encouraged them to join the guild of those associated with the food trades. Thus the records of the bourgeoisie registered twelve new refiners for the period 1525–39, and seventeen more for the periods 1560–64 and 1565–69. These numbers indicate the scale of the activity and the success of this profession. While several authors such as Fernand Donnet and Hans Pohl estimated the number of refiners at nineteen in 1556, the more precise research of Alfons K. Thijs was able to establish a list of twenty-five names for that same year and proposed another twenty-eight names for 1575. A research on the social and labor structure of the city, by Jan Van Roey, collected eighty-eight *suyckerbackers*, but probably included many *pâtissiers* and confectioners, who did not refine their raw material.<sup>121</sup> Furthermore, many of these refineries were no more than simple *suycker-sieders* or boiling houses. Others worked only small quantities of sugar and only the most prosperous employed four to five workers and several servants. Nevertheless, according to the calculations of Thijs, they succeeded in refining more than a third of the 15,200 chests imported to Antwerp in 1560.

The refinery that was constructed on the *Korte Raapstraat* around 1545–48 by the merchant from Lucca, Jan Balbani, and his associates Vincent and Baltasar Guinisy, who employed several dozen workers, was so large that other refiners feared that it would lead to monopolization in Antwerp.<sup>122</sup> In 1550 their *suyckerhuis* would be sold to Jean-Charles de Affaitadi. Although the other *suyckerbakkers* or *banketbakkers* consisted of many modest artisans, some middle-class workers made a fortune; in 1658 the brothers Karel and Willem van den Eynde left a legacy of at least 30,000 guilders to the almoners of the city.<sup>123</sup>

This dominant position of the Antwerp refineries would obviously suffer from the closing of the Scheldt in 1585, as the Antwerp sugar market itself did, and would be damaged by the departure of several refiners. However, these dramatic events must not be considered as the sole determining factors in the diffusion of refining throughout northern Europe. Although the secrets and techniques of refining took their time to become familiar in western Europe, sugar gradually became a commodity almost as essential as salt, cheese, and grains, and every city of a certain size had to provide for its supply through its own merchants and sugar refiners, very similar to how breweries operated. Even without the political-religious crises of 1567–85, the Antwerp refining industry would have had to let go of its ascendancy and see its exclusive or predominant position break up and expand toward the great cities of consumption in northern Europe. Wage costs, the more capitalist organization of work, and the technological specialization of the refinery could hardly slow down or limit this proliferation of sugar refining. Only the volume and weight of these thousands of chests of sugar and the

difficulties of conservation and storing called for rapid processing and distribution. Quality was a relative term for consumers who were still uninformed and relatively easy to please, and less fine sugars, such as brown sugars and molasses, were disposed of more easily or often underwent a second transformation.

On the other hand, after 1585 Antwerp recovered a part of its refining capacity corresponding to the reestablishment of both its sugar market and local and regional consumption. The city even reexported part of this refined sugar, due to its persisting reputation as a specialized refiner. According to the assertions of the *cahier d'apprentissage* (apprenticeship notebook) of the Van Colen-De Groot in 1643, Antwerp's refineries produced a refined-sugar of a higher quality than their competitors in Amsterdam and Hamburg, who used saltier water.<sup>124</sup> This qualitative specialization corresponded somewhat to the renewed manufacturing activity through the seventeenth century, particularly in luxury items such as silk, furnishings, musical instruments, painting, and printing, which produced a great purchasing power and stimulated the consumption of sweets. In 1676, the city still had approximately sixteen refineries, thanks to its exclusive rights to the market in the southern Low Countries and a considerable mass consumption. Recall the aforementioned protest of the *pepercoeckbackers*, who made gingerbread as a protest against a new tax on syrups from Motril and Málaga, under the pretext of a general inflation of prices that affected modest people's consumption habits.<sup>125</sup>

The dispersion of sugar refining began well before 1585. Aside from Antwerp, one would expect that refining would develop earlier in the large French ports, given their direct, early relations with Brazil. In 1546, according to a letter from Luis de Góis to João III, seven to eight French ships annually frequented the Brazilian coast between Cabo Frio and Rio de Janeiro. In fact, in the middle of the seventeenth century Jean de Léry was astonished that "we French had not yet, when I was there, the appropriate people or the necessary instruments to export sugar (as the Portuguese had in the areas they possessed). We only infused water with sugar to sweeten it, or else those who desired could suck and eat the [cane] pulp."<sup>126</sup> They knew at most how to extract a sort of liqueur from old, moldy canes. It is easy to comprehend why in 1556 a Venetian settled in Antwerp proposed to go to France to make sugar.<sup>127</sup> Already in 1548, in Rouen, a Spanish refiner volunteered to teach this art to an apothecary, and later on similar efforts were made (such as that of the Hollé-Seigneur company in 1570) before successful refineries started operating in 1611.<sup>128</sup> In La Rochelle the refinery began at the end of the sixteenth century, after the arrival of Flemish refiners such as Joseph Baertz in 1598 and Gillis Tsermartyns de Malines in 1599; however, another Flemish refiner, Brisson, went bankrupt there in 1605.<sup>129</sup>

Two attempts to establish a refinery in Marseilles failed.<sup>130</sup> The first, in 1547, was a proposal by the Italian Jean-Baptiste des Aspectat, who claimed to have experience in the industry in Antwerp, and who could probably be identified with the aforementioned Jean-Baptiste de Affaitadi. In 1574 a second refinery was set up by François de Corbie and Pierre Hostagier, businessmen from Marseilles, but their company lasted only for a few months and made a modest number of sugarloaves.

Among the plausible explanations for the absence of refineries, there is no need to invoke the infamous "French economic backwardness," particularly in colonial matters. In fact, one could argue that the French already had sufficient maritime enterprises with their cod and other fishing industries, and especially with trade in Brazilian wood. The ships they outfitted in La Rochelle in 1561 came back loaded with Brazilian wood rather than sugar.<sup>131</sup> Moreover, as a result of the increasingly fierce Portuguese defense of their monopoly from the 1540s on, the French did not succeed in securing a regular supply through the possession of plantations and mills. On the other hand, for an internal market as vast as that of France, with a smaller population density and a lower degree of urbanization, and for a market that could develop the very broad variety of its immense natural resources, refined sugar remained too strange and too expensive in comparison with fruit syrups and honey, which were produced there in greater abundance, especially in the Midi of France. Finally, commerce presupposed exchange, and if French commercial interests wanted to sell their wines, salt, and textiles, sugar became a more suitable import product.

England also attempted to free itself from the mediation of the Antwerp market, starting in 1544, with an attempt by Sir William Chester, followed by others, all still without the ability to supplant the role of Antwerp as distributor.<sup>132</sup> Although from 1650 to 1670 the large English ports had at their disposal large-scale refiners such as the Sugar House Close in Liverpool and the East Sugar House in Glasgow, the English continued to direct a large part of their sugar from the Caribbean islands to Dutch ports.

In Germany in 1547, a refiner in Nuremberg found himself in trouble because of the debt from his expensive equipment.<sup>133</sup> The Augsburg refinery, founded in 1573 on the initiative of Konrad Rot, son-in-law of Bartholomäus Welsler, who passed as much time in Antwerp as in Venice and Lisbon, was a little more successful. Familiar with the monopolistic contracts for sugar and copper awarded by the Portuguese crown, he attempted to obtain similar exclusive rights from municipal authorities.<sup>134</sup> However, a dozen years later, a second refinery appeared in Leipzig under the control of Hieronimus Rauscher. It appeared that the great Hanseatic ports offered a better location for the develop-

ment of a powerful refinery because, after the 1590s, ships from Hamburg had engaged in the Brazil trade routes and brought back Brazilian sugar directly, while at the same time numerous New Christian and Flemish merchants established themselves in Hamburg.

If Antwerp finally ceded its monopoly in the matter of sugar refining, it was to the profit of the United Provinces, especially Amsterdam. The initiative for the installation of the first refinery in Holland is generally attributed to the brothers Pieter and Jasper Morimont, merchants from Antwerp who, after a trip to England, settled in Leyden in 1577, but it is doubtful that their refinery functioned effectively.<sup>135</sup> In any case, in 1585 the Van der Meulens, emigrants to Holland, had to request a chest of *banket* (good-quality pastries) from a *pâtissier* in Antwerp on the occasion of a marriage in Haarlem.<sup>136</sup> Shortly thereafter, the marked increase in sugar prices may have encouraged the establishment of new refineries, which permitted more substantial profits through the rapid transformation of material initially contested.

At the same time, the pirate activity of Zeeland, Dutch, and English captains against Portuguese and Spanish boats increased dangerously and inundated the sugar market of Amsterdam, although it was true that not all the cargo of stolen sugar was immediately destined for Dutch ports.<sup>137</sup> As the real ownership often belonged to *cristãos novos* settled in Amsterdam but associated with Flemish merchants in Antwerp, or settled in Brazilian or Portuguese ports, it was of importance for the pirates to avoid an easy, rapid judicial confiscation of their booty. Thus they obscured their tracks by putting large quantities up for sale in the ports of the Barbary Coast or England. There they may have had covert arrangements with insurers, whereas the Spanish authorities considered the ready surrender of Portuguese crews as treason. In February 1607, an informant notified the Spanish authorities of 800 chests sold in Barbary in May 1606 and of 4,000 chests available for purchase at Plymouth in September 1606.<sup>138</sup> These predators obviously had an interest in delivering their loot as rapidly as possible to refiners, and Amsterdam offered the greatest possibilities of camouflage, despite the respect for the law of certain groups among the merchants. Although during the 'Twelve Years' Truce sugar commerce temporarily surged back to normal levels, after the foundation of the West Indies Company in 1621 these extra-legal import deals resumed in full force. According to Johan De Laet, the company managed to confiscate, through the seizure of 547 Portuguese and Spanish boats during the first thirteen years of activity, no fewer than 40,000 chests of sugar, of which a good part was finally unloaded in the ports of Holland and Zeeland.

This was all that was necessary for sugar refining to impose itself as one of the

most dynamic sectors of industrial growth and capitalist accumulation. The first refinery in Amsterdam was reported in 1597.<sup>139</sup> From three refineries in 1605, the number increased to twenty-five in 1622, forty in 1650, and fifty or sixty in 1661. Each refinery could process nearly 1,500 chests per year, and could have stocks in reserve that were worth two tons of gold. At the time of the fire at the Nuyts refinery in 1660, the sugar burned was worth three tons of gold.

The refineries were installed in old convents and brand new buildings of five to six floors. They housed thousands of pots necessary for drying sugarloaves. The refineries stimulated the development of pottery in surrounding areas. On the other hand, industrial activity in the center of the city—with continuous smoke coming out of the numerous chimneys (the first of the truly modern type, according to Jan De Vries and Ad Van der Woude)—caused serious pollution problems, after which coal heating was prohibited in the summer.<sup>140</sup> Despite the fact that the number of workers involved was relatively modest—scarcely 1,500, or 1.5 percent of the manual workers employed by the principal Dutch industries for the period 1672–1700—municipal authorities showed themselves to be rather understanding of the refiners, indicating also their economic weight and political influence. It has been claimed that a fifth of the *waaggelden* (municipal taxes) came from sugar and that its commerce at any time maintained at least one hundred ships en route.

Among the entrepreneurs were several immigrants from Antwerp, such as Abraham and Hans Pelt, Adam and Hans Nijs, and Cornelis Nuyts. One refinery even called itself *De stad Antwerpen*, another quite simply *Suyckerbakery*, where the painter Rembrandt came to live in 1639. Of the thirty-one refineries set up before 1670, no fewer than twenty-one would maintain their name until the nineteenth century. It appears that it was only in 1655 that the first Portuguese New Christians, Abraham and Isaac de Pereira, received the authorization to set up a refinery, on the condition that they only sold wholesale.

Obviously it was important to safeguard the local trade and internal market of the United Provinces, whose population witnessed a substantial growth from 940,000 in 1500 to 1,900,000 in 1650. The ability to purchase and consume sugar, like Chinese porcelain or other luxury objects, was no longer limited to the bourgeoisie because seamen, artisans, and even workers in the United Provinces earned some of the best salaries in Europe. A majority of the production was exported, not only to the ports of the Baltic and Germany but also to France and Italy.<sup>141</sup> In 1645 the United Provinces sold to France sugar that was worth 1,885,150 livres, or 8.75 percent of the total exports to that country. The steady penetration of Dutch ships into the Mediterranean derived in large part from the success of Dutch sugar. In Tuscany, Dutch sugarloaves were preferred for

their whiter, more brilliant consistency, harder, sweeter, and silkier than Venetian sugar.<sup>142</sup>

According to the somewhat debatable hypothesis that Amsterdam had forcefully taken from Antwerp the dominant position in the refined sugar trade, its new preeminence also crumbled more rapidly. In 1700, the number of refineries diminished to thirty-five. Already within the United Provinces itself, refineries had arisen earlier in the other important cities. Thus was the case in 1627 in Middelburg with the creation of a refinery by Daniel Dierckens, who brought his experience as a refiner in Rouen.<sup>143</sup> Other refiners, nearly a dozen, established themselves in Rotterdam, Delft, and Gouda. Moreover, this internalization of refining activity occurred in the southern Low Countries and began to threaten the regional monopoly of Antwerp, after the opening of a refinery in Brussels in 1650 by two brothers from that very same city on the Scheldt.<sup>144</sup> Later in the eighteenth century, there would be more in Ypres, Ghent, Mons, and Liège.

In France, the refineries rapidly regained ground after the 1664 proclamation, by Colbert, of a new tariff that intended to attract the sugar of the French Caribbean islands to French ports and to exclude Dutch refined sugar. Duties rose from fifteen to 22.05 *livres*. Between twenty and thirty refineries were created in Rouen, Nantes, Orléans, Bordeaux, and Bayonne.<sup>145</sup> Very rapidly, the city of Nantes gained a reputation for its refined Antillean sugar, and its production increased from 5,400 tons in 1674 to 9,300 tons in 1683. None of this prevented Dutch sugar from entering as contraband. In turn, Sweden and Denmark similarly enacted protectionist measures against Dutch imports.

In Italy, this Dutch explosion rapidly reached its limits. According to the Van Colen-De Groot's *cahier d'apprentissage*, refined sugar exports were forcefully limited to Messina, Naples, and Genoa, as Venice and Livorno had at their disposal their own refineries.<sup>146</sup> The latter city saw a rapid expansion from 1620, with the influx of Flemish and Portuguese Jewish merchants, and thus became a Mediterranean center for all kinds of legal and illegal business revolving around Brazilian sugar, often purchased from Algerian corsairs. Moreover, its first refinery was the work of a Dutchman, Bernard Jansz Van Ens, a merchant and refiner from Hoorn.<sup>147</sup> In 1624, together with his neighbor Theodoor Reiniers, he obtained from the grand duke of Tuscany a monopoly for ten years. Upon his death in 1626, the business passed into the hands of two other Flemish businessmen, Daniel Bevers and Paris Gautier. Nicolas Du Gardin, a large-scale merchant from Amsterdam deeply involved with the West Indies Company, functioned as the source of financing. When, at the beginning of 1630, business began to decline, it appeared that the plague was not the sole cause; confectioners refined their

own sugar and competed with refiners. As for Venice, it defended its regional monopoly against the creation of refineries in its hinterland of Veneto.<sup>148</sup>

Clearly, sugar trade and refining developed much earlier and had an economic and cultural importance that was much greater than is generally admitted in the majority of works that synthesize the European economy during the period 1500–1650. Too often sugar is ranked behind the other colonial commodities, especially spices. However, among the “rich trades,” it was the only one to have continued and expanded so remarkably, successively enriching the various European economies, from Italy and the Iberian Peninsula to Flanders, from the United Provinces to France and England. On these grounds, the sugar economy would certainly merit more detailed, targeted research, as much on its place in creating commercial fortunes as in industrial investments. Authors such as Jan De Vries and Ad Van der Woude have somewhat underestimated the importance of sugar as the engine of economic growth, sugar refining in relation to the other *trafieken*, or processing industries, of raw materials such as tobacco. Although the processing of tobacco may have employed more workers, sugar refineries not only generated employment in other industries (pottery, ceramics, and silversmiths) but also transformed the work of *pâtissiers*, confectioners, and women. This applies not only to the so-called “first modern economy” of the United Provinces but also to the purportedly more traditional economies of Italy, the Iberian Peninsula, the Spanish Netherlands, and France.

In addition, sugar encourages the questioning of the negative relationship between high prices and mass consumption and the verification of a hypothesis that would, rather, posit an increase in consumption preceding the depression of prices since the middle of the seventeenth century. There are numerous indications that the prestige of sugar in European society from 1500 to 1650, characterized by a marked urbanization and modernization, was such that it took on symbolic value of social integration and promotion, and that its high price incited consumption, rather than abstention, among the middle or lower urban classes. Like drugs today in poor neighborhoods, the high cost of sugar was not prohibitive, and many by-products such as syrup and molasses were cheaper. One should not forget that sugar once figured among the drugs of the “Orient.”

#### NOTES

1. Giuseppe Bertini, *Le nozze di Alessandro Farnese, feste alle corti di Lisbona e Bruxelles* (Milan: Skira, 1997); A. Castan, *Les noces d'Alexandre Farnèse et de Marie de Portugal, narration faite au cardinal de Granvelle par un cousin germain Pierre Bordey* (Brussels: Hayez, 1888). With warm thanks to my colleagues Giuseppe Bertini, who brought this text to my

attention, and to Bart De Prins, who helped me with the revision of this essay. On sugar banquets, see also Roy Strong, *Feast: A History of Grand Eating* (London: Jonathan Cape, 2002), 194–95, 198–201; Krista De Jonge, “Rencontres portugaises, L’art de la fête au Portugal et aux Pays-Bas méridionaux au XVIe et au début du XVIIe siècle,” in *Portugal et Flandre, Visions de l’Europe*, exhibition catalog (Brussels: Musées royaux des Beaux-Arts de Belgique, Europalia Portugal, 1991), 84–101; and Ghislaine De Boom, *Archiduchesse Eléonore (1498–1558), Reine de France—Sœur de Charles Quint* (Brussels: Le Cri, 2003), 147. See also Juan Christóval Calvete de Estrella, *El felicíssimo viaje del muy alto y muy poderoso Príncipe don Philippe*, ed. Paloma Cuenca (Madrid: Sociedad Estatal para la Conmemoración de los Centenarios de Felipe II y Carlos V, 2001), 352–53; and Peter Brears, *All the King’s Cooks: The Tudor Kitchens of King Henry VIII at Hampton Court Palace* (London: Souvenir Press, 1999), 64–85.

2. Francesco De’ Marchi, *Narratione particolare delle gran Feste, e Trionfi fatti in Portogallo et in Fiandra* (Bologna, 1566). On the soaring pieces of sugar, see F. Yates, “L’entrata di Carlo IX e della sua regina in Parigi nel 1571,” in *Astrea, L’idea di Impero nel Cinquecento* (Turin: Einaudi, 1975), 173; and K. J. Watson, “Sugar Sculpture for Grand Ducal Weddings from the Giambologna Workshop,” *The Connoisseur* 199, no. 799 (1978). After the second half of the fifteenth century, the *colazioni di zucchero* were already highly appreciated at the Court of the Estes in Ferrara; see T. Truohy, *Herculean Ferrara, Ercole d’Este, 1471–1501, and the Invention of a Ducal Capital* (Cambridge: Cambridge University Press, 1996), 172–76.

3. Sidney W. Mintz, *Sweetness and Power* (New York: Viking, 1985); Jean Meyer, *Les Européens et les autres* (Paris: Armand Colin, 1975), 217, proposes the years 1730–40 as the period in which sugar became part of the daily diet, and ceased to be a medicine that was given to desperate patients at the hospital of Saint-Yves in Rennes, as well as in Parisian hospitals. See also H. J. Teuteberg, “Der Beitrag des Rübenzuckers zur ‘Ernährungsrevolution’ des 19. Jahrhunderts,” in *Unsere tägliche Kost, Geschichte und Regionale Prägung*, ed. H. J. Teuteberg and G. Wiegmann (Munster: Coppenrath, 1986); and Martin Bruegel, “A Bourgeois Good? Sugar, Norms of Consumption and the Labouring Classes in Nineteenth-Century France,” in *Food, Drink and Identity, Cooking, Eating and Drinking in Europe Since the Middle Ages*, ed. Peter Scholliers (Oxford and New York: Berg, 2001).

4. Olivier de Serres, *Le théâtre d’agriculture et mesnage des champs* (Arles: Actes Sud, 1996). One of the pioneering books on sugar in Portugal is Emanuel Ribeiro, *O doce nunca amargou . . . , doçaria portuguesa, história, decoração, receituário* (Sintra: Colares, 1997), with the first edition appearing in 1928. On the papers cut from lace, the *rosas*, and *periquitos*, see Eurico Gama, “A Arte do Papel Recortado,” *Revista de Etnografia* 7, no. 2 (1966); and *O doce nunca amargou*, exhibition catalog (Lisbon: Museu de Arte Popular, 1977). On women and sweets in Spain, see María Angeles, “Los recetarios de mujeres y para mujeres, sobre la conservación y transmisión de los saberes domésticos en la época moderna,” *Cuadernos de Historia Moderna* 19 (1997).

5. Lucie Bolens, *La cuisine andalouse, un art de vivre, Xie–XIIIe siècle* (Paris: Albin Michel, 1999); Manuel Urban Pérez Ortega, *Viaje por la mesa del alto Guadalquivir* (Jaén: Diputación Provincial de Jaén, 1993). On the use of honey and sugar for the preservation of food, see Lucie Bolens, “Sciences Humaines et Histoire d’alimentation: Conservation des

aliments et associations des saveurs culturelles (de l’Andalousie à la Suisse Romande),” in *Alimentazione e nutrizione, secc. XII–XVIII* (Prato: Instituto Datini, 1997).

6. Maria de Lourdes Modesto, Afonso Praça, and Nuno Calvet, *Festas e comeres do povo português*, 2 vols. (Lisbon: Verbo, 1999); Alfredo Saramago and António Monteiro, *Cozinha transmontana, Enquadramento histórico e receitas* (Lisbon: Assírio & Alvim, 1999).

7. Jean-Louis Flandrin and Philip and Mary Hyman, eds., *Le cuisinier français* (Paris: Bibliothèque Bleue, Montalba, 1983). Note, however, that *confites larges de cidra* and the *calbazate de Valencia* are found in displays during commencement ceremonies at the University of Salamanca, according to a 1619 document. Luis Enrique Rodríguez-San Pedro Bezares, *La Universidad Salmantina del Barroco, período 1598–1625*, 3 vols. (Salamanca, 1986), 910–12; and María de los Angeles Pérez Samper, *La alimentación en la España del Siglo de Oro, Domingo Hernández de Maceras “Libro del Arte de Cocina”* (Huesca: La Val de Onsera, 1998), 123.

8. Alfredo Saramago, *Doçaria conventual do Alentejo, as receitas e seu enquadramento histórico* (Sintra: Colares, 1997); Alfredo Saramago, *Doçaria conventual do norte, história e alquimia da farinha* (Sintra: Colares, 1997); Alfredo Saramago, *A tradição conventual na doçaria de Lisboa* (Sintra: Colares, 1998); Alfredo Saramago and Maneul Fialho, *Doçaria dos conventos de Portugal* (Lisbon: Assírio & Alvim, 1997); Maria Isabel de Vasconcelos Cabral, *O livro das receitas da última freira de Odivelas* (Lisbon: Verbo, 2000). On Spanish convents and confectioneries, see Luis San Valentín, *La cocina de las monjas* (Madrid: Alianza, 1989); and María Luisa Fraga Ibarne, *Gula de dulces de los conventos sevillanos de clausura* (Córdoba, 1988).

9. Frei Isidoro Barreira, *Tractado das significações das plantas, flores e fructas* (Lisbon, 1622); Sórora Maria do Céu, *Significações das frutas moralizadas em estylo singello* (Lisbon, 1735).

10. Carlos Zolla, *Elogio del dulce, ensayo sobre la dulcería mexicana* (Mexico City: Fondo de Cultura Económica, 1988). Un *chrisme* is a Christ symbol, formed by the Greek letters X (*chi*) and P (*rho*).

11. On Lisbon during this period, see in particular the appraisals of two Flemish visitors, the pilgrim Jan Taccoen and the humanist Nicolas Clenardus. Eddy Stols, “A repercussão das viagens e das conquistas portuguesas nas Índias orientais na vida cultural da Flandres no século XVI,” in *Vasco da Gama, Homens, Viagens e Culturas*, Actas do Congresso Internacional, Lisboa, 4–7 November 1998, ed. Joaquim Romero Magalhães, 2 vols. (Lisbon: Comissão Nacional para as Comemorações dos Descobrimientos Portugueses, 2001), 2:11–38. It is astonishing that Joaquim Romero Magalhães, who specializes in the economic history of the sixteenth and seventeenth centuries, devotes little attention to the refining and working of sugar in his chapters in the *História de Portugal*, ed. José Mattoso, 3 vols. (Lisbon, 1993), vol. 3.

12. João Brandão, *Grandeza e abastança de Lisboa em 1552*, ed. José de Felicidade Alves (Lisbon: Livros Horizonte, 1990), 32–33, 59–60, 72, 210–14. In his *Sumário* of Lisbon in 1551, Cristóvão Rodrigues de Oliveira offers slightly less significant figures, with only eight sugar-masters, twenty-three *alfeloeiros*, thirteen candymakers, forty-three pastymakers, but also sixty-six women who made sugared fruits, twenty-three women who made *alfeloas*, and thirty

jam makers. Cristóvão Rodrigues de Oliveira, *Lisboa em 1551, summário em que brevemente se contém algumas coisas assim eclesiásticas como seculares que há na cidade de Lisboa* (1551), ed. José de Felicidade Alves (Lisbon: Livros Horizonte, 1987), 97–99. On the economic wealth of several confectioners in Lisbon in 1565, see António Borges Coelho, *Quadros para uma viagem a Portugal no século XVI* (Lisbon: Editorial Caminho, 1986), 63, 126, 358.

13. Damião de Góis, *Descrição da cidade de Lisboa*, ed. Raúl Machado (1554), 59.

14. D. De Sande, *Diálogo sobre a missão dos embaixadores japoneses à curia romana*, ed. A. da Costa Ramalho (Macao: Fundação Oriente, 1997).

15. Artur Teodoro de Matos, “‘Quem vai ao mar em terra se avia,’ preparativos e recomendações aos passageiros da carreira da Índia no século XVII,” in *A Carreira da Índia e as rotas dos estreitos*, ed. Artur Teodoro de Matos and Luís Filipe F. Reis Thomaz (Angra do Heroísmo: Actas do VIII Seminário Internacional de História Indo-Portuguesa, 1998), 385–86. It is probable that the Portuguese Indies were also supplied by way of China, where sugar production had witnessed a dramatic expansion. See Sucheta Mazumdar, *Sugar and Society in China: Peasants, Technology, and the World Market* (Cambridge and London: Harvard University Press, 1998).

16. Giacinto Manupella, ed., *Libro de cozinha da infanta D. Maria* (Lisbon: Imprensa Nacional, Casa da Moeda, 1987); E. Newman, *A Critical Edition of an Early Portuguese Cook Book* (Chapel Hill: University of North Carolina Press, 1964).

17. Gerónimo Gascón de Torquemada, *Gaçeta y nuevas de la corte de España desde el año 1600 en adelante*, ed. Alfonso de Ceballos-Escalera y Gila (Madrid: Real Academia Matritense de Heráldica y Genealogía, 1991), 70.

18. María de los Angeles Pérez Samper, *La alimentación en la España*, 26–29.

19. José Martínez Millán, ed., *La corte de Carlos V*, 4 vols. (Madrid: Sociedad Estatal para la Conmemoración de los Centenarios de Felipe II y Carlos V, 2000), 2:132, 4:233.

20. José Luis Gonzalo Sánchez-Molero, *El aprendizaje cortesano de Felipe II (1527–1546), La formación de un príncipe del Renacimiento* (Madrid: Sociedad Estatal para la Conmemoración de los Centenarios de Felipe II y Carlos V, 1999), 117.

21. María del Carmen Simón Palmer, *Libros antiguos de cultura alimentaria (Siglo XV–1900)* (Córdoba: Imprenta Provincial, 1994); Manuel Martínez Llopis, *La dulcería española, Recetarios histórico y popular* (Madrid: Alianza, 1999).

22. Luis Lobera de Avila, *El Banquete de nobles caballeros* (San Sebastián: R & B Ediciones, 1996).

23. Manuela Rêgo, ed., *Livros portugueses de cozinha* (Lisbon: Biblioteca Nacional, 1998).

24. Guy Cabourdin, *La vie quotidienne en Lorraine aux XVIIe et XVIIIe siècles* (Paris: Hachette, 1985).

25. Gérard Oberlé, *Les Fastes de Bacchus et de comus ou histoire du boire et du manger en Europe, de l'Antiquité à nos jours, à travers les livres* (Paris: Belfond, 1989).

26. Lancelot de Casteau, *Ouverture de cuisine* (Liège, 1604); reedition by Léo Moulin et al. (Antwerp and Brussels: De Schutter, 1983).

27. Jean-Louis Flandrin and Philip and Mary Hyman, eds., *Le cuisinier français*; Françoise Sabban and Silvano Serventi, *La gastronomie au grand siècle, 100 recettes de France et d'Italie* (Paris: Stock, 1998).

28. Alberto Capatti and Massimo Montanari, *La cucina italiana: Storia di una cultura* (Rome and Bari: Giulio Laterza, 1999); Lord Westbury, *Handlist of Italian Cooking Books* (Firenze, 1963); O. Bagnasco, ed., *Catalogo del fondo italiano e latino delle opere di gastronomia, sec. XIV–XIX* (Sorengo, 1994), 3 vols.; Giampiero Negri et al., *Coquatur ponendo, cultura della cucine e della tavola in Europa tra medioevo ed età moderna* (Prato: Francesco Datini, 1996).

29. Cristoforo da Messisburgo, *Banchetti, composizioni di vivande e apparecchio generale*, ed. F. Bandini (Vicenza, 1992), 103–4, in José Martínez Millán, *La corte de Carlos V*, 4:11.

30. Jean Boutier, Alain Dwerpe, and Daniel Nordman, *Un tour de France royal, le voyage de Charles IX (1564–1566)* (Paris: Aubier, 1984), 159–60.

31. Marie-Laure and Jacques Verroust, *Friandises d'hier et d'aujourd'hui* (Toulouse: Berger-Levrault, 1979); A. Perrier-Robert, *Bonbons et friandises* (Paris: Hatier, 1995); Catherine Amor, *Les bonbons* (Paris: Éditions du Chêne, 1998). On similar recipes for mixture of medical plants and sugar and actual confections in France and Belgium, see *Petite anthologie de la réglisse* (Barbentane: Éditions Équinoxe, 2002); and Bernard Dubrulle, *Petit futé, biscuits, confiseries de nos régions* (Brussels: Neocity, 2002).

32. In his otherwise innovative exploration of Flemish convents, Paul Vandenbroeck, ed., *Le jardin clos de l'âme*, exhibition catalog (Brussels, 1994), has ignored this sweeter aspect of monastic life in favor of suffering and the macabre.

33. *Het leven van de seer Edele Doorluchtigste H. Begga, Hertoginne van Brabant, stichteresse der Begijnen met een cort gegrip van de levens der salige, godvruchtighe en Lofweerdighe Begijntjens der vermaerde en hoogh-gepresen Begijnhoven, bij een vergaert door eenen onbekenden dienaer Gods* (Antwerp, 1711), 115.

34. W. A. Olyslager, *750 Jaar begijnen te Antwerpen* (Kapellen: Pelckmans, 1990); Johan Verberckmoes, *Laughter, Jestbooks, and Society in the Spanish Netherlands* (New York: Macmillan, 1999), 157.

35. Marcus Van Vaernewijck, *Van die beroerlicke tijden in die Nederlanden en voornamelyk in Ghendt (1566–1568)*, ed. Ferdinand Vanderhaeghe (Gand, 1872–81).

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37. *Antwerps Archievenblad*, 23:241, 249, 24:170, 194; R. Van Roosbroeck, ed., *De kroniek van Godevaert Van Haecht over de troebelen van 1565 tot 1574 te Antwerpen en elders*, 2 vols. (Antwerp, 1929).

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41. Walter L. Braekman, ed., *Een Antwerps kookboek voor "Leckertonghen"* (Antwerp: Municipal Library, 1995).
42. Lancelot du Casteau, *Ouverture de cuisine*, 24, 35.
43. R. Ródenas Vilar, *Vida cotidiana y negocio en la Segovia del siglo de oro. El mercader Juan de Cuéllar* (Salamanca: Junta de Castilla y León, 1990), 166.
44. On the forms of pastry, see Friedrich August Zuckerbäcker, *Die europäische Conditorei in ihren ganzen umfang* (Heilbronn, 1837); and Georg Christian Neunhöfer, *Das neueste der Conditoreikunst, in getreuen, mit illuminierten abbildungen von tafel und laden confekturen*, 2 vols. (Stuttgart, 1844–48). See also *El arte efimero en el mundo hispánico* (Mexico City: Instituto de Investigaciones Estéticas, UNAM, 1983); and Roy Strong, *Art and Power: Renaissance Festivals, 1450–1650* (Woolbridge: Boydell Press, 1995).
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67. Maguelonne Toussaint-Samat, *Histoire naturelle & morale de la nourriture* (Paris: Bordas, 1987), 418.

68. Guy Cabourdin, *La vie quotidienne en Lorraine, 220–22*; Jean Boutier et al., *Un tour de France royal*.

69. Wilfrid Brulez, *De firma della Faille en de internationale handel van Vlaamse firma's in de 16e eeuw* (Brussels: Koninklijke Vlaamse Academie van België, 1959), 4, 204.

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shaker preserved in Belgium at the Sterckxhof Museum of Antwerp dates, however, from approximately 1665. Anne D. Janssens and Arnould de Charette, *L'orfèvrerie et le sucre de XVIIe au XXe siècle en France et en Belgique* (1993); *Le sucre luxe d'autrefois*; Johanna Maria van Winter, "Keramiek in Nederlandse kookboeken van de vijftiende tot en met de achttiende eeuw," *Vormen uit vuur 148* (1993); J. Witteveen, "Of Sugar and Porcelain: Table Decoration in the Netherlands in the 18th Century," in *Feasting and Fasting* (Proceedings of the Oxford Symposium on Food and Cooking, 1990).

72. Robert Vande Weghe, *Geschiedenis van de Antwerpse straatnamen* (Antwerp: Mercurius, 1977), 460–61.

73. Ribeiro, *O doce nunca amargou*, 40.

74. Matilde Santamaría Arnal, "La alimentación," in *La vida cotidiana en la España de Velázquez*, ed. José Alcalá-Zamora y Queipo de Llano (Madrid, 1994).

75. Schama, *Embarrassment of Riches*, 164–65; Joziën Jobse-Van Putten, *Eenvoudig maar voedzaam*, 173.

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78. Vitorino Magalhães Godinho, *Os descobrimentos e a economia mundial* (Lisbon: Editorial Presença, 1983), 4:679; A. A. Marques de Almeida, *Capitais e capitalistas no comércio da especiaria, o eixo Lisboa-Antuérpia (1501–1549)* (Lisbon: Edições Cosmos, 1993).

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80. Eddy Stols, *De Spaanse Brabanders of de handelsbetrekkingen van de zuidelijke Nederlanden met de Iberische Wereld, 1598–1648* (Brussels: Koninklijke Vlaamse Academie van België, 1971); Roland Baetens, *De Nazomer van Antwerpens Welvaart, de diaspora en het handelshuis de groote tijdens de eerste helft der 17de eeuw*, 2 vols. (Brussels: Gemeentekrediet, 1976); Hans Pohl, *Die Portugiesen in Antwerpen (1567–1648), zur geschichte einer Minderheit* (Wiesbaden: Franz Steiner Verlag, 1977).

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87. Fernand Donnet, *Histoire de l'établissement des Anversois aux Canaries au XVIe siècle* (Antwerp: De Backer, 1985).

88. Eddy Stols, "Les Canaries et l'expansion coloniale des Pays-Bas méridionaux et de la Belgique vers 1900," in *IV Colóquio de historia canario-americana* (1980), ed. Francisco Morales Padrón (Grand Canary, 1982), 2:903–33; Manuela Marrero Rodríguez, "Mercaderes flamencos en Tenerife durante la primera mitad del siglo XVI," in *IV Colóquio de historia canario-americana* (1980), ed. Francisco Morales Padrón (Grand Canary, 1982), 1:599–614; C. Negrín Delgado, "Jácome de Monteverde y las ermitas de su hacienda de Tazacorte en La Palma," *Anuario de Estudios Atlánticos* 34 (1988); Ana Viña Brito, "El azúcar canario y la cultura flamenca. Un viaje de ida y vuelta," in *España y las 17 Provincias de los Países Bajos, Una revisión historiográfica (XVI–XVII)*, ed. Ana Crespo Solana and Manuel Herrero Sánchez (Córdoba: Universidad de Córdoba, 2002), 2:615–37.

89. On 26 November 1582, Carlos de Santa Cruz insured for no less than 1,141 livres a cargo of more than 1,200 arrobas of various sugars from various ingenios in Tenerife (Orotava, Señor Capitán, Maria de las Cuevas and Diego de Mesa) and Grand Canary (Pedro de Soso) on the *Bon espoir*, Captain Pierre Pontu, departing from Croset for Middelburg, and, if possible, on to Antwerp. See the Archives Générales du Royaume, Brussels, Famille Comte Mercy-Argenteau, II, 14, 8 October 1588. Thus at the height of the crisis following the fall of Antwerp, Paul van Dale sold to the merchants Gillis Houtappel, Nicolas Ripet, and others the entire output of his ingenios in Tazacorte and Argual for the period November 1588–September 1589, for no less than 72,000 reales. Municipales Archives, Antwerp, Notaris L. Van Rockergem, 8-X-1588.

90. Jan Denucé, *L'Afrique au XVIe siècle et le commerce Anversois* (Antwerp: De Sikkell, 1937).

91. Joseph Billioud, *Histoire du commerce de Marseille*, ed. Gaston Rambert, 4 vols. (Paris: Plon, 1949–56), 3:284.

92. Enrique Otte, "Die Welser in Santo Domingo," in *Festschrift für Johannes Vincke* (Madrid, 1962–63).

93. Baetens, *De nazomer van Antwerpens welvaart*, 1:155; Pohl, *Die Portugiesen in Antwerpen*, 155–59.

94. Eddy Stols and Eduardo Dargent-Chamot, "Aventuriers des Pays-Bas en Amérique hispano-portugaise," in *Flandre et Amérique latine, 500 ans de confrontation et métissage*, ed.

Eddy Stols and Rudi Bleys (Antwerp: Fonds Mercator, 1993), 62–66; Eddy Stols, "Convênças luso-flamengas na rota do açúcar," *Ler História* 32 (1997): 119–45; Eddy Stols, "Humanistas y jesuitas en los negocios brasileños de los Schetz, grandes negociantes de Amberes y banqueros de Carlos V," in *Carlos V y la quiebra del humanismo político en Europa (1530–1558)*, ed. José Martínez Millán, 4 vols. (Madrid: Sociedad Estatal para la Conmemoración de los Centenarios de Felipe II y Carlos V, 2001), 4:29–47.

95. Brulez, *De firma della Faille*, 139–44.

96. Billioud, *Histoire du commerce de Marseille*, 4:147. On Andalusian sugar, see esp. J. Pérez Vidal, *La cultura de la caña de azúcar en el Levante español* (Madrid: Instituto Miguel de Cervantes, 1973); Margarita M. Birriel Salcedo, "La producción azucarera de la Andalucía Mediterránea, 1500–1750," in *Producción y comercio del azúcar de caña en época preindustrial: Actas del tercer seminario internacional, Motril, 23–27 Septiembre 1991* (Granada: Diputación Provincial, 1993); and Purificación Ruiz García and Antonio Parejo, *La axarquía, tierra de azúcar, cincuenta y dos documentos históricos* (Vélez and Málaga: Asukaría Mediterránea, 2000).

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98. António Borges Coelho, *Quadros*, 95, 268.

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100. Mathieu Lobelius, *Nova stirpium adversaria* (Antwerp, 1576), f. 19–20.

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108. Municipal Archives, Antwerp, Insolvente Boedelskamer, 2126.

109. Emile Coornaert, *Les Français et le commerce international à Anvers*, 2 vols. (Paris: SEVPEN, 1962).

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111. Henri Lapeyre, *Une famille de marchands: Les Ruiz* (Paris: SEVPEN, 1955), 589; Jacques Bottin, "La redistribution des produits américains par les réseaux marchands rouennais (1550–1620)," in *Dans le sillage de Colomb*, ed. Jean-Pierre Sanchez (Rennes: Presses Universitaires de Rennes, 1995).
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