

I do not know if coffee and sugar are essential to the happiness of Europe, but I know well that these two products have accounted for the unhappiness of two great regions of the world: America has been depopulated so as to have land on which to plant them; Africa has been depopulated so as to have the people to cultivate them.

—from Volume 1 of J. H. Bernardin de Saint Pierre's  
*Voyage to Isle de France, Isle de Bourbon,  
The Cape of Good Hope... With New Observations on Nature  
and Mankind by an Officer of the King* (1773)



This engraving by William Blake, *Europe Supported by Africa and America*, was commissioned by J. G. Stedman for the *finis* page of his book *Narrative of a five years' expedition, against the Revolted Negroes of Surinam* (London: J. Johnson & J. Edwards, 1796). (Photo courtesy of Richard and Sally Price)

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SIDNEY W. MINTZ

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# SWEETNESS AND POWER

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THE PLACE OF SUGAR  
IN MODERN HISTORY

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ELISABETH SIFTON BOOKS  
VIKING

## 3 • Consumption

For people living today in societies like Britain or the United States, sugar is so familiar, so common, and so ubiquitous that it is difficult to imagine a world without it. People now in their forties or older may recall the sugar rationing of World War II, of course, and those who have spent time in poorer societies may have noticed that some peoples seem to experience even greater pleasure than we when consuming sugar.<sup>1</sup> So plentiful and important is this substance in our lives today that it has become notorious: campaigns are waged against it, eminent nutritionists attack and defend it, and battles for and against its consumption are waged in the daily press and in Congress. Whether the discussions concern baby food, school lunches, breakfast cereals, nutrition, or obesity, sugar figures in the argument. If we choose not to eat sugar, it takes both vigilance and effort, for modern societies are overflowing with it.

Only a few centuries ago it would have been equally difficult to imagine a world so rich in sugar. One writer tells us that when the Venerable Bede died in 735 A.D., he bequeathed his little treasure of spices, including sugar, to his brethren.<sup>2</sup> If true, this is a remarkable reference, for there follow many centuries during which sugar in the British Isles remained unmentioned and, one supposes, virtually unknown.

The presence of sugar was first acknowledged in England in the twelfth century. What was most striking about the English diet at that time was its complete ordinariness and meagerness. Then and

for long thereafter, most Europeans produced their own food locally, as best they could. Most basic foods did not move far from where they were produced; it was mainly rare and precious substances, principally consumed by the more privileged groups, that were carried long distances.<sup>3</sup> "Bread made in the home almost everywhere in the country," write Drummond and Wilbraham of England in the thirteenth century, was "indeed the staff of life in those days."<sup>4</sup> Wheat was particularly important in England, but in the north of the country other grains were grown and eaten more: rye, buckwheat, oats, barley, and important pulses and legumes such as lentils and many kinds of beans. In poor areas throughout Europe, these carbohydrates were likely to be primary, since they were more plentiful and cheaper than wheat.

All other foods, including meats, dairy products, vegetables, and fruits, were subsidiary to grains. It was poverty of resources, not plenty, that made them accessories to the starch-based diet. "Judging from the controls and regulations that all authorities throughout Western Europe set to cover virtually every transaction, grain was the core of the diet of the poor," one scholar has written.<sup>5</sup> When the wheat harvest failed, people in southern England switched to rye, oats, or barley; in the north, these were already the mainstay. "They stretched their bread grain with peas and beans and apparently consumed some milk, cheese, and butter in normal years," but in the worst years—such as the so-called dear years of 1595–97—even dairy products were priced out of the reach of the poorest people.<sup>6</sup> In times of want, said William Harrison, writing in the late sixteenth century, the poor "shifted from wheat to Horse corne, beanes, peason, otes, tare and lintels."<sup>7</sup> Such people probably forwent their skimpy consumption of dairy products and the like, if it meant they could obtain more of the bulkier legumes. Often enough, it seems, many Englishmen had not enough of anything to eat; but they ate as much bread as they could, when harvests permitted.<sup>8</sup> One can assume a meager supply of protein from domesticated fowl and animals, probably eked out with wild birds, hares, and fish, both fresh and preserved, and some vegetables and fruit.

Working people, however, greatly feared the effects of fresh fruit, supposedly dangerous when eaten in quantity. The resistance to

fresh fruit harks back to Galenic biases against it,<sup>9</sup> and infantile diarrhea, frequent in the summertime, which was a great killer as late as the seventeenth century, doubtless reinforced the fear of fresh fruit. Sir Hugh Platt (who reappears later in these pages as a gourmet and *bon vivant*) had grim advice for his countrymen on the occasion of the 1596 famine: when flour supplies were short, he advised the poor to “boil your beanes, pease, beechmast, &c. in faire water . . . and the second or third boyling, you shall finde a strange alteration in taste, for the water hath sucked out & imbibed the greatest part of their ranknesse, then must you drie them . . . and make bread thereof.”<sup>10</sup> Even when cultivated flour substitutes were exhausted, Platt writes consolingly, the poor could turn to “excellent bread of the rootes of Aaron called Cuckow pot, or starch rootes” (the cuckoopint, *Arum maculatum*).<sup>11</sup> If the picture is not one of chronic or countrywide need, it is also certainly not one of general dietary adequacy.

Between the onset of the bubonic plague in 1347–48 and the early fifteenth century, the population of Europe decreased sharply and did not begin to climb again until after about 1450; the plague continued to disrupt economic life until the mid-seventeenth century. These were centuries when European agriculture wanted for labor, but even when population increased again, English agriculture remained inadequately productive. Of the production of grains for making bread, the economic historian Brian Murphy writes: “The harvest of the years 1481–82, 1502, 1520–21, 1526–29, 1531–32, 1535, 1545, 1549–51, 1555–56, 1562, 1573, 1585–86, 1594–97, 1608, 1612–13, 1621–22, 1630, and 1637, could be said to have been such that the average wage earner with a family to support can have had little left over after buying bread.”<sup>12</sup> Though they were irregularly spaced, the bad years averaged one every five during this 150-year period. Murphy believes the bad years reflect “the varying encroachment of animals on bread-grain”—which is to say, the competition between the production of wool and of grain foods, a critical economic problem in sixteenth-century England.

The seventeenth century seems to give evidence of significant change. Between 1640 and 1740, the English population rose from

about five million to slightly more than five and one-half million, a rate of growth, lower than in the preceding century, that may have reflected greater disease vulnerability brought about by bad nutrition and/or the spread of gin drinking. There were poor harvests in 1660–61, 1673–74, 1691–93, 1708–10, 1725–29, and 1739–40—a worsening to a one-bad-year-in-four ratio over eighty years. Yet, as Murphy points out, by then there seems to have been enough grain, if export figures mean anything. Between 1697 and 1740, England became a net exporter of grain, exporting more than she imported in all but two years (1728 and 1729). Yet even as grain exportation continued, “There were still plenty of people with empty stomachs, but who, even at low bread prices, lacked the money to fill them.”<sup>13</sup> Grain production might appear to have yielded a surplus, but Murphy shows that it was rather a matter of grossly inadequate income among the laboring classes.

During the centuries when sugar and other unfamiliar substances were entering into the diet of the English people, then, that diet was still meager, even inadequate, for many if not most people. It is in the light of these dietary, nutritive, and agricultural practices that sugar's place at the time can best be understood.

From the first known introduction of sugar to England until the late seventeenth century, when it became a desired good—consumed frequently by the wealthy, and soon to be afforded by many who would forgo important quantities of other foods in order to have it—we are dealing with limited agricultural production and a narrow diet. And even as consumption of sugar rose, there is no conclusive evidence that the basic diet of most people was otherwise improving. Indeed, for a long time sugar and a few other new substances were the only major additions to the English diet. Explaining this particular addition requires first some attention to the ways Englishmen learned to use sugar.

Cane sugar—sucrose—is a versatile, one might say protean, substance. During the early centuries of north European usage, however, it was not some single undifferentiated good. It was already possible to obtain sugars varying from syrupy liquid to hard crystalline solid, from dark brown (“red”) in color to bone white (as

well as many other brilliant colors), and in degree of purity from slight to nearly 100 percent. Purer sugars were prized for aesthetic reasons, among others, and reference has already been made to the preference for fine white varieties, particularly in medico-culinary usage. The purer the sugar, generally, the better it combines with most other foods, and the more easily it can be preserved. The history of sugar is marked by culturally conventionalized preferences for one or another such variety, and many different sugars evolved over time to satisfy particular preferences.

[ For our purposes here, sucrose can be described initially in terms of five principal uses or “functions”: as medicine, spice-condiment, decorative material, sweetener, and preservative. These uses are often difficult to separate from one another, however. Sugar used as a spice or condiment, for instance, differs from sugar used as a sweetener largely in terms of the quantities used, relative to other ingredients. Moreover, the different uses of sugar did not evolve in any neat sequence or progression, but overlapped and intersected; that sugar commonly serves more than one such purpose at a time is considered one of its extraordinary virtues. Only after these various uses had multiplied, had become differentiated, and were firmly embedded in modern life would it be appropriate to add to them the use of sugar as a *food*. This final change did not begin before the late eighteenth century. By that time sugar had moved beyond its traditional uses, and—in Britain, at least—was actually altering the ancient core-fringe, complex-carbohydrate-flavoring pattern of the human majority, in a revolutionary fashion. ]

[ Disentangling sugar’s various uses is nearly impossible; yet it is a worthwhile task. To some extent, one can learn in this way how the users themselves became more aware of sugar’s versatility, and how they reacted creatively to it. Most sugar uses arrived in England together with particular sugars, from regions long familiar with this rare and unusual substance. But it was inevitable that, in the hands of new users, the uses and meanings of sugar would change in some ways, becoming what they had not been before. A sketchy overview of major uses, then, plotted against a background of change, may suggest how this happened. ]



A *Negro Servant from America Cutting Sugar Cane* first appeared in Father J.-B. Labat's *Nouveau voyage aux isles d'Amérique* (1722). The artist's choice of exotic costume was a common affectation of the time. In fact, cane-cutting gangs worked in rags, under the direction of a “driver” who held a whip in his hand. The illustration from *Ten Views of Antigua*, on the following page, provides a more realistic view of field labor on a sugar plantation. (Bibliothèque Nationale, Paris)



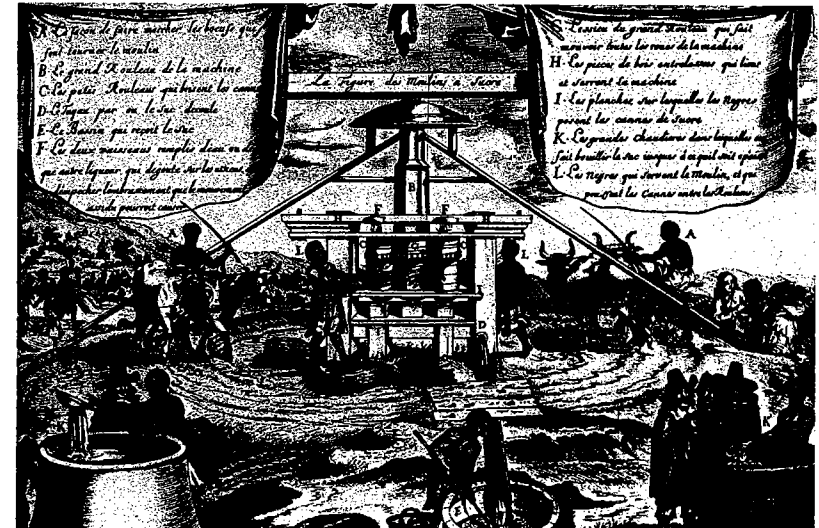
This careful display of tropical plants, from William Rhind's *A History of the Vegetable Kingdom* (1865), includes sugar cane, somewhat exaggerated in height and thickness but otherwise accurately illustrated. Interestingly, the only human figures are shown next to the cane; one appears to be cutting cane, and both are depicted as black.

One of W. Clark's *Ten Views of Antigua* (1823), which shows a slave gang hoeing and planting sugar cane. Though this drawing was made only a few years before the Emancipation in the British West Indies, the highly organized, almost industrial character of field labor probably typified the slave-based Caribbean plantation from its very beginnings more than three centuries earlier. (*British Library*)

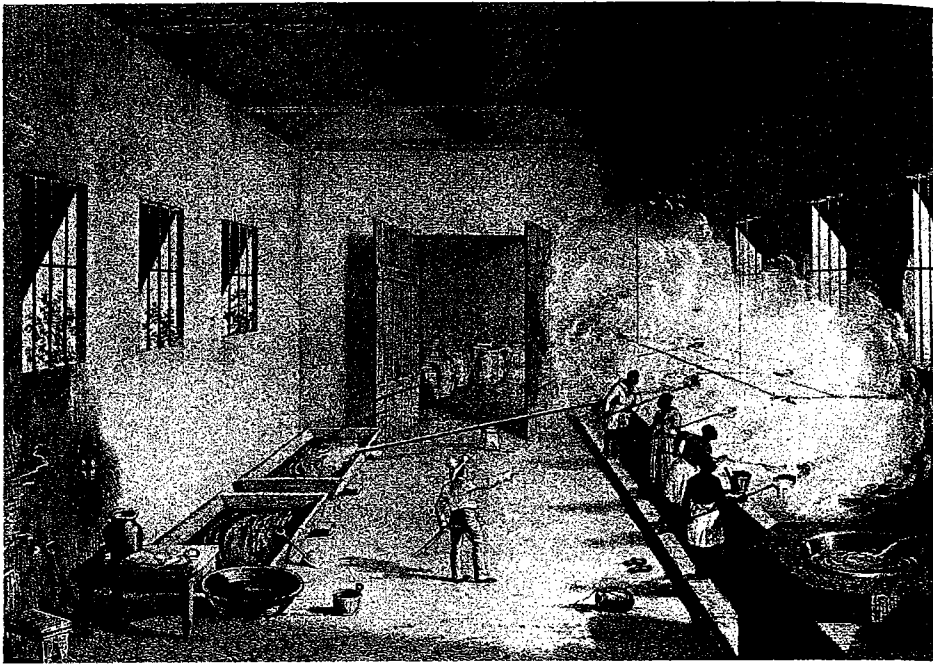


This fanciful drawing, from *De Americae* (Part V, 1595), by the engraver Theodor de Bry, illustrates a text by Girolamo Benzoni on the sugar-cane industry in Santo Domingo. Benzoni, an Italian adventurer, visited the New World in the years 1541–55, and his account, *La Historia del mondo nuovo* (1565), is one of the earliest we have for the Caribbean. In this depiction the workers resemble Classical Greeks more than Africans or Indians, and the cane processing is confusingly presented: a “mill” at the upper right shows only a sluice and a water wheel, while the device inside the shed is an edge-roller, long employed in Europe to crush olives and apples and in India and elsewhere to crush cane, but whose use is not documented for the New World.

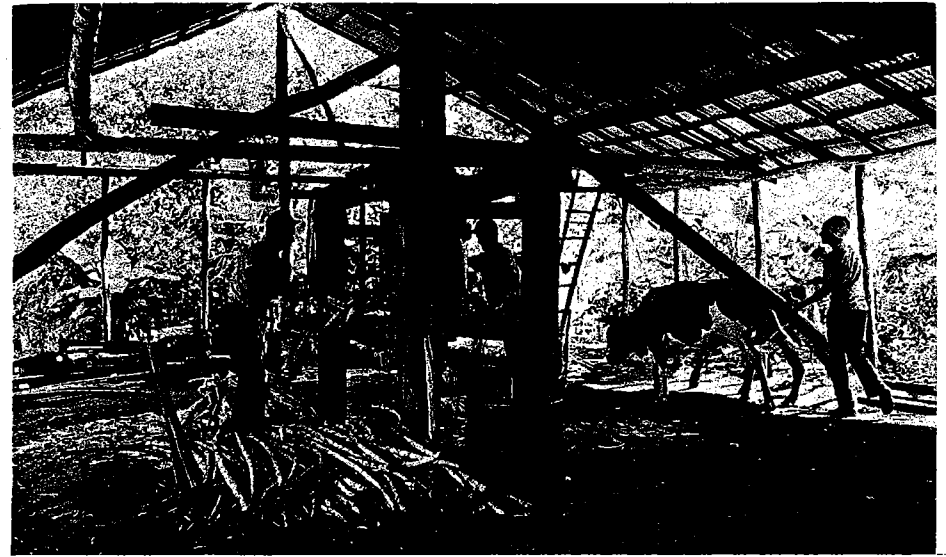
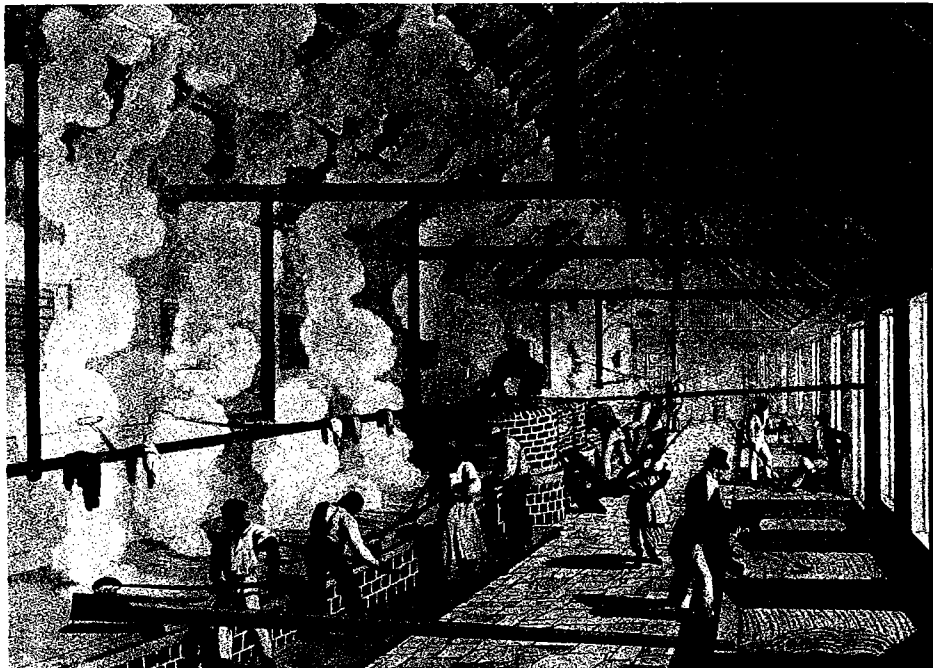
This engraving, from César de Rochefort's *Histoire naturelle et morale des Antilles* (1681), is signed “A.W. delin” (presumably *delineavit*), but A.W. is unidentified. The kind of sugar mill design it shows was retained for centuries.





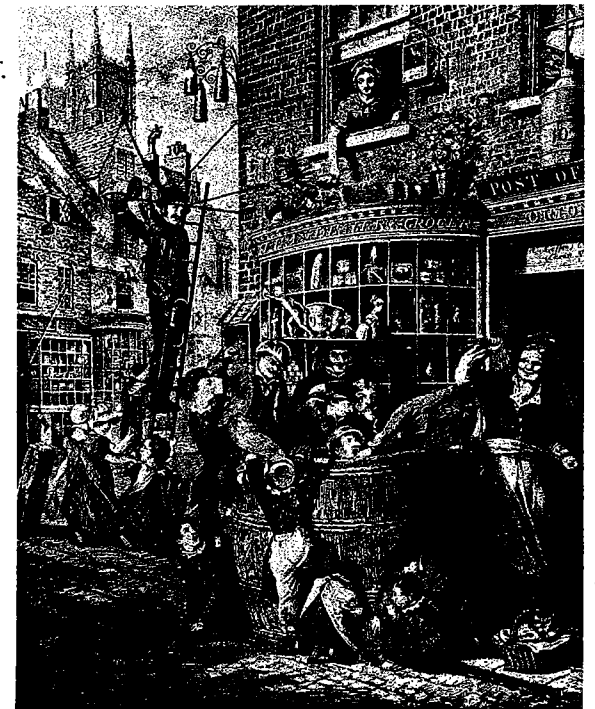


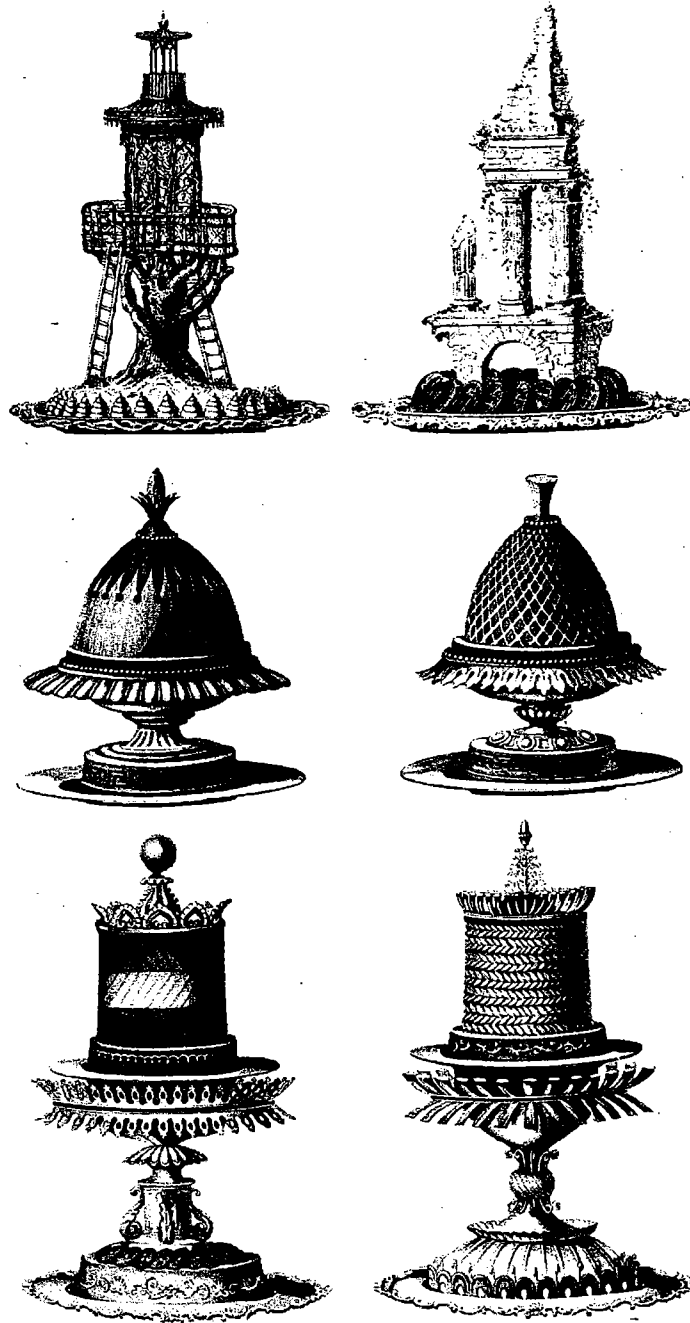
Two interior views of nineteenth-century sugar boiling-houses, by R. Bridgens (above) and W. Clark (below). Once again, the time-conscious, disciplined, industrial character of sugar manufacture is suggested. (British Library)



A contemporary sugar mill in the Dominican Republic. Closely resembling their predecessors going back several centuries, such mills are still to be found in the Caribbean, as well as on the South American mainland. The final product is a coarse brown sugar popular in the traditional cuisines of many regions. (Bonnie Sharpe)

*The Sugar Hogshead*, by E. T. Parris (1846). Sugar shipped in great barrels such as this was dispensed by local grocers. Parris, a sentimental and rather undistinguished artist, painted many such London scenes. The children, drawn like flies to the now-empty barrel, reveal nicely how important sugar had become in the nineteenth-century British diet.





These elegant nineteenth-century desserts, illustrations from the cookbook of the French bakers Dubois and Bernard, reveal the niche in *haute cuisine* that developed after sugar lost its special symbolic potency and became a relatively inexpensive commodity. (Centre de Documentation du Sucre)

Sugar as a spice or condiment alters the flavor of food as does any other spice—saffron, say, or sage, or nutmeg—but without clearly sweetening it. So much sucrose is now used in the modern world that such restricted use may seem unlikely, but any experienced cook is familiar with this archaic practice. Sugar as a decorative material must first be mixed with other substances, such as gum arabic (extracted from the trees *Acacia senegal* and *Acacia arabica*, among others), oil, water, or, often, ground nuts (particularly blanched almonds); it can then be made into a pliable, claylike or pastelike solid, which can be molded before hardening; once firm, it can be decorated, painted, and displayed before being eaten. Such derivative practices may well have first arisen from sugar's uses in medicine, and the observations of its nature recorded by physicians. It seems certain that sugar was first known in England as spice and as medicine, however, and its medicinal usefulness persisted for centuries—indeed it has never been entirely lost, though it figures far less importantly in modern practice. Sugar as sweetener seems glaringly obvious to us; but the shift from spice to sweetener was historically important, and sugar use in Britain changed qualitatively when this became economically possible. Finally, preserving may have been one of sugar's oldest purposes, and in English history this function was always important, but became qualitatively and quantitatively different in modern times.]

[A moment's reflection shows why these uses overlap. While sugar used decoratively was usually eaten after display, that used to coat medicines was both preservative and medicinal. Fruit preserved in syrup or in semicrystalline sugar was eaten together with its coating, which of course was sweet as well. Yet we can still observe that uses were added on and occasionally discarded as the volume of sugar consumed steadily increased. Differences in quantity and in form of consumption expressed social and economic differences within the national population.]

[When it was first introduced into Europe around 1100 A.D., sugar was grouped with spices—pepper, nutmeg, mace, ginger, cardamom, coriander, galangale (related to ginger), saffron, and the like. Most of these were rare and expensive tropical (and exotic) imports,

used sparingly by those who could afford them at all.<sup>14</sup> In the modern world, sweetness is not a “spice taste,” but is counterposed to other tastes of all kinds (bitter as in “bittersweet,” sour as in “sweet and sour,” piquant as in “hot sausage” and “sweet sausage”), so that today it is difficult to view sugar as a condiment or spice. But long before most north Europeans came to know of it, sugar was consumed in large quantities as a medicine and spice in the eastern Mediterranean, in Egypt, and across North Africa. Its medical utility had already been firmly established by physicians of the time—including Islamized Jews, Persians, and Nestorian Christians, working across the Islamic world from India to Spain—and it entered slowly into European medical practice via Arab pharmacology.]

As a spice sugar was prized among the wealthy and powerful of western Europe, at least from the Crusades onward. By “spice” is meant here that class of “aromatic vegetable productions,” to quote Webster’s definition, “used in cooking to season food and flavor sauces, pickles, etc.” We are accustomed not to thinking of sugar as spice, but, rather, to thinking of “sugar *and* spice.” This habit of mind attests to the significant changes in the use and meanings of sugar, in the relationship between sugar and spices, and in the place of sweetness in western food systems that have occurred since 1100.

[In the fourteenth century—by which time we can detail with some confidence the place of sugar in English households—Joinville’s *Chronicle* touchingly betrays European ignorance of the origin and nature of spices, among which sugar was then still included. Impressed by the Nile, which he believed to originate in some far-off earthly paradise, Joinville describes it thus:

Before the river enters into Egypt, people who are accustomed to do so, cast their nets outspread into the river, at night; and when morning comes, they find in their nets such goods as are sold by weight, and brought into the land, viz., ginger, rhubarb, wood of aloes, and cinnamon. And it is said that these things come from the earthly Paradise, just as the wind blows down the dry wood in the forests of our own land; and the dry wood of the trees in Paradise that thus falls into the river is sold to us by the merchants.<sup>15</sup>

Whether or not this friend and biographer of Saint Louis truly believed that spices were fished out of the Nile, his description charmingly confirms the exotic character of spices, which were (like sugar) mostly tropical in origin.

Various explanations have been advanced for the popularity of spices among the privileged of Europe, particularly the chronic scarcity of winter fodder before about 1500, which led to heavy fall butchering and the consequent need to eat meats that were cured, salted, smoked, spiced, and sometimes rotten. But perhaps it is enough simply to remind ourselves how pleasantly aromatic, pungent, and salty, sour, bitter, oily, piquant, and other tasty substances can relieve a monotonous diet. And spices can also aid in digestion. Even when people do not have enough to eat, they can become bored with their food. (The rich and powerful of Europe gave evidence of their desire to make their diet digestible, varied, contrastive, and—in their own view of things—savory:

The reason for the immoderate use of spices may be found in part in the current opinions on diet in the Middle Ages. Most men know that the enormous amount of meat served for a feast, or even for an ordinary meal, imposed a heavy burden upon the digestion, and hence they used cinnamon and cardamom and ginger and many other spices to whip up the action of the stomach. Even when not at table they made free use of spiced comfits, partly for the sake of aiding digestion and partly to gratify the appetite. One may well believe, too, that at a time when overkept meats and fish were freely used, spice was employed to cover up the incipient decay. At all events, whatever the reason, most dishes were smothered in spices, whether needed or not. As a rule, possibly because of its provenance from the East, sugar was classed with spices.<sup>16</sup>

Sugar figures importantly in these usages. Adam de Moleyns’s *Libelle of Englyshe Polycye* (1436), a paean to English sea power, belittled most imports via Venice—but not sugar:

*The grete galees of Venees and Florence  
Be wel ladene wyth thynges of complacence,  
All spicerye and other grocers ward,*



*Wyth swete wynes, all manere of chaffare,  
Apes and japes and marmusettes taylede,  
Niffles, trifles that litell have availed,  
And thynges wyth whiche they fetely blere oure eye,  
Wyth thynges not enduryng that we bye.*

Even the imported drugs were unessential, thought de Moleynes; but he adds:

*And yf there shulde excepte by ony thyng,  
It were but sugre, trust to my seyng.*<sup>17</sup>

[In the earliest English cook books of which we have record, the place of sugar as flavoring or spice is unmistakable, and that use can be documented in some detail. But the first written mention of sugar, if we omit the Venerable Bede, is in the pipe rolls—the official records of royal income and expenditures—of Henry II (1154–89). This sugar was used as a condiment in cooking and was purchased directly for the court.] The quantities involved must have been very small: only royalty and the very rich could have afforded sugar at the time. In 1226, Henry III requested the mayor of Winchester to get him three pounds of Alexandrian (Egyptian) sugar, if so much could be had at one time from the merchants at the great Winchester fair.<sup>18</sup>

[During the thirteenth century, sugar was sold both by the loaf and by the pound, and though its price put it beyond the reach of all but the wealthiest, it could be procured even in remote towns.<sup>19</sup> The sugar of Beza, we are told, was the kind most commonly in use; “that from the marts of Cyprus and Alexandria was in higher esteem.”<sup>20</sup> But sugar names in those early centuries were also attributions, such as the “Zucker Marrokes” of the account rolls for 1299, the “sugre of Sicilis,” and “Barbarye sugar”—all among the Oxford Dictionary citations. By 1243, Henry III was able to order the purchase of 300 pounds of “zucres de Roche,” presumably lump sugar, among other spices.<sup>21</sup> By 1287, during the reign of Edward I, the royal household used 677 pounds of ordinary sugar, as well as 300 pounds of violet sugar and 1,900 pounds of rose sugar.<sup>22</sup>

The following year the sugar consumption of the royal household climbed sharply, to 6,258 pounds.<sup>23</sup>

[Precious though it was, sugar’s popularity as a spice was already spreading. The countess of Leicester’s remarkable seven-month account in 1265, which the historian Margaret Labarge used in her rich description of a baronial household, mentions sugar frequently. “It used to be thought,” writes Labarge, “that sugar was unknown until later in the Middle Ages, and that only honey was employed for sweetening; but a close study of accounts shows that sugar was in continuous use in wealthy households by the middle of the thirteenth century.”<sup>24</sup> Bishop Swinfield’s household account for 1289–90 mentions the purchase of “more than one hundred pounds of sugar—mostly in coarse loaves—and also of liquorice and twelve pounds of sweetmeats.”<sup>25</sup> The bishop of Hereford’s household roll for the same year shows sugar purchased in Hereford and Ross-on-Wye.<sup>26</sup>]

The countess’s records note both “ordinary sugar” and powdered white sugar. The “ordinary sugar” was presumably in crystalline loaves, only imperfectly refined; the whiter the product, the more expensive it was. During those seven months in 1265 for which we know the countess’s household expenditures, fifty-five pounds of sugar (of both types) were purchased. But the countess’s household also used fifty-three pounds of pepper (presumably *Piper nigrum*, or Indian peppercorns) during the same period, which may support the view that sugar was used as a condiment.

[The quantities of various sugars imported gradually increased during the subsequent century, but it seems certain that this was because the privileged classes were consuming more, not because its uses were spreading downward.] By the early fifteenth century, sugar cargoes had become substantial—Alexander Dordo’s galley brought twenty-three cases in 1443, some more refined (“kute”—later, “cute,” from the French *cuit*) than the rest. Less refined brown sugar, partially cleaned and crystallized, was imported in chests—the “casson sugar,” later called “cassonade,” one finds in the inventory lists of grocers in the mid-fifteenth century. This sugar could be refined further, but commercial refineries do not appear in England for another century.]

Molasses, which apparently reached England by the end of the thirteenth century, was distinguished from other sugar forms. It came from Sicily, where it was fabricated together with brown and other sugars; it had begun to be shipped by Venetian merchants on the Flanders galleys making their annual voyages.<sup>27</sup> (It was forbidden to ship molasses in the holds of ships, presumably because the greater heat there might cause it to spoil. Of rum manufactured by distilling from molasses there is no mention before the early seventeenth century.<sup>28</sup>)

Toward the end of the fifteenth century, when Atlantic-island sugar production was supplanting North African and Mediterranean sugars, there was some price decline, but prices rose again in the mid-sixteenth century. At best, sugars were still costly imports; and though they were becoming important in the feasts and rituals of the powerful, they were still beyond the reach of nearly everyone—luxuries, rather than commodities. A shopkeeper whose stock has been described for the year 1446 carried saffron, saunders (powdered sandalwood, used as a spice more than as a scent), and sugar, as well as spectacles, caps for chaplains and priests, and the like—hardly everyday necessities.<sup>29</sup> But that sugars were already of substantial importance to the wealthy and powerful is easily documented. The first English cook books to provide recipes date from the late fourteenth century, by which time sugar was known among the privileged classes in England and used by them. These recipes make clear that sugar was perceived as a segment of a taste spectrum—not a quadrangle or tetrahedron—that might enhance or conceal the underlying tastes of the food. The somewhat indiscriminate use of sugar in flesh, fish, vegetable, and other dishes is evidence that sugar was regarded as a spice at the time.

William Hazlitt, who read and interpreted many early cook books, shows his disdain for “the unnatural union of flesh with sweets,” the source of which he locates (probably inaccurately) in “the prehistoric bag pudding of King Arthur”: “That wedlock of fruit with animal matter—fat and plums—which we post-Arthurians eye with a certain fastidious repugnance, but which, notwithstanding, lingered on to the Elizabethan or Jacobean era—nay, did not make the gorge of our grandsires turn rebellious.”<sup>30</sup> Hazlitt confesses that

this “wedlock” never wholly vanished from English cuisine. But he was wrong to treat it as some continuous tradition traceable to a semimythical past, and to suppose, as he puts it, that “it survives among ourselves only in the modified shape of such accessories as currant jelly and apple sauce.”<sup>31</sup>

A striking feature of the sugar uses of the late fourteenth century is sugar’s frequent combination with honey, as if the tastes of the two substances were not only different (which, of course, they are) but also mutually beneficial. Here again, however, the condimental character of these sweet substances is revealed in the recipes themselves, which call for sauces used on fish or meat; salted, heavily spiced solids whose base is rice flour; spicy drinks that are to be “allayed” with refined sugar if they are overspiced; and so on.<sup>32</sup>

Sugar and other spices were combined in dishes that tasted neither exclusively nor preponderantly sweet. Often, food was reduced by pounding and mashing, and so heavily spiced that its distinctive taste was concealed: “Nearly every dish, whatever its name, was soft and mushy, with its principal ingredients disguised by the addition of wine or spices or vegetables. Practically everything had to be mashed or cut into small pieces and mixed with something else, preferably of so strong a flavour as to disguise the taste of most of the other ingredients.”<sup>33</sup> Perhaps this was because of the absence of forks at the table; but that hardly explains the seasoning. In his discussion of medieval English cuisine, the British historian William Mead lists few recipes without sugar, and, like Hazlitt, he seems offended by the presence of sugar. “Everyone is aware,” he tells us, “that nothing is more sickening than an oyster sprinkled with sugar. Yet we have more than one old receipt recommending such a combination.”<sup>34</sup> The recipe he cites, however (“Oyster in gravy Bastard”), combines the oyster liquor, ale, bread, ginger, saffron, and powdered pepper and salt, along with sugar; since the proportions are unspecified, there is no certainty that the oysters actually tasted sweet. Admittedly, they must have tasted little like oysters as we know them. But admirers of Oysters Rockefeller and kindred wonders may not be quite so shocked as Mead.

Perhaps authors such as Hazlitt and Mead are objecting not so much to the taste of sweetness as to the conjunction of sweetness

with other tastes. That such preferences can change over time and even at a very rapid rate seems certain. Whereas Mead deplores the use of sugar with fried pork—"Such delicacies," he says, "are not for our time"<sup>35</sup>—Thomas Austin's late-nineteenth-century notes to *Two Fifteenth-Century Cookery-Books* recount that pork "was quite lately taken with it [sugar] at St. John's College, Oxford."<sup>36</sup> From *The Forme of Cury*, compiled around 1390 by the master cooks of Richard II, come scores of recipes that illustrate well the spice character of sugar. "Egurdouce" (*aigredouce* in French) was made using rabbit or kid with a sweet-and-sour sauce, as follows:

Take conynges or kydde and smyte hem on pecys rawe; and frye hem in white grece. Take raysons of corannce and fry hem, take oynonns parboile hem, and hewe hem small and fry him; take rede wyne, sugar, with powdor of pepor, of gynger, of canel, salt, and cast thereto; and let it seeth with a gode quantite of white grece, and serve it forth.<sup>37</sup>

Even more illustrative is the recipe for "Chykens in cawdel":

Take chykenns and boile hem in gode broth, and ramme him up [bruised, and pressed close together]. Thenne take zolkes of ayren[eggs], and the broth, and alye [mix] it togedre. Do thereto powdor of gynger, and sugar ynowh [enough], safronn and salt; and set it over the fyre withoute boyllynge, and serve the chykens hole, other ybroken [or cut up], and lay the sowe [sauce] onward.<sup>38</sup>

[Though there are many recipes in which sugar figures as a principal ingredient, especially for pastries and wines, those based on meat, fish, fowl, or vegetables usually list sugar with such ingredients as cinnamon, ginger, saffron, salt, galingale, and saunders, if they include it at all.]

[This usage of sugar as spice may have reached some sort of peak in the sixteenth century. Soon thereafter, prices, supplies, and customary uses began changing rapidly and radically. It is not surprising that the spice use of sugar tended to disappear as sugar itself became more plentiful. But the condimental use of sugar survives in a number of fringe areas that deserve mention in passing. Cookies or biscuits associated with the holiday seasons commonly combine

sugar and spices (ginger, cinnamon, and pepper, for instance) in ancient ways; similar usages apply to holiday fowl, such as ducks or geese, with which fruit jams, brown sugar, and sweet sauces are combined; and to hams, commonly prepared with cloves, mustard, brown sugar, and other special flavorings for festive treats. Yet this apparent gravitation of sugar to ceremonial usages is deceptive. Rather than being some shift in usage, these condimental associations merely demonstrate what anthropologists have long contended—that holidays often preserve what the everyday loses. The world in which sugar was used primarily as a spice is long vanished; we now find sugar all about us. Like tipping one's hat or saying grace, baking and eating gingerbread cookies is a way of reaching back.]

By the sixteenth century, the habit of using sugar as decoration, spreading through continental Europe from North Africa and particularly Egypt, began to percolate downward from the nobility. To understand this decorative use, we need to review two aspects of the process of sugar manufacture. First, the process of refining itself involved the gradual removal by boiling, and by the addition of chemical substances, of the noncrystalline, darker, and impure materials, resulting in an ever-whiter product that became chemically purer. European preferences for the whitest sugars may have been imitations of the tastes of the Arabs, among whom sugar consumption was already an ancient habit. But the association between whiteness and purity was also ancient in Europe. Because of it, white sugar was commonly prescribed in medicines, and combinations of white foods (chicken, cream, etc.) at times enjoyed a popularity out of all proportion to their therapeutic efficacy.

Second, sugar is preservable, the more so when it is highly refined. Some insects and animals may, of course, consume it, and it cannot withstand lengthy exposure to moisture, but it bears remembering that under favorable circumstances substances made with sugar can be durable.]

To these two features of sugar we may add another: the relative ease with which other edibles can be combined with it, whether in solid or in liquid form. Among these, one additive of the greatest

importance in European usage, and clearly diffused from the Middle East and North Africa, was the almond. Though marzipan in Europe cannot be documented earlier than the end of the twelfth century,<sup>39</sup> it was known and fabricated in the Middle East before then. Sugar was also combined with oil of almonds, with rice, with scented waters, and with various gums. Recipes for these combinations abound in sixteenth- and seventeenth-century texts; though they are not readily traceable to specific Egyptian recipes, a connection (via Venice in particular) seems likely.]

The important feature of these recipes is that the resulting pastes were used to sculpture forms—forms having an aesthetic aspect but also preservable and edible. The eleventh-century caliph al-Zahir, we are told, in spite of famine, inflation, and plague, celebrated the Islamic feast days with “art works from the sugar bakers,” which included 157 figures and seven large (table-sized!) palaces, all made of sugar. Nasir-i-Chosrau, a Persian visitor who traveled in Egypt in 1040 A.D., reports that the sultan used up 73,300 kilos of sugar for Ramadan—upon his festive table, we are told, there stood an entire tree made of sugar, and other large displays. And al-Guzuli (d. 1412) gives a remarkable account of the caliph’s celebration, at which a mosque was built entirely of sugar and beggars were invited in at the close of the festivities to eat it.<sup>40</sup>

[Not surprisingly, analogous practices soon spread to Europe. Marchpane (marzipan) and marchpanelike pastes were used at royal French feasts in the thirteenth century.<sup>41</sup> Soon continental waferers and confectioners crossed from France to England, to practice their arts there. The confections were based primarily on the combination of sugar with oil, crushed nuts, and vegetable gums, to make a plastic, claylike substance. It was possible to sculpture an object out of this sweet, preservable “clay” on any scale and in nearly any form, and to bake or harden it. Such displays, called “subtleties,” served to mark intervals between banquet “courses,” but each such course actually consisted of several different dishes. Thus, for instance, at the marriage of Henry IV and Joan of Navarre in 1403, three courses of “meat” (each consisting of several dishes, in fact, not all of them meat) were followed by three courses of “fish,” and each set concluded with a “sotelte,” as follows:

## First Course

Fylettes in galentyne.—Vyand ryall [a dish prepared with rice, spices, wine, and honey]—Gross chare: [beef or mutton]—Sygnettes—Capoun of haut grece:—Chewetys [pudding]—a sotelte.<sup>42</sup>

The subtleties were in the form of animals, objects, buildings, etc., and because sugar was desirable and expensive, they were admired and eaten. [But the preciousness of the ingredients, and the large quantities required, confined such practices at first to the king, the nobility, the knighthood, and the church.] Initially, the displays were important simply because they were both pretty and edible. But over time, the creative impulses of the confectioners were pressed into essentially political symbolic service, and the subtleties took on greater significance. “Not only compliments,” writes one commentator, “but even sly rebukes to heretics and politicians were conveyed in these sugared emblems.”<sup>43</sup> For royalty, what had begun as “Conserves and marchpanes made in sundry shapes, as castles, towers, horses, bears and apes,” were transformed into message-bearing objects that could be used to make a special point. At the coronation of Henry VI, two quite different subtleties, fully described in the literature, dramatize the strange significance of a food that could be sculptured, written upon, admired, and read before it was eaten. One was:

A sotyltie of Seynt Edwarde and Seynt Lowys armyd, and upon eyther his cote armoure, holdynge atwene them a figure lyke unto kyng Henry, standynge also in his cote armour, and a scripture passynge from them both, sayinge: “beholde ii. parfyght kinges under one cote armour.”

The other was a “warner”—one of the names used for a subtlety, usually when it preceded a “course”—directed against the Lollards, religious dissenters. This was “of the emperor and the kyng that ded is, armed, and their mantels of garters, and the king that now is, kneeling before them with this reason”:

*Ayeinst miscreants the emperor Sigismund  
Hath shewid his myghte, which is Imperial;*

*Sithen Henry V. so noble a knyght was founde  
For Christ's cause in actis martial.  
Cherishyng the chirch, Lollardes had a falle,  
To give example to kynges that suited....<sup>44</sup>*

Similar displays followed each course, their accompanying texts confirming the king's rights and privileges, his power, and sometimes his intent. The highly privileged nature of such display rested on the rarity of the substances used; almost no one except a king could afford such quantities. But to be able to provide one's guests with attractive food, which also embodied in display the host's wealth, power, and status, must have been a special pleasure for the sovereign. By eating these strange symbols of his power, his guests validated that power.

[The connection between elaborate manufactures of sweet edibles and the validation of social position is clear.] Before too long, one commentator was at pains to explain that merchants now picked and chose the foods they would serve at their feasts with such care that they were "often comparable to the nobility of the land":

In such cases also, jellies of all colours, mixed with a variety in the representation of sundry flowers, herbs, trees, forms of beasts, fish, fowl, and fruits, and thereunto marchpane wrought with no small curiosity, tarts of divers hues and sundry denominations, conserves of old fruits, foreign and home bred, suckets, codinacs, marmalades, marchpane, sugarbread, gingerbread, florentines, wild fowls, venison of all sorts, and sundry outlandish confecti-  
ons, altogether sweetened with sugar.<sup>45</sup>

By the sixteenth century, merchants as well as kings were showmen and consumers.]

[As a still-scarce substance associated with foreign trade, the nobility, and sumptuary distinction, sugar had become desirable almost as soon as its importation was stabilized in the fourteenth century. But it was not simply as a spice or as an item of direct consumption that sugar was appealing. At the same time that sugars were becoming more commonly used by the powerful, the links between such consumption and the mercantile sinews of the kingdom were becoming more intimate. And as sugar came closer to

the ceremonial nexus of certain forms of consumption, it acquired greater symbolic weight or "voltage" in English life.]

Thomas Warton's *History of English Poetry* incidentally documents the growing importance of the feast as a form of symbolic validation of powers and authority, even among scholars and clerics, as early as the fifteenth century:

These scholastic banquets grew to such excess that it was ordered in the year 1434, that no inceptor in arts should expend more than "3000 grossos Turonenses." ... Notwithstanding, Neville, afterwards Bishop of York, on his admission to the degree of master of arts in 1452, feasted the academics and many strangers for two successive days, at two entertainments, consisting of nine hundred costly dishes. ... Nor was this reverence to learning, and attention to its institutions, confined to the circle of our universities.

Such was the pedantry of the times, that in the year 1503, archbishop Wareham, chancellor at Oxford, at his feast of inthronisation, ordered to be introduced in the first course a curious dish, in which were exhibited the eight towers of the university. In every tower stood a bedell; and under the towers were figures of the king, to whom the chancellor Wareham, encircled with many doctors properly habited, presented four Latin Verses, which were answered by his majesty.

The "curious dish" was a subtlety constructed entirely of sugar.<sup>46</sup>

[Certainly by the late sixteenth century, and probably even earlier, the creation of subtleties—however modest—occurred in families that, though still well within the upper stratum of English society, were neither noble nor exceedingly wealthy. Partridge's classic sixteenth-century cook book (1584), devoted largely to recipes in which sugar figures as a condiment (to bake chicken, fry vegetable marrow, season a roast rabbit, or bake an ox tongue), also contains recipes such as that for marchpane, which appears more or less completely plagiarized in many other cook books thereafter.]

Take...blanched almonds...white suger...Rosewater...and Damask water.... Beate the Almondes with a little of the same water, and grind them till they be small: set them on a few coales of fyre, till they waxe thicke, then beate them again with the sugar, fine.... mixe the sweet waters and them together, and...

fashion your Marchpane. Then take wafer cakes.... Have reddy a hoope of greene Hazell wand.... Lay this hoope upon your wafer cakes.... Cut away all the parts of the Cakes.... Set it upon a warm hearth.... and ye maye while it is moyssse stiche it full of Comfets, of sundrie colours. If it be thorough dried.... a Marchpane will last many yeares. It is a comfortable meate, meete for weake folkes, such as have lost the taste of meates by much and long sicknesse....<sup>47</sup>

Here sugar is combined with other substances in a decorative sweetmeat that will keep indefinitely, and supposedly possesses special medicinal qualities—enough to suggest why a simple classification of sugar by its different uses is difficult. In later chapters, Partridge makes more explicit his stress on decoration. Sweetmeats are decorated with animal forms and words, cut from gold leaf (the link between sugar and gold, in combination with such rarities as almonds and rosewater, is significant). He instructs his readers to combine gum dragant with rosewater, to which is added lemon juice, egg white, and “fine white suger, well beaten to powder,” to make a soft paste. “This can then be formed into objects—all manner of fruities and other fine things, with their forme, as platters, dishes, glasses, cuppes, and suchlike things wherewith you may furnish a table.” Once made and admired, these objects can then be eaten by the guests: “At the end of the Banquet, they maye eat all, and breake the platters, Dishes, Glasses, Cups, and all things, for this paste is very delicate and savourous.”<sup>48</sup>

Cook books in succeeding decades enlarged upon Partridge’s techniques. Sir Hugh Platt’s *Accomplisht ladys delight in preserving, physick and cookery* first appeared soon after Partridge’s book, and went through at least eleven highly successful editions. It provides detailed instructions for making “conceits in sugar-works,” including “Buttons, Beakes, Charms, Snakes, Snailles, Frogs, Roses, Chives, Shooes, Slippers, Keyes, Knives, Gloves, Letters, Knots, or any other Iumball for a banquet quicklie.”<sup>49</sup>

By 1660, subtleties were being prescribed for the wealthy on a scale that dwarfed the “Buttons, Beakes, Charms, and Snakes.” Robert May was a professional cook who lived during the reigns of Elizabeth, James I, Charles I, Cromwell, and Charles II, when

subtleties were an unfailing accompaniment to every feast. May wrote for wealthy commoners, and his recipes suggest a real attempt to ape the pretensions of royalty—a kind of confectioner’s *lèse majesté*. “Make the likeness of a ship in paste-board,” he advises those who, while rich, still cannot afford to make their subtleties entirely of marzipan. Then he maps out in exquisite detail an astounding display of sugar sculpture, complete with a stag that “bleeds” claret wine when an arrow is removed from its flank, a castle that fires its artillery at a man-of-war, gilded sugar pies filled with live frogs and birds, and much else. May’s display ends with the ladies’ tossing eggshells full of scented water at one another to counteract the smell of gunpowder. “These were formerly the delights of the Nobility,” he tells his readers, “before good-housekeeping had left England, and the sword really acted that which was only counterfeited in such honest and laudable Exercises as these.”<sup>50</sup>

While kings and archbishops were displaying magnificent sugar castles and mounted knights, the aspiring upper classes began to combine “course paste” men-of-war with marzipan guns to achieve analogous social effects at their festive tables. Some of these people were probably only newly ennobled; others were prosperous merchants or gentry. The techniques used to impress their guests and validate their status through consumption continued on a downward percolation—even though most of the creations lacked the majesty of an earlier era. By 1747, when the first edition of Mrs. Hannah Glasse’s famous *The Art of Cookery* appeared, at least two recipes are included in the category of subtlety—though properly modified to fit the means of her customers. The first, for what are called “jumballs” (Sir Hugh Platt’s “Iumball” of more than a century earlier), combines flour, sugar, egg whites, butter, and almonds, kneaded with rosewater and baked. Jumballs were then cut into the desired shapes: “cut your Jumball in what figures you fancy.... If you make them in pretty figures, they make a fine little dish.”<sup>51</sup> Mrs. Glasse’s other recipe is for “Hedgehog”—a marzipan confection meant to be admired before it is eaten, composed of crushed almonds, orange-flower water, egg yolks, sugar, and butter, made into a paste, and molded into the form of a hedgehog: “Then stick



it full of blanched almonds slit, and stuck up like the Brussels of a Hedge-Hog." A yet more elaborate version, made with saffron, sorrel, nutmeg, mace, citron, and orange peel (cochineal in place of saffron, if saffron is too dear), was sent "hot to Table for a first course"!

Mrs. Glasse's special confectionery cookbook of 1760 included elaborate displays, graced with as many as ten different dessert items. The tables were decorated with ornaments "bought at the confectioners, and will serve year after year." There are hedges, gravel walks, "a little Chinese temple," and the top, bottom, and sides of the display were arrayed with "fruits, nuts of all kinds, creams, jellies, syllabubs, biscuits, etc., etc. and as many plates as you please, according to the size of the table." This all seems a far cry from the festive tables of Henry IV or Archbishop Warham. But it was also a good while later, when sugar had become relatively cheaper and more plentiful, and its function as a marker of rank had descended to the middle classes.

The Reverend Richard Warner, who compiled several early cookery tracts in his *Antiquitates Culinariae*, was keenly aware of the transformation of regal subtleties into bourgeois entertainments. "It seems probable," he writes, "that the splendid desert frames of our days, ornamented with quaint and heterogeneous combinations of Chinese architecture, Arcadian swains, fowl, fish, beasts, and fanciful representations drawn from Heathen mythology, are only the remains of, or, if more agreeable to the modern ear, refinements on, the Old English Sotiltees."<sup>52</sup>

It is no longer considered a sign of elevated rank to stuff one's guests with sugar—at least in most social groups and on most social occasions in the western world. Few allegories are any longer created at table, and writing in sugar is largely confined to Saint Valentine's Day, Christmas, birthdays, and weddings. But the confinement of sugar to somewhat narrower symbolic spheres was accompanied by its permeation of everyday life in other forms, attesting to the increased significance of sugar rather than the opposite. And sugars in such archaic forms as gingerbread houses, candy hearts, candy corn, and molded chickens and rabbits, once the playthings of the court and the wealthy, have now become the playthings of children.

[The decline in the symbolic importance of sugar has kept almost perfect step with the increase in its economic and dietary importance. As sugar became cheaper and more plentiful, its potency as a symbol of power declined while its potency as a source of profit gradually increased. Hence, to speak of the decline of its symbolic importance is, in one sense, to speak in riddles. One must add a query: *for whom* has its symbolic importance declined? Without projecting symbols against the differentiated class structures of the societies within which they are being manipulated, we cannot illuminate the link between sweetness and power.]

The frogs and birds that once sprang out of hot pies are no more; the famous dwarf who stepped forth from a cold pastry brandishing a sword and saluting Charles I and his new queen was the last of his kind; with four-and-twenty blackbirds there went the castles of marzipan. By the nineteenth century, culinary drama of this sort had lost most of its appeal, even for the middle classes. But old meanings diffused downward in society and new ones emerged.

[As the spread of sugar downward and outward meant that it lost some of its power to distinguish those who consumed it, it became a new substance. In the eighteenth century, producing, shipping, refining, and taxing sugar became proportionately more effective sources of power for the powerful, since the sums of money involved were so much larger. Almost inevitably, sugar lost many of its special meanings when the poor were also able to eat it. But later, making sugar available in ever-larger quantities to the poor became patriotic as well as profitable.]

Recent writers have emphasized the luxury status in England of early imports like sugar, which were eventually supplemented by the mass importation of more familiar food staples, such as fruits and grains.<sup>53</sup> In reaction, others have argued that the luxury/staple contrast tends to gloss over the great social importance of the so-called luxuries in establishing and maintaining social links among the powerful. "The relationship of trade to social stratification," the anthropologist Jane Schneider writes, "was not just a matter of an elevated group distinguishing itself through the careful application of sumptuary laws and a monopoly of symbols of status; it further involved the direct and self-conscious manipulation of var-

ious semiperipheral and middle level groups through patronage, bestowals, and the calculated distribution of exotic and valued goods."<sup>54</sup> [This point is well taken, for the importance of a "luxury" like sugar cannot be judged by its bulk or weight, or without attention to the part it played in the social life of the powerful. The particular nature and the specific, culturally conventionalized uses of each such luxury are thus highly relevant to its importance. To put it differently, sugar and gold were both luxury imports; as medicines, they even overlapped slightly in use. But it was not possible to produce them in like quantities or to confine their uses to the same sphere. And while it is true that gold would one day be bought and sold in somewhat humbler strata, it can neither be produced nor be consumed as sugar is. Unless we look at the intrinsic—the "culturally usable"—character of a luxury, its meaning cannot be fully understood. As for sugar, it was *transformed* from a luxury of kings into the kingly luxury of commoners—a purchased luxury that could be detached from one status and transferred in use to another. Thus understood, sugar became, among other things, a spurious leveler of status. As this was occurring, of course, the rich and powerful were beginning to repudiate their consumption of a product the older symbolic meaning of which was being steadily emptied of its potency.]

[Sugar's special status as a medicine was largely incidental to the transmission of medicinal lore concerning it from classical texts to medieval Europe by way of Islam. The relatively meager reference to sugar in Greek texts is of interest, given that Galenic theory prevailed in European medicine for centuries after the Crusades. As far as the actual substances the terms were meant to stand for are concerned, there is uncertainty, and Greek knowledge of sugar—sucrose fabricated from the juice of the sugar cane—is questionable. But there is no doubt that the Moslem, Jewish, and Christian physicians from Persia to Spain who were the major interpreters of humoral medicine to the Europeans knew sucrose. (Spain [especially Toledo], Salerno [Sicily], and Gondeshapur [in deltaic Khuzestan, Persia] were the principal centers.) Certainly it was they, most of all, who brought sugar and its medicinal uses into European prac-

tice, incorporating sucrose into the Greek medical system they had adopted and adapted, in which it had figured only obscurely.]

Because sugar has become controversial in modern discussions of health, diet, and nutrition, it may be difficult to imagine its having once been a wonder drug or panacea. But that epoch is not so remote. A ninth-century Arab manuscript from Iraq (*Al-Tabaṣṣur bi-l-tiḡāra*: Concerning Clarity in Commercial Matters) documents the production of sugar from cane in Persia and Turkestan.<sup>55</sup> It describes musk and sweet sugar cane carried from the city of Khiva, in Khwarizm (Chorasmia); sugar candy from the Persian Gulf city of Ahwaz; fruit syrups, quince, and saffron from Isfahan, in central Persia; rosewater, syrups, water-lily ointment, and jasmine ointment from the province of Fars (probably Shiraz); even candied capers, from Bushari (Bushehr), near Ahwaz. Carried westward by the Arabs along with the cane itself, these products entered Europe as spices or *materia medica* via Spain, together with other innovations, including the lime, bitter orange, lemon, banana, tamarind, cassia, and myrobalan. All figured in medical preparations, but among them sugar stands out conspicuously. In the works of al-Kindi, al-Tabari, Abu'l-Dasim, and other writers in Arabic between the tenth and fourteenth centuries, sugar figures as one of the most important medicinal ingredients.

Arabic pharmacology was organized in terms of the medical formulary (*aqrābādhīn*), divided into sections or chapters on different sorts of pharmaceuticals. "The *aqrābādhīn*," writes the historian of Arab pharmacology Martin Levey, "may be considered to have had its organizational origin in Galen's *De Compositione medicamentorum*; surprisingly, it persisted well into the nineteenth century as a form of pharmacological literature."<sup>56</sup> Classified by type of preparation, these formularies provide a remarkable view of the medical role of sugar. One category was the syrup (*shurba* in Arabic): "a juice concentrated to a certain viscosity so that when two fingers were dipped into it, it behaved as a semi-solid when the digits were opened. Very often sugar and/or honey were added as thickeners and sweeteners."<sup>57</sup> Another category, the rob (*rubb* in Arabic), was similar: to prepare it, fruits and flower petals were immersed in hot water to which sugar was added, and the whole

preparation was boiled down until it was concentrated. The julep (Arabic *julāb*, from the Persian *gul* + *āb* ["rose" + "water"]) was less thick than the rob—"Frequently, sugar was added to it."<sup>58</sup> Other categories included lohochs, decoctions, infusions, fomentations, powders, confections, electuaries, hieras, trypheras (aromatic electuaries), theriacs, etc. Sugar figures in some specific compounds in *every category*, and importantly so in many of them.<sup>59</sup>

We have seen that a term for what may be sugar is present in the original texts of Galen and Hippocrates, but mention is rare and vague enough to raise questions about its specific identity. Hence the introduction of sugar into Galenic practice—at least on a substantial scale—probably meant a significant addition to the Greco-Roman pharmacology that Islamic doctors were busily transmitting. Europe's acceptance of Arab science was considerable, by way of Latin translations of Arab texts, through the traditions of the School of Salerno (Salerno) via Spain, especially in the period 1000–1300 A.D., and through the Byzantine Empire. Scholars like the Persian Avicenna (ibn-Sina, 980–1037)—known for his assertion "*apud me in eis, quae dulcia sunt, non est malum!*" ("As far as I am concerned, sweetmeats are [always] good!")—who wrote the *Canon medicinae Avicennae* (*Qanun fi'l-tibb* in Arabic), remained authoritative in the practice of European medicine until nearly the seventeenth century.

After additional knowledge of sugar was borne back to Europe by the Crusaders, its medicinal and other uses spread. The Greek physician Simeon Seth (c. 1075) wrote of sugars as medicines; and Synesios, the eleventh-century court physician of the Byzantine emperor Manuel Comnenus, recommended rose sugar to break fever. In Italy, Constantinus Africanus (b. 1020) described medical uses for sugar, both internal and external, employing solid and liquid sugars. The *Circa Instans*, which he translated (and may have composed) while at the School of Salerno in the mid-eleventh century, epitomizes the changing medical picture in Europe itself. Western Latin translators who knew Arabic and/or Persian were beginning to make more available to northern Europe the collected medical beliefs of the Islamic world, as well as of the Greco-Roman

predecessors they had inherited. In later editions of *Circa Instans* (1140–50), sugar is prescribed for fever, dry coughs, pectoral ailments, chapped lips, and stomach diseases. At this time sugar would have been available, even in the smallest quantities, only to the very rich. Honey was used in its stead for those somewhat poorer patients who could nevertheless afford some similar medication.

Not long afterward—in the thirteenth century, when some of the earliest written mentions of sugar turn up in England—prescriptions of medicinal tonics containing sugar also begin to appear. Aldebrando di Siena (d. 1287) and Arnaldus Villanovanus (1235?–1312?) both prescribed sugar frequently. It is Arnaldus who speaks of the uncommon healthfulness of *alba comestio*, which closely resembled Spain's traditional *majar blanco*, made of rice flour, milk, chicken breasts, and sugar.<sup>60</sup> The French *le grand cuisinier*, composed of white bread, almond milk, breast of capon, sugar, and ginger, was, similarly, food and medicine at once. Arnaldus also provides recipes for candying lemons and lemon slices, preserving pine kernels, almonds, hazelnuts, anise, ginger, coriander, and roses—all of which, he says, require the finest sugar. Again we see the differentiated uses of sugar intersecting—preservation, food, spice, decor, and medicine are tangled. The concept of sugar as medicine remained sturdy for centuries more.

In the twelfth century, the medicinal nature of sugar became the pivot upon which an important theological question turned—and this gives us an early glimpse of sugar's near invulnerability to moral attack. Were spiced sugars food? Did eating them constitute a violation of the fast? None other than Thomas Aquinas found them medicinal rather than foods: "Though they are nutritious themselves, sugared spices are nonetheless not eaten with the end in mind of nourishment, but rather for ease in digestion; accordingly, they do not break the fast any more than taking of any other medicine."<sup>61</sup> Aquinas thus endowed wondrous sucrose—all things to all men, protean and subtle—with a special advantage. Of all of the major tropical commodities—what I have called "drug foods"—whose consumption rose so sharply among European populations from the seventeenth to the twentieth centuries, including tea, coffee,

chocolate, tobacco, rum, and sugar, only sugar escaped religious proscription. this special "secular" virtue of sucrose requires a further word.

That sugars, particularly highly refined sucrose, produce peculiar physiological effects is well known. But these effects are not so visible as those of such substances as alcohol; or caffeine-rich beverages like tea, coffee, and chocolate; or tobacco, the first use of which can trigger rapid changes in respiration, heartbeat, skin color, and so on. Though conspicuous behavioral changes occur when substantial quantities of sucrose are given to infants, particularly for the first time, these changes are far less dramatic in the case of adults. And all of these substances, sucrose included, seem to have a declining and less visible effect after prolonged or intensified use. This has nothing to do with their long-term nutritive or medical significance, but with visible, directly noticeable consequences. In all likelihood, sugar was not subject to religion-based criticisms like those pronounced on tea, coffee, rum, and tobacco, exactly because its consumption did not result in flushing, staggering, dizziness, euphoria, changes in the pitch of the voice, slurring of speech, visibly intensified physical activity, or any of the other cues associated with the ingestion of caffeine, alcohol, and nicotine.<sup>62</sup>

The medicinal attributes of sugar were expounded upon by other famed philosophico-medical figures besides Aquinas. Albertus Magnus, in his *De Vegetabilibus* (c. 1250–55), uses the language of humoral medicine to express a generally favorable opinion: "It is by nature moist and warm, as proved by its sweetness, and becomes dryer with age. Sugar is soothing and solving, it soothes hoarseness and pains in the breast, causes thirst (but less than honey) and sometimes vomiting, but on the whole it is good for the stomach if it is in good condition and free of bile."<sup>63</sup> Sucrose figured importantly in all of the supposed remedies for the Black Death. From Carl Sudhoff's essays on the Pest Books of the fourteenth century we learn, "In none of the prescriptions is sugar lacking, added as it is to the medicines of the poor, as a substitute for the costly electuaries, the precious stones and pearls to be found in the remedies for the rich."<sup>64</sup>

The identification of sugar with precious stones and metals re-

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verberates with echoes of the "subtleties." What more pointed way of dramatizing privilege than the literal bodily consumption of preciosities? That one might seek to cure a physical ailment by the ingestion of crushed precious stones probably should not cause surprise. But consider this in the light of what we already know about the subtleties. To be able to destroy—literally, by consuming it—something that others desire is not a privilege alien to contemporary life and values. What may seem slightly offensive to modern bourgeois morality is its literalness. The egalitarian view is that invidious consumption ought not to be explicit, perhaps because it casts so bright a light upon the nonegalitarian motives of the consumer. When hierarchy is firm and acknowledged—when the rights of kings are considered rights by commoners—the excesses of nobility are not usually regarded as excesses. Indeed, the excesses of both nobility and poor seem more explicable, in terms of who they are, than do those of the ascendant middle classes. Inevitably, the crumbling of ancient hierarchy will affect the received morality of certain forms of consumption. Will those who have no chance of eating crushed diamonds resent the rights of those who do? Eating sugar might eventually bridge the distance between such groups. For this reason, what the consumption of sugar permits us to understand about how societies change may matter more than the consumption itself.

(So useful was sugar in the medical practice of Europe from the thirteenth through the eighteenth centuries that the expression "like an apothecary without sugar" came to mean a state of utter desperation or helplessness. As sugar became more commonplace and honey more costly, the permeation of the pharmacopoeia by sucrose grew more pronounced. (The switching of honey and sugar was not limited to medicine; later their use as foods and preservatives would also be exchanged.)

But the spread of sugar as medicine also involved some important controversies. In a concise modern summary of sugars in pharmacy, Paul Pittenger, biochemist and pharmacologist, lists twenty-four uses for sucrose alone; of these, at least sixteen were almost certainly known to, and employed by, physicians of the Islamic world before the fourteenth century.<sup>65</sup> Given this intensive and varied use of one

“medicine,” first borrowed from an increasingly suspect foreign civilization, the rise of more independent medical perspectives among the physicians and pharmacists of Europe eventually led to some questioning of sugars as remedies. While European physicians never emerged as consistently antisucrose before this century, there were debates about the extent to which sugar should be relied upon in everyday medical practice. In some instances, arguments developed over the interpretations of Galenic medicine itself. Sixteenth-century criticisms of sugar by medical authorities may even have formed part of fashionable, anti-Islamic *partis pris*, common in Europe from the Crusades onward.

Miguel Serveto (Michael Servetus, 1511–53) and Leonhard Fuchs (1501–56) were the principal antagonists. Serveto, a precocious and overconfident young Spanish theologian who was to end his life at the stake (after having quite innocently turned to John Calvin for protection), was a critic of the medical syrups of the Arab world. Though he never practiced medicine, he served as an assistant in dissection, attended lectures at the University of Paris, and wrote two essays attacking the “Arabists.” In the second, *On Syrups*, he charged the so-called Arabist School (especially Avicenna and Manardus) with distorting Galenic teaching.<sup>66</sup>

Paracelsus (1493?–1541) was also critical of the wide use of sucrose and syrups, and perhaps of their presence in Islamic formularies, but his hostility seems to have been directed more toward the doctors than toward sugar itself: “creating mixtures of good and bad, sugar combined with gall . . . and their friends the apothecaries, those swill-makers who do an idiot’s job by mixing drugs with sugar and honey.”<sup>67</sup> Yet he also considered sugar “one of nature’s remedies,” recognized its utility as a preservative, and objected principally to its being combined with bitter medicines such as aloes or gentian, the effectiveness of which he thought it reduced. Some authorities argued that since sugar was capable of masking some poisons by its sweetness, it could be used sinfully.

Other authorities were not so much opposed to sugar as reserved about its therapeutic qualities. Hieronymus Bock’s *New Herb Book* (1539) considers sugar “more as an extravagance for the rich than as a remedy,” a truth many of his contemporaries would not ac-

knowledge. He mentions sugar’s usefulness for candying anise and coriander, violets, roses, and peach blossoms, and orange peel, which are items “good for ailments of the stomach,” but he adds, rather offhandedly, that “he who cannot pay for the sugar may boil [such other ingredients] in water.”<sup>68</sup>

Nevertheless, by the sixteenth century the medical uses of sugar had become widely established in Europe. Writers specified those uses. Tabernaemontanus (c. 1515–90) gave sugar a generally good assessment, even while identifying one of its disadvantages:

Nice white sugar from Madeira or the Canaries, when taken moderately cleans the blood, strengthens body and mind, especially chest, lungs and throat, but it is bad for hot and bilious people, for it easily turns into bile, also makes the teeth blunt and makes them decay. As a powder it is good for the eyes, as a smoke it is good for the common cold, as flour sprinkled on wounds it heals them. With milk and alum it serves to clear wine. Sugar water alone, also with cinnamon, pomegranate and quince juice, is good for a cough and a fever. Sugar wine with cinnamon gives vigor to old people, especially a sugar syrup with rose water which is recommended by Arnaldus Villanovanus. Sugar candy has all these powers to higher degree.<sup>69</sup>

From the late sixteenth century, medical references to sugar occur commonly in English texts. According to Vaughan’s *Naturall and Artificial Directions for Health*, “it mitigateth and openeth obstructions. It purgeth fleagme, helpeth the reines, and comforteth the belly.”<sup>70</sup> Rice, “sodden with milke and sugar qualifieth wonderfully the heat of the stomake, increaseth genitall seede, and stoppeth the fluxe of the belly.” Strawberries “purified in wine, and then eaten with good store of sugar doe assuage choler, coole the liver, and provoke appetite.”<sup>71</sup> Still, Vaughan had some of the same reservations as Tabernaemontanus:

Sugar is of a hot quality, and is quickly converted to Choler; for which cause I cannot approve the use thereof in ordinary meates, except it bee in vinegar or sharpe liquor, specially to young men, or to them which are of hot complexions: for it is most certain that they which accustome themselves unto it, are commonly thirsty and dry, with their blood burned, and their teeth blackened

and corrupted. In medicine-wise, it may be taken either in water, for hot Feavers, or in syrups, for some kinde of diseases. In beer I approve it most wholesome.<sup>72</sup>]

Vaughan goes on to recommend sugar for “noises and soundes in the Eares,” dropsy, ague, cough, flux, melancholia, and much else.

Tobias Venner, writing in 1620, provides an illuminating opinion, first by comparing sugar medically to honey, second by distinguishing among sugar’s then-used varieties. Whereas honey is “hot and dry in the second degree, and of an abstersive and soluble facultie”—more Galenical (humoral) shoptalk of the time—

Sugar is temperately hot and moyst, of a detersive facultie, and good for the obstructions of the breast and lungs; but it is not so strong in operation against phlegm as honey. . . . Sugar agreeth with all ages, and all complexions; but contrariwise, Honie annoyeth many, especially those that are cholerick, or full of winde in their bodies. . . . Water and pure Sugar onely brewed together, is very good for hot, cholericke, and dry bodies, that are affected with phlegme in their breast. . . . Sugar by how much the whiter it is, by so much the purer and wholsomer it is, which is evident by the making and refining of it. It is made much after the same manner and forme as white salt is. The Sugar is nothing else but the iuyce of certain canes or reeds, which is extracted by boyling them in water, even after the same manner and fashion as they do salt. This first extracted Sugar is grosse, and of red colour: it is hot and dry, somewhat tart in taste, and of a detersive facultie: by longer boyling it becometh hard, which we call Red Sugar Candie, which is only good in glysters, for to clense and irritate the expulsive facultie. This grosse reddish Sugar is againe mixed with water, and boyled, and cometh to be of an whitish colour, less hot, more moyst, and more acceptable to the taste and stomacke. This kinde of second Sugar, we call common or kitchen Sugar. This being the third time diluted, and decocted, is of excellent temperament, most white, and of a singular pleasant taste. This is the best, purest, and wholesomest sugar . . . by further boyling becommeth hard, and of a resplendent white colour, which we commonly call white Sugar Candie: this is the best sugar for diseases of the breast, for it is not altogether so hot as the other Sugar, and is also somewhat of a more pure and subtile moysture. Wherefore it excellently assuageth and moystneth the asperitie and siccitie of the tongue, mouth, throat, and winde-pipe; and is very good for a dry cough, and other infirmities

of the lungs; it is most accomodate for all hot and dry constitutions.<sup>73</sup>

Most such home-physician books of the seventeenth century do not differentiate among sugar’s possible medical uses, contenting themselves instead with discussions of sugar’s place in humoral medicine, followed by various specific (and usually exotic) “prescriptions.” Among the uses that seem to appear with considerable regularity are prescriptions for chest coughs, sore throat, and labored breathing (some of which uses persist to this day); for eye ailments (in the care of which sugar now appears to have completely disappeared); and a variety of stomachic remedies.

Not surprisingly, perhaps, an antisugar school of medicine arose anew, in the seventeenth and eighteenth centuries. In the same year that the seventh edition of Vaughan’s work appeared, James Hart’s *Klinike or the Diet of Diseases* raised some of the questions that were occurring to physicians of the time. Though the humoral context that would continue to dominate European medical thinking for another 150 years was plainly still very strong, Hart had some serious questions about sugar:

Sugar hath now succeeded honie, and is become of farre higher esteem, and is far more pleasing to the palat, and therefore everywhere in frequent use, as well in sicknesse as in health. . . . Sugar is neither so hot nor so dry as honie. The coursest, being brownest, is most cleansing and approacheth nearest unto the nature of hony. Sugar is good for abstersion in diseases of the brest and lungs. That which wee commonly call Sugarcandie, being well refined by boiling, is for this purpose in most frequent request, and although Sugar in it Selfe be opening and cleansing, yet being much used produceth dangerous effects in the body: as namely, the immoderate uses thereof, as also of sweetconfections, and Sugar-plummes, heateth the blood, ingendreth the *landise obstructions, cachexias, consumptions*, rotteth the teeth, making them look blacke, and withall, causeth many time a loathsome stinking-breath. And therefore let young people especially, beware how they meddle to much with it.<sup>74</sup>

Until late in the eighteenth century, the prosugar and antisugar authorities would engage in serious argument about sugar’s medic-



inal properties. But the medical and nutritional aspects of sugar's role were never far apart, any more than they are today. Whereas the Frenchman de Garancières thought that overconsumption of sugar by the English led to their melancholic dispositions, the Englishman Dr. Frederick Slare found sugar a veritable cure-all, its only defect being that it could make ladies too fat.

Slare's work is one of the most interesting of its time (1715), even to its title: *A Vindication of Sugars Against the Charge of Dr. Willis, Other Physicians, and Common Prejudices: Dedicated to the Ladies*.<sup>75</sup> Slare lost his quarrel with Dr. Willis, though he never knew it. Dr. Willis was the discoverer of diabetes mellitus, and his anti-sugar views arose from his study of the disease. Slare was eager to prove that sugar was beneficial to everyone, and could cause no medical harm. But his book does much more. Its dedication is accompanied by the assertion that female palates were more refined than males', "not being debauch'd by sowre or uncouth values, or Drams, or offensive Smoak, or the more sordid juice of the Indian Henbane, which is Tobacco, or vitiated by salt and sowre Pickles, too much the delight of our Coarser Sex."<sup>76</sup> That women would become "Patronesses of the Fair SUGAR" Slare fully expected, since they "of late had more experience of it, in a more liberal use than formerly."

Slare's encomia to sugar are accompanied by his recommendations to women to make their "Morning Repasts, call'd Break-fasts" consist of bread, butter, milk, water, and sugar, adding that coffee, tea, and chocolate are similarly "endowed with uncommon virtues." His message concerning sugar, he says, will please the West Indian merchant,

who loads his Ships with this sweet treasure. By this commodity have Numbers of Persons, of inconsiderable Estates, rais'd Plantations, and from thence have gain'd such Wealth, as to return to their native Country very Rich, and have purchas'd, and do daily purchase, great Estates.

The Grocer, who retails what the Merchant furnishes by wholesale, is also concerned for the Credit and Good Name of his defam'd and scandaliz'd Goods, out of which he has also made his Fortune, his Family Rich and Wealthy. In short, there is no

Family through the Kingdom but would make use of it, if they can get it, and would look upon it as a Matter of great Complaint, and a Grievance to be depriv'd of the use of it."<sup>77</sup>

Having dwelled upon these somewhat tangential aspects of sugar's virtues, however, Slare turns to its medical utility, offering the reader almost immediately a prescription from "the famous oculist of Sarum, Dr. Turberville," for ailments of the eye: "two drams of fine sugar-candy, one-half dram pearl, one grain of leaf gold; made into a very fine and impalpable powder, and when dry, blow a convenient quantity into the eye."<sup>78</sup> We see here anew the mixture of sugar and preciosities to be consumed in medication, harking back both to the medicine of the plague and the subtleties of earlier centuries. Mixing sugar, pearls, and gold leaf to produce a powder in order to blow it into one's ailing eye may seem bizarre in the extreme. It is necessary to keep in mind both the trustfulness born of desperation, and the power we invest in the things we hold dear.

Slare piles wonder upon wonder. We are instructed next on the value of sugar as a *dentifrice* (Slare prescribed it for his patients with great success, he says); as a hand lotion also helpful for external lesions; as snuff in place of tobacco; and for babies: "For I have heard many Ladies of the better Rank, who read Books of some learned Persons, condemn Sugar, and denied it to their poor Babes very injuriously."<sup>79</sup> "You may soon be convinc'd of the satisfaction a Child has from the Taste of Sugar," he writes, "by making two Sorts of Water-Paps, one with, and the other without Sugar, they will greedily suck down the one, and make Faces at the other: Nor will they be pleas'd with Cow's Milk, unless that be bless'd with a little Sugar, to bring it up to the Sweetness of Breast-Milk."<sup>80</sup>

Slare's enthusiasm is highly suspect but his work is much more than a mere curiosity, because it touches on so many aspects of what was even then a relatively new commodity for most people. The consumption of sugar in England was rising rapidly, and production of it in the British West Indies, following the conquest of Jamaica and steady increases in the slave trade, was keeping pace. By stressing its uses as medicine, food for persons of all ages, preservative, etc., Slare was simultaneously reporting on the success of

sugar while attracting additional attention to it. "I forbear," he writes,

to enumerate one Half of the Excellency of Sugar. I will refer the Reader to Confectioners Shops, or the Stores for Sweet-meats in the Places of the Rich, or rather to a Banquet, or Dessert serv'd up at a generous Feast, with the Encomium of Eloquent Ladies at the End of a Treat, upon every charming Sweet, which is purely owing to the artful Application of Sugar, being first the Juice of the Indian Cane, more grateful and more delicious than the mellifluous Liquid of the Honey-comb.<sup>81</sup>

John Oldmixon, a contemporary, expressed similar sentiments:

One of the most pleasant and useful Things in the World, for besides the advantage of it in Trade, Physicians and Apothecaries cannot be without it, there being nearly three Hundred Medicines made up with Sugar; almost all Confectionery Wares receive their Sweetness and Preservation from it, most Fruits would be pernicious without it; the finest Pastries could not be made nor the rich Cordials that are in the Ladies' Closets, nor their Conserves; neither could the Dairy furnish us with such variety of Dishes, as it does, but by their Assistance of this noble Juice.<sup>82</sup>

[As medicine it would become less uncritically prescribed in the late eighteenth and nineteenth centuries, and its medical role steadily diminished as it was transformed into a sweetener and preservative on a mass basis.] Yet it mattered little whether people continued to use it medically, since they were already consuming it in substantial quantities. The former medicinal purposes of sugar were now assimilated into a new function, that of a source of calories.

[Sugar as sweetener came to the fore in connection with three other exotic imports—tea, coffee, and chocolate—of which one, tea, became and has since remained the most important nonalcoholic beverage in the United Kingdom. All are tropical products, all were new to England in the third quarter of the seventeenth century, all contain stimulants and can be properly classified as drugs (together with tobacco and rum, though clearly different both in effects and addictiveness). All began as competitors for British preference,

so that the presence of each probably affected to some extent the fate of the others.

All three beverages are bitter. A liking for bitterness, even extreme bitterness, falls "naturally" within the range of normal human taste response and can be quickly and firmly developed. The popularity of such diverse substances as watercress, beer, sorrel, radishes, horseradish, eggplant, bitter melon, pickles, and quinine, to name only a few, suggests a broad human tolerance for bitterness. Turning this into a preference usually requires some culturally grounded habituation, but it is not difficult to achieve under certain circumstances.

Sweet-tasting substances, however, appear to insinuate themselves much more quickly into the preferences of new consumers. The bitter substances are "bitter-specific"—liking watercress has nothing to do with liking eggplant, for instance. But, in contrast, liking sucrose seems to be "sweet-general." Added to bitter substances, sugar makes them taste alike, at least insofar as it makes them all taste sweet. What is interesting about tea, coffee, and chocolate—all harshly bitter substances that became widely known in Great Britain at approximately the same time—is that none had been used exclusively with a sweetener in its primary cultural setting. To this day tea is drunk without sugar in China and by overseas Chinese. (Tea usage in India poses somewhat different problems, deeply influenced as it was by the export of British customs, and intensely developed in India only under British stimulus.) Coffee is often drunk with sugar, but not everywhere, and not always, even within areas of ancient usage such as North Africa and the Middle East. Chocolate was commonly (though not invariably) used as a food flavoring or sauce without sweetener in its original tropical American home.<sup>83</sup>

Though it is possible to date the first appearance of coffee, tea, and chocolate in Britain with fair confidence, documentation for the custom of adding sugar to such beverages during the early period of their use in the United Kingdom is almost nonexistent. Since the combination of a nonalcoholic, bitter, calorie-empty stimulant, heated and in liquid form, with a calorie-rich and intensely sweet substance came to mean a whole new assemblage of beverages, the

lack of detailed information on how such combinations were first formed and received is frustrating. More than a century after coffee and tea habits were well established, Benjamin Moseley, a physician who practiced in the West Indies, tells us, "It has long been a custom with many people among us, to add mustard to their coffee. . . . The Eastern nations add either cloves, cinnamon, cardamoms, etc., but neither milk, or sugar. Milk and sugar, without the aromatics, are generally used with it in Europe, America, and the West India islands."<sup>84</sup> But by this time the English people had been drinking these beverages for more than a century. In his treatise on beverages, however, John Chamberlayn asserts that sugar was taken with all three by the time he was writing (1685).<sup>85</sup>

Tea eventually supplanted home-brewed small beer almost entirely, even contested the popularity of sugar-flavored wines (such as hippocras), as well as gin and other strong alcoholic intoxicants. But at first, all three new beverages were drunk only by the wealthy and powerful, slowly becoming desired by the poor, and later preferred by them to other nonalcoholic drinks. By the time that tea and its sister drinks were taken up by working people, they were being served hot and sweetened. Well suited to the needs of people whose caloric intake may actually have been declining during the eighteenth century, and for whom a hot, sweet beverage must have seemed especially welcome given their diet and England's weather, these drinks swiftly became popular. As the English drank more and more of the new substances, the beverages themselves became more and more English in two senses: by the process of ritualization, on the one hand; and by being produced more and more in British colonies—at least for another century or two—on the other.

Catherine of Braganza, the Portuguese bride of Charles II, who reigned from 1649 to 1685, was "England's first tea-drinking queen. It is to her credit that she was able to substitute her favorite temperance drink as the fashionable beverage of the court in place of the ales, wines, and spirits with which the English ladies, as well as gentlemen 'habitually heated or stupefied their brains morning, noon and night.'<sup>86</sup> As early as 1660, tea was being touted in London advertising: a famous broadside distributed by Garway's beverage house vaunts tea's supposed medicinal virtues. Before 1657, we are

told, tea had been used only "as a regalia in high treatments and entertainments, and presents made thereof to princes and grandees."<sup>87</sup> But the Sultanness Head Coffee House had already advertised tea in the London newspaper *Mercurius Politicus* on September 30, 1658: "That excellent and by all physicians approved *China* drink, called by the Chineans *Tcha*, by other nations *Tay*, alias *Tee*, is sold at the Sultanness Head Cophee House. . . ."<sup>88</sup>

Little more than a year later, *Mercurius Politicus Redivivus*, edited by Thomas Rugge, reports: "Theire ware also att this time a turkish drink to bee sould, almost in every street, called Coffee, and another drink called Tee, and also a drink called Chocolate, which was a very hartly drink." The first London coffeehouse appears to have been opened by a Turkish merchant in 1652, and the institution grew with amazing rapidity, both on the Continent and in England. The late-seventeenth-century French traveler Misson was favorably impressed by London's coffeehouses: "You have all Manner of News there: You have a good Fire, which you may sit by as long as you please: You have a Dish of Coffee; you meet your Friends for the Transaction of Business, and all for a Penny, if you don't care to spend more."<sup>89</sup>

Arnold Heeren, the German historian, writing of the eighteenth century, tells us:

The mercantile system lost none of its influence. . . . This was a natural consequence of the ever increasing importance of colonies, from the time that their productions, especially coffee, sugar, and tea, began to come into more general use in Europe. The great influence which these commodities have had, not only on politics, but also on the reformation of social life, is not easily calculated. Apart from the vast gains resulting to the nations at large from commerce, and to the governments from duties—what influence have not coffee-houses exercised in the capitals of Europe, as central points of political, mercantile, and literary transactions? In a word without those productions, would the states in the west of Europe have acquired their present character?<sup>90</sup>

Chocolate soon followed tea and coffee; it was more expensive than coffee, and gained greater favor with the rich. Chamberlayn's 1685 tract on the preparation of these three beverages indicates

that they were already being taken with sugar ("small quantities") and makes clear that their use was slowly spreading throughout society.

In terms of drinkable beverage rendered per pound, tea soon emerged as the most economical. But its growing popularity cannot be so much attributed either to its relative price or to any intrinsic superiority to these other exotic stimulants, as to the way it is used. Tea can be more successfully adulterated than either coffee or chocolate,<sup>91</sup> apparently because it can be tolerated, even when very diluted, more readily than those other beverages. Perhaps weak sweet tea tastes more satisfying than equally weak, equally sweet coffee or chocolate. At any rate, such possible virtues of tea were revealed only when imperial protection for its cultivation and production was turned toward India by the machinations of the importers.

The Honourable East India Company was chartered in 1660, one of what were eventually sixteen such companies—Dutch, French, Danish, Austrian, Swedish, Spanish, and Prussian—competing for trade in the Indies. None was so powerful or successful as the John Company, as this British chartered body was also called, which made its start importing pepper, but grew important because of tea.

Its early adventures in the Far East brought it to China, whose tea was destined later to furnish the means of governing India. . . . During the hey-day of its prosperity John Company . . . maintained a monopoly of the tea trade with China, controlled the supply, limited the quantity imported into England, and thus fixed the price. It constituted not only the world's greatest tea monopoly but also the source of inspiration for the first English propaganda on behalf of a beverage. It was so powerful that it precipitated a dietetic revolution in England, changing the British people from a nation of potential coffee drinkers to a nation of tea drinkers, and all within the space of a few years. It was a formidable rival of states and empires, with power to acquire territory, coin money, command fortresses and troops, form alliances, make war and peace, and exercise both civil and criminal jurisdiction.<sup>92</sup>

As tea drinking became popular in England, the smuggling of tea grew into a major business and, for the tax agents of the crown, a

major headache. In 1700, England received legally about twenty thousand pounds.<sup>93</sup> By 1715, Chinese green tea was flooding the London market (thanks to the John Company), and by 1760, duty was paid on more than five million pounds. By 1800, the legally imported total alone was more than twenty million pounds. In 1766, however, the government was estimating that as much smuggled as legally introduced tea was reaching England. In that year the Honourable East India Company carried more tea away from China—six million pounds—than any of its competitors. Not until 1813 did the government intercede in the company's administrative and commercial activities, and not until 1833 was its monopoly to China—largely consisting of tea—finally terminated.

There is no comparable story for either coffee or chocolate; nor is any such monopoly to be found in the history of West Indian sugar, where different sugar colonies vied with one another. But the relationship among these four products—together with rum (molasses) and tobacco—was intimate and entangled. Tea won out over coffee and chocolate and, in the long run, even over beer and ale (though by no means altogether over rum and gin!)—for many different reasons. But the East India Company's monopoly, which led in turn to the complete domination of tea growing in India by British capital—and with total governmental support—played an important part. India tea (usually combining leaves from both Indian and Chinese plants) was much delayed by the antagonism of the selfsame East India Company. By 1840, however, it was in production, which

marked the beginning of the end of China tea in England. . . . Within six years from the time Lord Bentinck had appointed his tea committee, the Government had demonstrated that *British grown tea* could be produced in marketable quantities. . . . Within the span of three generations British enterprise carved out of the jungles of India an industry that covered over two million acres, representing a capital investment of £36,000,000 with 788,842 acres under tea producing 432,997,916 lbs. annually, giving employment to one and a quarter million people; at the same time creating one of the most lucrative sources of private wealth and government tax returns in the British Empire [*italics added*].<sup>94</sup>

The success of tea, like the less resounding successes of coffee and chocolate, was also the success of sugar. In the view of the West Indian interest, increasing consumption of any of these exotic liquid stimulants was highly desirable, for sugar went with them all. Tea was pushed hardest by British trade, and its victory over competing beverages was conditioned by factors quite unrelated to its taste. That it was a bitter stimulant, that it was taken hot, and that it was capable of carrying large quantities of palatable sweet calories told importantly in its success. But unlike that of coffee and chocolate, the production of tea was developed energetically in a single vast colony, and served there as a means not only of profit but also of the power to rule. The same could not really be said of chocolate or coffee at the time; the better analogy, if any, would be with sugar.

Tea's success was phenomenally rapid. Before the midpoint of the eighteenth century, even Scotland had become a land of tea addicts. The Scottish jurist and theologian Duncan Forbes looked back in time to write:

But when the opening [of] a Trade with the East-Indies... brought the Price of Tea... so low, that the *meanest* labouring Man could compass the Purchase of it;—when the Connection which the Dealers in their Country had with many *Scotsmen* in the Service of the *Swedish* Company at *Gottenburg*, introduced the Common Use of that Drug among the *lowest* of the People;—when *Sugar*, the inseparable Companion of Tea, came to be in the possession of the very poorest Housewife, where formerly it had been a great Rarity,—and therby was *at hand*, to mix with Water and Brandy, or Rum;—and when Tea and Punch became thus the *Diet* and *Debauch* of all the Beer and Ale Drinkers, the effects were very suddenly and severely felt.<sup>95</sup>

And the historian of Scotland David MacPherson, writing at the beginning of the nineteenth century, looked back to the lowering of the duties on tea in 1784, and the even sharper increase in use that followed upon it:

Tea has become an economical substitute to the middle and lower classes of society for malt liquor, the price of which renders it impossible for them to procure the quantity sufficient for them

as their only drink... In short, we are so situated in our commercial and financial system, that tea brought from the eastern extremity of the world, and sugar brought from the West Indies and both loaded with the expense of freight and insurance... compose a drink cheaper than beer.<sup>96</sup>

Cheapness was important, but it does not by itself explain the growing tendency toward tea consumption. The cleric David Davies, an important observer of rural life at the end of the eighteenth century, discerned the combined circumstances leading to a deepening preference for tea and sugar over other items of diet at the time. Davies insisted that the rural poor would produce and drink milk if they could afford to keep a cow, but that this was beyond the means of most, and his detailed budgetary records support his view. Then, because malt was a taxed item, it was too costly to enable the poor to make small beer:

Under these hard circumstances, the dearness of malt, and the difficulty of procuring milk, the only thing remaining of them to moisten their bread with, was *tea*. This was their last resource. Tea (with bread) furnishes one meal for a whole family every day, at no greater expense than about one shilling a week, at an average. If any body will point out an article that is cheaper and better, I will venture to answer for the poor in general, that they will be thankful for the discovery.<sup>97</sup>

Davies was sensitive to the arguments against tea:

Though the use of tea is more common than could be wished, it is not yet general among the labouring poor: and if we have regard to numbers, their share of the consumption is comparatively small; especially if we reckon the *value* in money.

Still, you exclaim *tea is a luxury*. If you mean fine hyson tea, sweetened with refined sugar, and softened with cream, I readily admit it to be so. But *this* is not the tea of the poor. Spring-water, just coloured with a few leaves of the lowest-priced tea, and sweetened with the brownest sugar, is the luxury for which you reproach them. To this they have recourse of necessity; and were they now to be deprived of this, they would immediately be reduced to bread and water. Tea-drinking is not the cause, but the consequence of the distresses of the poor.

After all, it appears a very strange thing, that the common people of any European nation should be obliged to use, as part of their daily diet, two articles imported from opposite sides of the earth. But if high taxes, in consequence of expensive wars, and the changes which time insensibly makes in the circumstance of countries, have debarred the poorer inhabitants of this kingdom the use of such things as are the natural products of the soil, and forced them to recur to those of foreign growth; surely this is not *their* fault.<sup>98</sup>

Of course it was remarkable that, so early in England's history, "the common people . . . should be obliged to use, as part of their daily diet, two articles imported from opposite sides of the earth." It was remarkable not only for what it shows us about the English economy, already in large measure a nation of wage earners, but also for what it reveals about the intimacy of the links between colony and metropolis, fashioned by capital. So vital had sugar and tea become in the daily lives of the people that the maintenance of their supply had by then become a political, as well as an economic, matter.

Other observers of English rural life, such as Sir Frederick Eden, also noted the growing consumption of tea and sugar in the countryside. Eden collected large numbers of individual family budgets, two of which, dating from 1797, are illustrative of the trend in sugar consumption. The first, a southern family of six, had a cash income of forty-six pounds per year; their calculation of money spent on food actually exceeds that figure slightly. This family's purchases were estimated to include two pounds of sugar weekly, or about a hundred pounds per year, which would give a per-capita average consumption of nearly seventeen pounds—a startlingly high figure for the time. The northern family had a more modest income. There were five, rather than six, members and they spent disproportionately less on food. Nonetheless, of the twenty pounds estimated to have been expended for food annually, tea and sugar cost £1 12s., and treacle 8s. more—in all, 10 percent of the cash purchases of food.<sup>99</sup>

Jonas Hanway, the eighteenth-century social reformer, was intensely hostile to the consumption of tea by the poor. The richness of his feelings can be conveyed by the following:

It is the curse of this nation that the labourer and mechanic will ape the lord. . . . To what a height of folly must a nation be arrived, when the common people are not satisfied with wholesome food at home, but must go to the remotest regions to please a vicious palate! There is a certain lane . . . where beggars are often seen . . . drinking their tea. You may see labourers mending the roads drinking their tea; it is even drank in cinder-carts; and what is not less absurd, sold out in cups to haymakers. . . . Those will have tea who have not bread. . . . Misery itself has no power to banish tea.<sup>100</sup>

John Burnett, a painstaking modern student of the history of British nutrition, reproaches Hanway gently. "Contemporary writers," he tells us, "are unanimous in blaming the labourer for his extravagant diet, and tireless in demonstrating that by better management he might have more meat and more variety in his meals. None of them seemed . . . to recognize that white bread and tea were no longer luxuries, but the irreducible minimum below which was only starvation. . . . Two ounces of tea a week, costing 8d. or 9d., made many a cold supper seem like a hot meal."<sup>101</sup> A number of scholars note that the substitution of tea for beer was a definite nutritional loss; tea was bad not only because it was a stimulant and contained tannin, but also because it supplanted other, more nutritious foods: "The poor people found that they could enjoy a quite deceptive feeling of warmth after drinking hot tea, whereas, in fact, a glass of cold beer would have given them far more real food."<sup>102</sup>

It was not simply as a sweetener of tea that sucrose became an item of mass consumption between the late seventeenth century and the end of the eighteenth. Mrs. Hannah Glasse's special confectionery cook book (1760), probably the first of its kind, appeared in more than a dozen editions and was widely read (and plagiarized); it probably contributed to the behavioral bridging between matron and drudge that accompanied the emergence of newer middle-class segments. It offers good evidence of how comprehensively sugar was entering the English diet. This pathbreaking work dealt not only with sugar-sculpture frames and mini-subtleties, but also with sweetened custards, pastries, and creams, the recipes for which required port, madeira, sack (sweet sherry), eggs, cream, lemons, or-



anges, spices, and immense quantities of sugar of many sorts. By instructing the rising middle classes in the fabrication of pastries and other desserts, Mrs. Glasse provides rich documentation that sugar was no longer a medicine, a spice, or a plaything of the powerful—though of course the powerful would continue to play with sugar, in new ways.

For the poor, probably the next most important use of sugar after sweetening tea was in supplementing the consumption of complex carbohydrates, particularly porridges and breads, with treacle (molasses). "Hasty pudding," so called, was in fact oatmeal porridge, commonly eaten with butter, milk, or treacle.<sup>103</sup> In the eighteenth century, treacle apparently dislodged the older combinations. Though molasses served as a sweetener in this instance, the taste of sweetness it afforded the porridge was probably more pronounced than in the case of tea, though tea was commonly drunk very sweet.

The first half of the eighteenth century may have been a period of increased purchasing power for laboring people,<sup>104</sup> even though the quality of nutrition probably declined at the same time. Innovations like the liquid stimulants and the greatly increased use of sugar were items for which additional income was used, as well as items by which one could attempt emulation of those at higher levels of the social system. But labeling this usage "emulation" explains very little. The circumstances under which a new habit is acquired are as important as the habits of those others from whom the habit is learned. It seems likely that many of the new tea drinkers and sugar users were not fully satisfied with their daily fare. Some were doubtless inadequately fed; others were bored by their food and by the large quantities of starchy carbohydrates they ate. A hot liquid stimulant full of sweet calories doubtless "hit the spot," perhaps particularly for people who were already undernourished.

C. R. Fay, a sometimes mordant commentator on English social history, writes: "Tea, which refreshes and quietens, is the natural beverage of a taciturn people, and being easy to prepare, it came as a godsend to the world's worst cooks."<sup>105</sup> It is true that tea is easier to prepare (and soon became cheaper) than either coffee or chocolate. But the East India Company had much to do with which

of these beverages would win out ultimately; and sugar may have helped as much as tea did to transform the English diet. It surely provided more calories.

These additions to the diet of the English people signaled the linkage of the consumption habits of every Englishman to the world outside England, and particularly to the colonies of the empire. For many people this widening of food choices was a distinct advantage, sometimes displayed with charm and wry humor:

I am heartily glad that we shall keep Jamaica and the East Indies another year, that one may have time to lay in a stock of tea and sugar for the rest of one's days. I think only of the necessaries of life, and do not care a rush for gold and diamonds, and the pleasure of stealing logwood. The friends of government, who have thought on nothing but reducing us to our islandhood and bringing us back to the simplicity of ancient times, when we were the frugal, temperate, virtuous old England, ask how we did before tea and sugar were known. Better, no doubt; but as I did not happen to be born two or three hundred years ago, I cannot recall precisely whether diluted acorns, and barley bread spread with honey, made a very luxurious breakfast [letter of Horace Walpole to Sir Horace Mann, 15 November 1779].<sup>106</sup>

The uses of sugar as a sweetener for beverages grew in the company of ever more common pastries, often eaten with the beverages or in place of bread. This use would not reach its fullest development until the mass production of fruit preserves, conditioned by big drops in the price of sugar, was mastered in the nineteenth century. But as the use of tea and the other exotic beverages increased, so did the consumption of breads baked outside the home, which were often sweetened. Misson, the late-seventeenth-century French traveler who had rhapsodized about the coffehouses, thought well of English puddings, too. Of "Christmas Pye," he writes, "It is a great Nostrum the composition of this Pastry; it is a most learned Mixture of Neats-tongues, Chicken, Eggs, Sugar, Raisins, Lemon and Orange Peel, various Kinds of Spicery, &c."<sup>107</sup> Of course such treats were not yet for the frequent delectation of the poorest segments of English society in the early eighteenth century. But as sugar became better known

and more familiar, pastries and puddings became more widespread. "Red" (brown) sugar and treacle were now widely used in baking, in puddings, with cereals, spread upon bread, and in other ways.

Elisabeth Ayrton deals at length with the English sweet tooth in her sprightly and literate *The Cookery of England* (1974):

Sugar had been a luxury too expensive for many until the beginning of the eighteenth century, when the price dropped to about 6d. per pound. Once it had done so, the practice of "scraping" the conical sugar-loaf over the crust of a pie and of supplementing sugar in the contents with raisins, was enlarged to a fuller use of sugar in pies and tarts and to its use with "flower" to make puddings.

At first the puddings formed part of the second or third course, which might also consist of fish, some lighter meat dishes, pies, tarts, vegetables or fruit. By the beginning of the nineteenth century they often, though not invariably, followed the savoury dishes as a separate course. In the first part of the eighteenth century a "pudding" almost always meant a basis of flour and suet with dried fruit, sugar and eggs added. As the century went on, hundreds of variations were evolved, recipes multiplied; even the plainest dinner served above the poverty line was not complete without its pudding.

Hot puddings, cold puddings, steamed puddings, baked puddings, pies, tarts, creams, moulds, charlottes and bettys, trifles and fools, syllabubs and tansys, junkets and ices, milk puddings, suet puddings: "pudding" used as a generic term covers so many dishes traditional in English cookery that the mind reels as it dwells on these almost vanished splendours of our tables.<sup>108</sup>

New foods and beverages were incorporated into daily life with unusual rapidity, and sugar had an important role in nearly all of these new items. But people do not simply add such important things to their diets without noticing what they are and how they can be used. Drinking tea, eating bread smeared with treacle or porridge sweetened with it, baking sweet cakes and breads were all acts that would gradually be assimilated into the calendar of work, recreation, rest, and prayer—into the whole of daily life, in sum—as well as into the cycle of special events such as births, baptisms, marriages, and funerals. In any culture, these processes of assimilation are also

ones of appropriation: the culture's way of making new and unusual things part of itself.

In complex hierarchical societies, "the culture" is never a wholly unified, homogeneous system, however. It is marked by behavioral and attitudinal differences at different levels, which are expressed and reflected in the differing ways ideas, objects, and beliefs are used, manipulated, and changed. Cultural "materials"—including material objects, the words for them, ways of behaving and of thinking, too—can move upward or downward, from lord to commoner, or vice versa. But when they do so, they are not unaltered or unchanged in meaning. And it would be naïve to assume that such diffusion occurs as readily or as often in an upward direction as in a downward. Wealth, authority, power, and influence surely affect the ways diffusion occurs.

Substances such as sugar, tea, and tobacco, their forms and uses, became embedded somewhat differently in different portions of the English social system, and the meanings attached to them varied as well. At each level, moreover, differences of age, sex, and the norms of social assortment affect the ways new usages are institutionalized and relearned. Sometimes old men, sometimes young wives, sometimes infants of both sexes will be most affected by one or another such substance. In the case of sugar, the downward movement that typified its spread was accompanied, as we have seen, by changes in what it meant or could mean to those who used it. Since it took many forms, the meanings attachable to sugar would vary depending on whether it was a spice, a medicine, a form of decoration, a sweetener, or whatever—and also depending on the social group employing it.

In general terms, sugar's use as a spice and a medicine declined as its use as a decoration, a sweetener, and a preservative increased. In these latter categories, its availability for new meanings broadened, as its nature was more fully grasped by those who used it. It formed part of a "tea complex" (the term is used with some hesitancy) that gradually came to characterize British society top to bottom—though intricately and profoundly differentiated at different levels. Here it was both a sweetener of the tea itself and a fundamental ingredient of many of the foods that accompanied the

tea. As a decoration, sugar was obviously important in ceremonial contexts, such as weddings, birthday parties, and funerals, where sculptured sugar could serve to memorialize—though of course the events in question were no longer matters of state or the appointments of church dignitaries. As a preservative, it had additional potentialities.]

[Two somewhat different processes were occurring as these uses became more or less standard, both of them aspects of what, for lack of a better term, may be called “ritualization”—the incorporation and symbolic reinvestment of new materials. (Because ritual has to do with regularity and with a sense of fitness, rightness, and validation, its meaning here is not confined to so-called religious behavior.) One such aspect may be called “extensification”: larger numbers of persons were becoming familiar with sugar on a regular, perhaps even daily, basis. The regular consumption of sugar, particularly of cheap brown sugar or treacle, even in modest quantities, gradually reduced sugar’s status as a glamorous luxury and a precious good. As a sweetener of tea, coffee, chocolate, and alcoholic drinks, and as an ingredient of bakery and fruit desserts, sugar acquired a more everyday, down-to-earth character in the eighteenth century. More frequent and greater consumption—with the addition of new food uses and new occasions for consumption, each of which forged and consolidated particular meanings—would deepen this everyday quality. A treat, perhaps, but a familiar, reliable, and expected treat—the analogy with tea itself, say, or even with tobacco may be persuasive. As sugar became more known, more “homey,” it was endowed with ritual meanings by those who consumed it, meanings specific to the social and cultural position of the users. This is a part of the extensification itself: a recasting of meanings, now detached from the past, and from those given by other social groups.]

[In contrast, “intensification” involved more continuity with past usage, more fidelity to older meanings, more—perhaps the word is closer to the mark here—emulation. Coronations, the installation of high religious authorities, and the granting of knighthoods did not spread throughout society; but sugar did. Hence intensification meant the attachment of sugar uses to ceremonial occasions harking

back to older usage but freed of much of the social and political content they formerly carried. Wedding cakes with their elaborate icings and figures, the use of spices and sweets with meat and fowl at holidays, the use of sweet foods at rituals of separation and departure (including funerals), and a lexicon in which the imagery of sweetness figures importantly all suggest such continuity.]

The preservative powers of sucrose were recognized at a very early time, as the ninth-century record documenting the manufacture and export of fruit syrups, candied capers, and similar preserves from Persia demonstrates. The usefulness of sugar as a preservative is shared to some extent by honey, but sucrose is more effective. Its capacity to draw off moisture and thus to deprive micro-organisms of a breeding environment makes it a relatively safe vehicle for the suspension of edible solids, even meat, for lengthy periods. Just as liquid sugar or syrups can be used as a medium in which to immerse other substances, so crystalline sugars can be used to coat or seal off edible materials.

In Europe these properties were written about by the thirteenth or fourteenth century, and were probably well known before then. In the *Compendium Aromatarorium* (1488), Saladin d’Asculo described how to prevent fermentation by using concentrated sucrose solutions, and how to preserve dairy products by applying a thick coating of powdered sugar. Paracelsus also recorded sugar uses to prevent spoilage.<sup>109</sup> Preserved fruit was a delicacy known to English royalty by the fifteenth century, and doubtless earlier. The “perys in syrippe” served at the wedding feast of Henry IV and Joan of Navarre in 1403 are noteworthy, since at that time “almost the only way of preserving fruit was to boil it in syrup and flavour it heavily with spices.”<sup>110</sup> Nearly two centuries later, the household book of Lord Middleton, at Woollaton Hall, Nottinghamshire, documents the purchase of two pounds, one ounce of “marmelade” at the astronomical price of 5s. 3d.—which shows “what a luxury such imported preserved fruits were.”<sup>111</sup> Though exact equivalencies cannot be established, the money for two pounds of preserved fruit at that time would have bought approximately one pound of pepper or ginger—equally exotic imports—or nearly fourteen pounds of butter, or almost twenty-nine pounds of cheese.

Delicacies of this sort continued to be food for royalty and the very wealthy for centuries more; but as with other sugar uses, those of lesser rank aspired to consume them, too. Candied fruit was imported to England from the Mediterranean at least as early as the fourteenth century. Socade, "a form of conserve which often covers what we now term marmalade," appears in sixteenth-century cargo lists.<sup>112</sup> And the Skinners' Company banquet of 1560 featured both "marmelade" and "sukett" among the sweetmeats served. Since law did not prohibit the use of sugar by inferior social strata, potential users were constrained only by its rarity and high price. It would of course be more likely to be used by a guild or corporate group than to appear on the family tables of the individual members, at least at first.

The principal use of sugar as a preservative had a different form before the nineteenth century, however, which diminished almost to the vanishing point when the fruit-preservative usage acquired an importance it would never again surrender, after about 1875. Henry IV's 1403 wedding feast features "sugar plums, sugar made up with roses, comfitures of fruit, sage, ginger, cardamom, fennel, anise, coriander, cinnamon, powdered saffron"<sup>113</sup>—but this list mixes different sorts of sweetmeat together. The spices, which could be candied or not, come first. Plain spices were passed about on costly gold and silver spice plates, filigreed and engraved with coats of arms and often jewel-incrusted—obvious display items of rank for male nobility. With them went the drageoirs, as richly decorated and costly as the spice plates, but filled with sugared confections. Drageoirs were a female display prerogative, paralleling the spice plates. Both the spice plates and the drageoirs or comfit boxes were forms of privileged consumption, associated with royalty and the specially wealthy, until the end of the seventeenth century.<sup>114</sup>

From the fourteenth century onward, the ceremonial feasts of the English kings included the serving of comfits and spices. Both were used to accompany second and subsequent servings of wine. The spices—cardamom, cinnamon, coriander—were "digestives" (a word that is more commonly used today with this meaning in other languages besides English, such as French and Italian), or medicines to aid digestion. The candied sweets served in drageoirs were

called "dragées." The word "drageoir" is lost to modern English; but "dragée" survives with three dictionary meanings, all of them significant. The first is a sugar-coated nut; the second, a pearllike sweet used to decorate cakes; and the third, a sugar-coated medication. Here three of sugar's principal and earliest uses are summed up in a single word. The term "comfit" (cognate with French *confiture* and with English "confection") is still used generally to mean a confection with a firm (fruit, nut, seed) center, coated with sugar.

The archetypes of the comfits may have been candied sugars, *zucchero rosato* and *zucchero violato*, mentioned in the fourteenth-century accounts of Balducci Pegolotti, a Venetian trader, and in the royal exchange accounts from the fourteenth century on.<sup>115</sup> But these delicacies did not embody the flowers, only their colors and aromas. Authentic comfits—objects coated with hardened sugar—are readily traceable to Venice, and doubtless backward in time to North Africa and the Middle East. It is of incidental interest that, before *confetti* came to mean bits of colored paper, it meant bits of colored candy, and in some languages—such as Russian—it still does. The word is cognate, of course, with comfit, *confit*, and confection.

But it is unlikely that most English people first encountered sugar used as a preservative in the form of candied fruits, or fruits preserved in syrup. These remained luxuries even after working people had begun to drink heavily sweetened tea, and they did not diffuse downward at the same rate as tea. By the mid-eighteenth century, to be sure, comfits and similar treats were known to the middle classes, and may have begun to become familiar in one form or another to working people as well. Pomet, although his work deals primarily with medicines rather than foods or confections, gives a concise description of these goodies:

There are infinite Variety of Flowers, Seeds, Berries, Kernels, Plums, and the like which are, by the Confectioners, cover'd with Sugar, and bear the Name of Sugar-Plums, which would be endless to set down, and are too frivolous for a Work of this Nature: The most common of the Shops are Carraway-Confacts, Coriander, and Nonpareille, which is nothing but Orrice-Powder, cover'd with Sugar; and what is much in Vogue at *Paris* is green

Anise: Besides these, we have Almond-Confects, Chocolate, Coffee, Berberries, Pistachia Nuts, &c.<sup>116</sup>

This is the older preservative use, which, though it survives in many rather trivial forms to this day, was outstripped by a quite different method. As with the sugar used to sweeten beverages, preservative sugar gained a completely new place in the British economy and in daily life, but only as large-scale consumption of preserved fruit came to typify English diet. Once again it was the transformation of a rare substance into a common one, and a costly treat into a cheap food, that made dependent transformations possible. From the “*perys in syrripe*” of the fourteenth-century chefs of royalty would eventually come the jams and marmalades of Tip-tree, Keiller, Crosse and Blackwell, Chivers, and other canners in the nineteenth.

Because of the old fear of fruit that typified commoner English attitudes, the manufacturers and merchants of jellies, jams, and marmalades had to overcome some resistance and distrust. Moreover, until a safe preservative medium that was cheap enough to result in an economical product was available, these sweets could not be mass-produced. But when the price of sugar fell sharply after the big victories of the free-trade movement of the mid-nineteenth century, jam consumption began to catch hold among working people. At the same time, consumption of sugar in other forms rose in response to a fall in sugar prices. These changes in sucrose consumption were entangled with other changes in diet and taste as well. Jam and the working class—a phrase I have borrowed from an important article by Angeliki Torode<sup>117</sup>—were conjoined only from about 1870 onward. Semiliquid and liquid sweeteners invaded the proletarian diet and taste somewhat earlier, in the form of treacle. Though very different from jams or jellies, treacle probably helped “sell” preserves to new users. From its early, more molasseslike form, it was progressively refined into a clear, gold-colored syrup that mimicked honey and, by the late nineteenth century, cost much less.

Edward Smith's records of the diets of the Lancashire operatives in 1864 show that they lived largely on bread, oatmeal, bacon,

a very little butter, treacle, and tea and coffee. Cheap jams made their appearance on the market in the 'eighties and immediately became very popular. Most of them contained very little of the fruit they were alleged to be made from and were simply concoctions made from the cheapest fruit or vegetable pulp obtainable, coloured and flavoured as required. Their sweetness made them very popular with poor families; bread and jam became the chief food of poor children for two meals out of three.<sup>118</sup>

John Burnett writes of the mid-nineteenth century that “bread was the staple of life for the 80 or 90 percent of the population that made up the working classes.”<sup>119</sup> Hence we have a population already eating sugar, especially in tea, but also confined to a heavily carbohydrate diet. What else were people eating? The various foods that composed working people's diets were interrelated, and cannot be considered one by one if we want to calculate where sugar fits in. Some data from Scotland are especially instructive in that they unite the bread-eating with jam, revealing how this combination could undercut an older pattern because yet other changes in Scottish society at the time were opening the way.

R. H. Campbell's short study of Scottish diet between the mid-eighteenth century and World War I—by which time regional differences in diet within Great Britain are believed to have become negligible—is useful here, exactly because it gives a good indication of how sugar progressively penetrated the food preferences of ordinary people over time. Permanent agricultural laborers (called “hinds”) in Scotland of the nineteenth century received up to two-thirds of their income in kind, including food. These landless workers were better fed, however, than were casual agricultural laborers. As payments in kind declined, partly in reaction to public criticism of arrangements retaining so much power in the hands of the employer, the diet of the hinds also declined. “Freedom of choice,” says Campbell, “led to a decline in the standard of diet”—not an unfamiliar consequence.<sup>120</sup> All the same, Scottish workers continued to eat substantial quantities of oatmeal in various forms, even when choosing their own ingredients, because it remained a cheap food during much of the nineteenth century. Since oatmeal provided important nutrients not otherwise available at so low a cost, its

cheapness actually underwrote a better diet than was available to English workers at the same salary level.

When Campbell provides comparative data for the industrial cities of Scotland (Edinburgh, Glasgow, and Dundee) at the end of the century, a different picture emerges. Diets here were judged to be deficient in protein, especially in animal protein, and the reasons were clear enough: "excessive use of bread, butter, and tea, instead of the porridge and milk of the rural diets."<sup>121</sup> Campbell asks the same questions as the Edinburgh investigators—"Why did people fail to retain the more satisfactory yet cheap diet of the rural areas? When a choice of diet became available, why was it exercised unwisely?" But he came up with an answer different from theirs.

The investigators had concluded that "when... it comes to a question of using the ready cooked bread or the uncooked oatmeal, laziness decides which, and the family suffers."<sup>122</sup> "But the investigation in Dundee," Campbell writes,

revealed conditions that more adequately explain the paradox of a decline in nutritional standards when cash income was rising. The organization of the jute industry provided opportunities for female labour, so that many housewives went out to work in Dundee. Nutritional standards declined still further and sharply when the wife went out to work. "When the mother is at work there is not time to prepare porridge or broth in the 'diet hour'... usually breakfast and dinner become bread and butter meals. As the school interval for dinner is not the same as the mill 'diet hour' the children have to unlock the house and get 'pieces' for themselves...."

Pressure on the housewife's time was in itself a sufficient explanation of the choice of an inferior diet. The need to save time rather than the need to economize or to maintain nutritional standards determined the choice.... Most notable was the increased consumption of bread. In one case in Dundee 6s 5d of a total expenditure of 12s 11d went on bread; one family of a father, mother and five children consumed 56lbs a week.... The cooking of vegetable broth was neglected in the cities. So long as vegetable broth was used extensively the Scottish custom of eating few vegetables in any other form was unimportant. Where the housewife had to go out to work, the preparation of broth was practically impossible. In Dundee the investigators found

that the broth pot was "an almost invariable feature" only of houses where the mother was at home.<sup>123</sup>

John Burnett's argument fits well not only with Campbell's assertions but also with the argument I am making about sugar.

White bread and tea passed, in the course of a hundred years, from the luxuries of the rich to become the hall-marks of a poverty-line diet. Social imitation was one reason, though not the most important.... Whereas they were mere adjuncts to the tables of the wealthy, they became all too often the total diet of the poor, the irreducible minimum beyond which lay only starvation. Paradoxically, they had become almost the cheapest foods on which life could be supported. White bread, though it was better with meat, butter or cheese, needs none of these; a cup of tea converted a cold meal into something like a hot one, and gave comfort and cheer besides. At 6s or 8s a pound in the middle of the nineteenth century tea was still a luxury, though the average consumption of a working-class household—2ozs a week, often eked out with pieces of burnt toast to colour the water—was scarcely extravagant. And in the circumstances of early industrialism this type of diet had an additional advantage that it could always be produced close at hand and required little or no preparation.<sup>124</sup>

But the clincher is what happened with jam. After the 1870s,

jam became an important food, especially for the working class. Free trade made possible the rise and prosperity of jam factories in this period. The abolition of the sugar duties made sugar cheap and plentiful; jam contains 50 to 65 per cent of its weight in sugar.... Most of the produce of the jam and preserves factories was for domestic consumption.... Urban working classes... consumed much of their fruit in the form of jam. Since the 1840s, people whose main staple was bread indulged in sugar or, when times were worse, in treacle, spreading it on bread as a substitute for butter, or using it in their tea instead of sugar. A pudding or a currant cake appears often in the budgets of working class families in the 1860s. Even the poor families interviewed by Seeböhm Rowntree in his study of the rural labourer either purchased or made jam—usually out of windfalls or even stolen fruit. Only in the worst cases would a mother hesitate to open her jam-jar, because her children ate more bread if there was jam on it. In any case, the jam manufacturers, with the



exception of Blackwell and Chivers who made expensive preserves as well, agreed in 1905 that their most extensive and lucrative market lay in the working class to whom jam, once a luxury, had now become a necessity, and a substitute for the more expensive butter.<sup>125</sup>

Several points emerge from these observations. First, it seems clear that, at least in Great Britain of the nineteenth century, food choices were reckoned partly in terms of available time, and not solely in terms of relative cost. Second, it is clear that fuel was an important part of food costs, so that food that circumvented this outlay would be more attractive. Third, the division of labor within the family shaped the evolution of British food preferences; a wife's leaving the house to earn a wage had a restrictive effect on the family diet, even though her work might increase the family income. Though not as conspicuous in the above argument but at least equally important for the story of sugar, there is good evidence that the nutritional value of foods was not equally distributed within family units; indeed, we shall examine evidence that wives and children were systematically undernourished because of a culturally conventionalized stress upon adequate food for the "breadwinner."

There seems no doubt that sugar and its by-products were provided unusual access to working-class tastes by the factory system, with its emphasis on the saving of time, and the poorly paid but exhausting jobs it offered women and children. The decline of bread baking at home was representative of the shift from a traditional cooking system, costly in fuels and in time, toward what we would now proclaim as "convenience eating." Sweetened preserves, which could be left standing indefinitely without spoiling and without refrigeration, which were cheap and appealing to children, and which tasted better than more costly butter with store-purchased bread, outstripped or replaced porridge, much as tea had replaced milk and home-brewed beer. In practice, the convenience foods freed the wage-earning wife from one or even two meal preparations per day, meanwhile providing large numbers of calories to all her family. Hot tea often replaced hot meals for children off the job, as well as for adults on the job. These changes were an integral part of the

modernization of English society. The sociological changes that they accompanied would continue to mark the modernization of the rest of the world.

[The nonmedicinal consumption of sucrose in England before 1700 took three principal forms besides decorative sugar and preserves: spices and dragées, sweet and sweetened alcoholic drinks, and baked sweet dishes. It was this last, most of all, that would eventually become the "sweet" (dessert) eaten at home by millions of English working people, so that the standardization of such dishes is a feature of the history both of English diet and of sugar itself.]

Baked sweet dishes do not appear conspicuously in English recipes before the fifteenth century, but thereafter such recipes are common. In his selections, based on two fifteenth-century works, Austin has published a section entitled "Dyverse baked metis," which provides recipes employing egg yolks, cream, various spices including saffron, and sugar (in some cases honey), the resulting mixture to be baked into a custard in pastry cups, shells, or barquettes.<sup>126</sup> In succeeding centuries, such dishes become more and more common, but their place within the meal was not firm until late in the history of sugar usage. I believe the link between a particular course and the specific taste of sweetness could be forged only when sweet substances were cheap and plentiful enough to enable people to think in such terms, meal after meal. There is nothing natural or inevitable about eating sweet food at every meal or about expecting a sweet course. It appears to have become a common feature of western European eating only in the last couple of centuries, and to have settled into position as a final course even more recently. Yet it is by now so commonplace that we may have difficulty in imagining some completely different pattern. Since the connection between one taste (sweetness) and one course (dessert) is the firmest of all such links in the western food order, it is worth trying to see how it emerged.

Perhaps only in the late seventeenth century, and at the topmost level of society, did a sequence of dishes consigning sweet courses to the end of the meal finally become stabilized. In medieval banquets, Mead writes, "the place assigned to the dessert, insofar as it

existed, appears to have been a matter of indifference."<sup>127</sup> The order of courses, even once the display (and, sometimes, the consumption) of subtleties had become patterned, was random with respect to sweet dishes. Henry IV's coronation feast, for instance, had "doucettys" as the third course among many, and there are no sweets at the end of the menu. Preserved fruits might be served at any point in the sequence; "quincys in comfyte" turn up near the beginning of the third course. Similarly, at Henry's wedding feast, though each of the three courses was climaxed with a subtlety, the only other candidates for a dessert course, cream of almonds and pears in syrup, turn up at the start of the third course. Mead believes the appetite for sweets was as keen in the fifteenth century as it is today but that medieval diners were simply not concerned about the order of their dishes.<sup>128</sup>

French royalty began to eat what looked like a dessert course in the fifteenth century. A feast given by two noblemen for the king of France and his court consisted of seven courses. Desserts began with the fifth: tarts, custards, plates of cream, oranges, and "*citrons comfits*." The sixth course was made up of wafers and red hippocras, and the seventh of subtleties, each piece carrying the arms and device of the king. Mead is inclined to attribute the emergence of the dessert in English practice to imitation of the French model. Because so much of English royal custom came from the French courts, this seems probable.

It would be easy to suppose that the English working classes learned to eat dessert because such was the habit of their rulers, but here the explanation may be too facile. The first sugar habit learned by the English poor was part of the tea habit, and the tea habit spread downward from the rulers and outward from the cities at a rapid rate. But the public consumption of tea and the other drug beverages was not at first as part of a meal. Both tea and sugar were first consumed outside the traditional home diet, were only later assimilated into it; indeed, were probably at first associated more with work than with the home.

It is plausible that the earliest foreign or exotic "interval foods" were stimulants such as caffeine and a calorie-heavy sugar, combined in an easily prepared hot liquid form. Once learned, this

combination of substances would then be taken into the home diet; cheaper sugar would facilitate the use of treacle and, soon enough, puddings, especially when store-baked bread became widely available. This chronology of successive additions is speculative, but it is reasonably accurate. It implies that a dessert course was the third, rather than the first, important sugar use for the poor.

The stabilization of the dessert—usually "pudding"—became firm in the nineteenth century, especially toward the end, when sugar use rose even more sharply. But this did not occur independently of other changes in diet and the structure of English meals. One fundamental such change was the decline in the consumption of bread and flour, as other foods became more available and less expensive, among them sugars. This decline continued into the twentieth century, in the United States as well as in the United Kingdom. It appears to be complementary to the rising curve for sugars, and to increasing meat (or at least fat) consumption. But whether changes of this kind represented—or eventuated in—an improvement in the diet of working people is moot.<sup>129</sup>

The part played by sugars in increasing the average total caloric intake makes it likely that sugars both complemented the complex carbohydrates and partly supplanted them. The pastries, hasty puddings, jam-smearing breads, treacle puddings, biscuits, tarts, buns, and candy that turned up more and more in the English diet after 1750, and in a deluge after 1850, offered almost unlimited ways in which the sugars could be locked onto complex carbohydrates in flour form. Added sugar was customary with hot beverages, and the eating of sweetened baked foods often accompanied these drinks. The drinking of tea, coffee, or chocolate (but most commonly tea) with meals, in moments of repose snatched from work, at rising, and at bedtime spread widely. The combination of such beverages with baked goods became common as well, though not an invariable practice.

While the dessert became a course in the sit-down lunches and dinners of most classes, sugar use itself spread far more widely. It became, in one form or another, the near-universal accompaniment of wheat products and hot beverages. Its caloric contribution rose from an estimated 2 percent of total intake at the start of the nine-

teenth century to a more probable 14 percent a century later. Even this somewhat startling latter figure may be an underestimate, since it is a national average and omits the differential effects of such factors as age, sex, and class on sugar consumption. That the appeal of sugar to the poor was greater—that it could satisfy hunger in the place of other, more nutritious foods—may have looked like a virtue.

The many new uses for sucrose that developed between the twelfth and eighteenth centuries eventuated in a modern multi-functional mass consumption. Such deepening differentiation—more uses, more frequency, more intensive use—typified the second half of the nineteenth century in the United Kingdom and, soon after, in other industrial and industrializing countries. An analogous sequence occurred in poorer, nonindustrial countries during our century. What had begun as a spice and a medicine was eventually transformed into a basic foodstuff, but a foodstuff of a special kind.

The uses of sugar overlapped because of the unusual versatility of sucrose. Food and medicine have been linked in thought and in act ever since human beings began viewing ingestion and fasting as instruments of health and purity; and sugars have been a bridge between “food” and “medicine” for millennia.<sup>130</sup> But sugar was not limited to medicinal uses, as we have seen. By the fifteenth century, sugar confections, often in a profusion distressing to the modern reader, had become an invariable accompaniment to nearly every courtly activity in England. English royalty manifested an affection for sweets that apparently exceeded even that of the kings and queens of the Continent. A German traveler of the sixteenth century, who met Elizabeth at court, wrote, “The Queen, in the 65th year of her age (as we were told), very majestic; her face oblong, fair but wrinkled; her eyes small, yet black and pleasant; her nose a little hooked, her lips narrow, and her teeth black (a defect the English seem subject to, from their too great use of sugar).”<sup>131</sup> He went on to say that the poor in England looked healthier than the rich, because they could not afford to indulge their penchant for sugar. In subsequent centuries, of course, this changed radically.

“This fondness of our countrymen and countrywomen for sweets,” writes British historian William B. Rye,

astonished the Spaniards who came with the Embassy of the Count Villamediana in 1603. At Canterbury the English ladies are described as peeping through the latticed windows... at the hidalgos, who presented the “curious impertinent fair ones” with the bonbons, comfits, and sweet meats that were upon the table, “which they enjoyed mightily; for (it is remarked) they eat nothing but what is sweetened with sugar, drinking it commonly with their wine and mixing it with their meat.”<sup>132</sup>

Spain had been familiar with sucrose in various forms for centuries, and had been exporting it to England for more than a hundred years when this incident was recorded. That Spanish diplomats should have been so struck by the English sweet tooth in 1603, nearly half a century before England began importing sugar from her first “sugar colony,” is worth noting. We can be sure, moreover, that these “curious impertinent fair ones” were neither servants nor dairy maids.

All the same, it would be difficult to contend that the history of sucrose consumption in England merely documents an innate liking. The American historian John Nef argued that the north European craving for sucrose originated in geographical factors. The “growth of economic civilization in the north,” to use his phrase, meant using fruits and vegetables “with less natural succulence than those growing in Mediterranean soil.”<sup>133</sup> To make them palatable, he claimed, it was necessary to sweeten them. But this is not convincing. Fruits such as the apple, the pear, and the cherry are arguably no less succulent than fruits from subtropical climes, nor is it easy to see why northern peoples would have a stronger craving for sweetness than peoples in the south, even if the highest rates of processed-sucrose consumption in the modern world are to be found principally among northern populations. People in subtropical regions, from south China through India, Persia, and North Africa, had been sugar eaters long before the Europeans knew much about sucrose, and the Venetians were fascinated by sugar when they first became acquainted with it, no later than the tenth century.<sup>134</sup>

Possibly more relevant to the peculiar English sweet tooth is a

cultural datum concerning alcohol. Ale prepared from malted grain was England's chief alcoholic drink for perhaps a millennium, to be challenged by beer only around the middle of the fifteenth century. Ale has a sweetish, rather than bitter, taste, as long as the malt sugar in it is not completely fermented. When hops began to be added, around 1425, they contributed to the preservability of the drink—now properly described as *bēer*—but also made it bitter-tasting. The bitterness apparently did not discourage consumption by those accustomed to the sweet taste of ale—but ale continued to be drunk thereafter.<sup>135</sup> A new bitter beverage was now available, in addition to a more familiar sweet one. Hence a familiarity with a sweet taste other than those of fruit and honey was maintained.

Beyond this, other sweet or sweetened drinks besides ale were long popular in England. Alcoholic beverages made from or with honey—mead, metheglin, hydromel, rhodomel, omphacomel, oenomel—constituted one such category. Honey was distilled after fermentation to make mead, or to be mixed with wine, grape juice, rose water, etc., to create these somewhat exotic intoxicants. But honey was relatively expensive and not very plentiful even before the sixteenth century, when the abolition of the monasteries dealt a near-fatal blow to honey production, destroying the only substantial market for (beeswax) candles, contributing to a rise in the price of honey, and cutting into the production of honey-based drinks.<sup>136</sup>

The other category consisted of beverages combining sugar and alcohol, especially wine. Sugar and sack—Falstaff's favorite—was one. But most popular was hippocras, a candied wine commonly flavored with spices as well as sugar, which displaced the older honeyed wines and fermented honey drinks as the importation of both wines and sugar rose. The English habit of adding sugar to wine was much remarked. The English "put a great deal of sugar in their drink," Hentzner wrote in 1598,<sup>137</sup> and when Fynes Morison discussed English drinking habits in 1617, he commented: "Clownes and vulger men only use large drinking of *Beere* or *Ale* . . . but Gentlemen *garrawse* onely in Wine, with whiche many mixe sugar—which I never observed in any other place or kingdom to be used for that purpose. And because the taste of the English is

thus delighted with sweetness, the wines in tavernes (for I speak not of Merchants or Gentlemens cellars) are commonly mixed at the filling thereof, to make them pleasant."<sup>138</sup>

These observations suggest not so much a special English predilection for sweetness—though there may indeed have been such—as a long-standing familiarity with sweetened beverages. It is conceivable that the sweetening of the drug drinks—coffee, chocolate, and tea—became customary not only because they were bitter as well as unfamiliar, but also because the habit of adding sugar to beverages was an old one. When tea was touted as the beverage that "cheers without inebriating," its sweetness surely emerged as a favorable feature for a people whose sweet tooth had long been cultivated by sweet or sweetened alcoholic beverages. In their turn, of course, tea, coffee, and chocolate helped to encourage the sharp upward curve of sucrose consumption. It seems improbable that they were essential to it, but there is no doubt that they accelerated it.

Tea, coffee, and chocolate never displaced alcoholic drinks—they only vied with them. The rivalry was lengthy, and of course it has never ended. In British social history, the issue of temperance figured critically in that rivalry. Temperance itself was espoused for moral reasons: the protection of the family, virtues like thrift, reliability, honesty, and piety. But temperance was also a national economic issue: an effective, factory-based industrial capitalism could not be consolidated by an absentee-ridden, drunken labor force. Hence the issue of alcoholic versus nonalcoholic beverages was neither a moral nor an economic-political question alone; certainly it was not simply a matter of "taste" or of "good manners."

During the late seventeenth and eighteenth centuries, alcoholic-drink consumption rose nationally in Great Britain, but the consumption of tea and other "temperance" beverages grew even faster. Gin began to be imported from Holland in the seventeenth century, and by 1700 imports reached 500,000 gallons in some years.<sup>139</sup> An act of 1690, directed against the French, legalized the manufacture of a local *eau de vie* from grains. Called "British brandy," this curious offshoot of national rivalries continued to be produced until well into the eighteenth century.<sup>140</sup> Whereas ale and beer could be

sold only at licensed houses from the mid-sixteenth century on—cider was added to the list in 1700—“spirits” could be sold without a license and with only a derisory tax. The consumption of gin had risen to an estimated five million gallons—that is, an increase of 1,000 percent—by 1735.

The rising price of grains with which to make hard liquor led to a renewed popularity for beer, which competed with tea in the mid-eighteenth century. And to these must be added rum; in 1698, only 207 gallons of rum were imported to England; in the period 1771–75, the annual average importation was well over two million gallons yearly.<sup>141</sup> Indeed, this understates the totals, partly because rum was distilled from the molasses that was a by-product of sugar making in Britain, partly because a great deal more was smuggled in. Tea, coffee, and chocolate, in other words, had many rivals; sugar was needed in the production and consumption of nearly all of these beverages.

Tea triumphed over the other bitter caffeine carriers because it could be used more economically without losing its taste entirely, because its price fell with fair steadiness in the eighteenth and nineteenth centuries (particularly after the East India Company's monopoly was broken in the 1830s), and because—a related consideration—its production was localized in British colonies. It turned out, moreover, to be a magnificent source of government revenues through taxation; by the 1840s, bohea, the cheapest China tea, was being taxed at 350 percent.

But tea was far more than an import directly profitable to the government. Some of the largest and most important retailing concerns in world history, such as Lipton (and some of its earliest competitors, such as Twining), were built on tea.<sup>142</sup> Touted as a temperance beverage, tea stimulated while carrying large quantities of calories. By the middle of the nineteenth century, the temperance movement had helped to convert Hanway's hated tea into a great blessing, as suggested by such effusions as the following:

*With you I see, in ages yet unborn, -  
Thy votaries the British Isles adorn,  
With joy I see enamour'd youths despise*

*The goblet's luster for the false one's eyes;  
Till rosy Bacchus shall his wreaths resign,  
And love and tea triumph o'er the vine.<sup>143</sup>*

Alcoholism did not disappear, nor did working-class families turn into teetotalers overnight, however. Alcohol consumption remained high among working people, and some laboring families were spending a third or even a half of all their income on drink throughout the eighteenth and nineteenth centuries. Still, the temperance movement definitely reduced drunkenness, particularly among the slightly better-off, more skilled workers.<sup>144</sup> In this gradual elimination or reduction of alcoholism, tea played a critical part. Here again, it is not clear how much influence the model of upper-class behavior may have had. The temperance movement was a product of middle- and upper-class thinking and morality—but this hardly means that alcoholism was a working-class monopoly.

I have stressed sugar's usefulness as a mark of rank—to validate one's social position, to elevate others, or to define them as inferior. Whether as a medicine, a spice, or a preservative, and particularly in the public display epitomized by the subtleties, sugar uses were molded into declarative, hierarchical functions. Certain scholars, emphasizing the function of luxuries in modernization, have seen this complex of customs somewhat differently. Werner Sombart, for example, argued that sugar (among many other substances) affected the rise of capitalism because the female love of luxury led to its increasing production and importation to European centers.

On one point, however, we already seem to have arrived at complete agreement: the connection between the consumption of sweets and feminine dominance....

This connection between feminism (old style) and sugar has been of the greatest importance for the history of economic development. Because of the predominant role of women during early capitalism, sugar rapidly became a favorite food; and only because of the widespread use of sugar were such stimulants as cocoa, coffee, and tea adopted so readily all over Europe. Trade in these four commodities and the production of cocoa, tea, coffee and sugar in the overseas colonies as well as the processing of

cocoa and the refining of raw sugar in Europe are outstanding factors in the development of capitalism.<sup>145</sup>

Probably only the final sentence in this passage can be accepted unreservedly. The “predominant role of women during early capitalism” is an enigmatic—one might almost say mysterious—assertion. The alleged importance of women in transforming sugar into a favorite food is similarly puzzling. Even the causation implicit in the sentence that follows—that sugar’s availability underwrote the drug-beverage habit—is unacceptable as it stands. Yet Sombart was not wrong to look for some connection between women and sugar use, for he was driving at a serious analysis of the circumstances under which consumption occurs. In the case of sugar and the foods eaten with it, such an analysis means looking at work, and at time, as well as at the divisions between the sexes and among classes—in short, at the total sociology of consumption during the rise of a new economic order in western Europe.

Sugars began as luxuries, and as such embodied the social position of the wealthy and powerful. The distinction between spice plates and drageoirs, as noted earlier, may have reflected a male-female difference of a kind, but one between persons of the same stratum or rank. When these luxuries began to be employed by wealthy commoners, they multiplied and redifferentiated their uses. And as sugars came to be viewed as everyday necessities for larger and larger segments of the national population, they were progressively incorporated into innovative contexts, ritualized by their new consumers. Just as the spice plates and drageoirs of the nobility of an earlier era validated and proclaimed rank and status with reference to others—to spouses, to equals, and (by exclusion) to inferiors—so these new sugar uses served analogous social and psychological functions for ever-larger, less aristocratic groups.

Some of these new patterns were essentially transfers of the uses and meanings of those of higher position to lower ranks—an intensification of older forms. Yet others, and more commonly, involved the use of old materials in new contexts and, necessarily, with new or modified meanings—an extensification of previous

usages. The development of tea as a social event serves to illustrate such processes.

Though tea turns up first in the tea- and coffeehouses of mid-seventeenth-century London and other cities and on the tables of the nobility and the aristocracy of the day as a sort of novelty, eighteenth-century writers make it clear that for the poor, and especially for rural workers, it accompanied more than leisure. Tea with sugar was the first substance to become part of a work break. The picture is quite otherwise for “the tea,” a social event that could either interrupt work or constitute a form of play. “The tea” swiftly became an occasion for eating as well as drinking. Since the eighteenth-century custom among the middle classes was to eat a light lunch, people were hungry in the afternoon:

Hence the need for tea was bound to arise, even had its existence not preceded the want of it. Tea was originally the prerogative of women, for the sexes were accustomed to separate at that epoch of an early dinner when the men began to take their wine seriously. Five o’clock tea implies tea served at the hour when dinner was finished—much as we now serve black coffee after lunch in imitation of the French—as which it precluded ombre, cribbage, backgammon and whist. This purely feminine development of a dish of tea into a “light refectation” may be considered as an imitation of the old French “goûter,” at which sweet wines...biscuits and petits-fours were served to both sexes.<sup>146</sup>

P. Morton Shand, a commentator on the English social scene, suggests that “the tea” can be traced to Continental custom and noble habits, but we can see that more than imitation was at work in the case of the laboring poor, for whom the beverage tea became important long before “the tea” was a social occasion. Still, the way Shand links substance to event is persuasive, even if somewhat impressionistic:

When the sexes began to lead less segregated social lives in England, tea was served to the ladies in the drawing-room at the same time as port, madeira and sherry for the gentlemen.... As women became less languorous and men less bearish manners

softened toward a greater sociability of intercourse which an enhanced sobriety in alcohol had initiated. Woman triumphed over her tea-cups and the decanters were gradually banished from her now indisputed sphere. Young men of the dawning romantic age were glad to be able to frequent the society of the ladies, and preferred their company to that of the irascible "three-bottle" stalwarts in the smoking-room. The year in which afternoon tea was first served in the august London clubs, those last remaining sanctuaries of male prerogatives, was a most important date in our social history....

Afternoon tea soon became an excuse for the indulgence of a woman's naturally sweet tooth [*sic*]. ... Tea must not be regarded as another meal, a second breakfast. The bread and butter was camouflage, the little cakes were the real lure, the *pièce d'abandon*. It was not long before man completely capitulated to woman, accepting and sharing the supernumerary snack on her own terms, so that today there are few Englishmen who will consent to be deprived of their tea, whether at work or play, at home or abroad. Tea is an excuse for eating something, rather than an avowed meal. It is a break, a challenge to the crawling hours, it "makes a hole in the day." ... Another advantage is the extreme elasticity of its hour, so that one can order it at any time from 4 p.m., till half-past six.<sup>147</sup>

Shand's conjecture that tea and alcohol tended to be sex-divided beverages until the salon lured men to afternoon tea may be accurate for the middle classes after the 1660s, but it fails to explain what happened among working people. "Once tea became an established custom among the well-to-do," he adds, "the lower middle classes naturally began to imitate it, but in a form peculiarly their own (to which the heavy six o'clock tea of public schools offers the only parallel that I know of)."<sup>148</sup> In Shand's interpretation, the introduction of teatime altered the entire meal pattern. "Supper was brought forward by an hour or two, with the new refinement, tea, and the hybrid, really a repetition of breakfast, was baptised high tea ... more often described circuitously by the phrase 'I take an egg (or fish) with ... my tea.'"<sup>149</sup> It is clear that tea, the tea custom, and "teatime" took on different contextual significance—served different nutritive and ceremonial purposes, actualized different meanings—in different class settings.

A century later, the place of tea and sugar in working-class diet, together with treacle, tobacco, and many other imported foods, was completely secure. These were the new necessities. The figures for tea and sugar consumption after the 1850s mount steadily—in the case of sugar, to just below ninety pounds per person per year by the 1890s. As early as 1856, sugar consumption was forty times higher than it had been only 150 years earlier, though population had not much more than trebled during that period.<sup>150</sup> In the 1800s, the national consumption was about 300 million pounds per year; once the duties began to be equalized and the price to drop, consumption rose, to a billion pounds in 1852, and still higher in succeeding years. Without the price drops, consumption could not have risen so fast. But the place for sugar within the laboring diet was highly expandible, and new uses multiplied as the price fell. Between 1832 and 1854, the per-capita *increase* has been estimated at five pounds. "The allowance to servants," one scholar writes, "is from ¾ lb. to 1 lb. per week" in 1854, from which it could be deduced, "that 50 lbs, per year, at least, is not too much for grown persons."<sup>151</sup> Indeed not—it was higher than that by 1873, and in 1901 the per-capita figure for the first time rose above ninety pounds.

Even these startling figures blur and conceal the sociology of sugar consumption, because per-capita statistics are merely national averages. There is no doubt that the sucrose consumption of the poorer classes in the United Kingdom came to exceed that of the wealthier classes after 1850, once the sugar duties were equalized. Not only did sucrose-heavy foods—treacle, jams, raw sugar for tea and baking, puddings, and baked goods—come to form a bigger portion of the caloric input of the working-class diet (though probably not absorbing a larger proportion of the money spent on food), but sucrose was also an ingredient in more and more items in the daily meals. Children learned the sugar habit at a very tender age; sweetened tea was a part of every meal; jam, marmalade, or treacle figured in most. In the late nineteenth century dessert solidified into a course, sweetened condensed milk eventually became the "cream" that accompanied tea and cooked fruit, store-purchased sweet biscuits became a feature of the tea, and tea became a mark of hospitality for



all classes.<sup>152</sup> It was also toward the end of the century that bread began to be supplanted by other food items, in a process that has since been repeated in many other countries.

Scholars have suggested that the decline in bread consumption was a sign of a rising standard of living, but “the falling curve representing bread and flour is complementary to the rising curve for sugar and sweetmeats.”<sup>153</sup> Yet sugar-consumption figures are adequate for neither short-term nor long-term inference as an index of the standard of living.<sup>154</sup> Since the price of sugar fell by 30 percent between 1840 and 1850, and by a further 25 percent in the next two decades, consumption increases reflect a decline in the price of sugar relative to other commodities, and not necessarily an improved life standard. In any event, per-capita sucrose consumption (and, as is argued here, the sucrose consumption of laboring people in particular) rose rapidly during the second half of the nineteenth century.

Drummond and Wilbraham believe that the decline in bread and flour consumption was accompanied by an increase in both meat and sucrose consumption, but another researcher, using figures based on supply estimates, was able to find no increase in meat consumption. Throughout the quarter-century 1889–1913, weekly per-capita meat availability—the average amount available in the market nationally in the United Kingdom—was 2.2 pounds. But to make that figure relevant to this analysis, one must make allowances for class differentials in meat consumption as well as for differentials within families. On this latter point, Derek Oddy, another historian of nutrition, is clear. “Animal food in particular,” he writes, “was largely consumed by him [the father] for his dinner or as ‘relishes’ for his supper.”<sup>155</sup> He cites Dr. Edward Smith, who noted in 1863 that meat “for the family” was consumed exclusively by the father, and that the mother thought of this as morally right: “The important practical fact is however well established, that the labourer eats meat and bacon almost daily, whilst his wife and children may eat it but once a week, and that both himself and his household believe that course to be necessary, to enable him to perform his labour.”<sup>156</sup> Mrs. Pember Reeves, a careful observer of the diet of laboring families, writes: “Meat is bought for men, and the chief expenditure

is made in preparation for Sunday’s dinner, when the man is at home. It is eaten cold by him the next day.”<sup>157</sup>

These observations throw light upon the apparent increases in meat and sucrose consumption in the nineteenth-century working-class diet: “Bread is the staple food of poverty and people eat much less of it when they can afford to buy meat and indulge in the type of dish with which sugar is eaten.”<sup>158</sup> There is an implicit hypothesis in this way of stating things, but no general rule. Even if a greater absolute sum is spent on food—indeed, even if a greater percentage of a higher income is spent on food—this is not sufficient evidence, of itself, that the diet has improved. Moreover, the high probability of culturally patterned differential consumption within the family—everybody eats more sugar, but women and children eat relatively more than adult men; everybody gets some meat, but adult men get disproportionately more than women and children—suggests a very different truth.

There are reasons to believe that the late-nineteenth-century diet was in fact unhealthy and uneconomical. Bread and, to a lesser extent, potatoes were the main foods, but the disproportionately high expenditure on meat provided little for the money. Small amounts of “tea, dripping [fat], butter, jam, sugar, and greens,” remarked Mrs. Reeves, “may be regarded rather in the light of condiments than of food.”<sup>159</sup> Such additions were essential, says Oddy, “to make the semblance of a meal in diets with high starch content.”<sup>160</sup> But while the laboring husband got the meat, the wife and children got the sucrose: “We see that many a labourer, who has a wife and three or four children, is healthy and a good worker, although he earns only a pound a week. What we *do not see* is that in order to give him enough food, mother and children habitually go short, for the mother knows that all depends upon the wages of her husband.”<sup>161</sup> Mrs. Reeves labeled potatoes “an invariable item” for the midday meal, but not necessarily for all of the family: “Treatle, or—as the shop round the corner calls it—‘golden syrup,’ will probably be eaten with the suet pudding, and the two together will form a midday meal for the mother and children in a working man’s family.”<sup>162</sup> “This clearly illustrates the complementary nature of certain foods,” Oddy writes. “Some form of fat or sugar was an

essential component of a meal to accompany the main, and largely starchy, food. In the absence of animal food sugar acted as a substitute and this in turn determined the type of starchy food eaten."<sup>163</sup>

We see here a return to the core-carbohydrate-and-fringe principle. In many western countries, however—of which the United Kingdom was the first—the “fringe” (of which processed fats and sugars are more representative than vegetables, fruit, or meat) began, as a corollary of modernity, to overtake the “core.”

Insufficiently palatable food could result in general undernourishment:

The limited consumption of animal foods indicated their use in the working-class diet as a vehicle for consuming larger amounts of carbohydrate foods and it is probable, therefore, that when the animal food content of the diet was reduced by economic factors, the consumption of starchy foods was restricted in turn.... The conclusion seems inescapable that families in this period with an income of less than, say, 30 shillings per week and with a family of growing children might well obtain only 2000–2200 calories and 50–60 grams protein per head per day. Given that the distribution of food within the family followed the general pattern suggested in which the father got a disproportionately large fraction of the total protein, it is impossible to envisage how the diverse physiological needs of a manual worker, his wife, and growing children could be met adequately. The inference which can be drawn from... first-hand observers of the working-class home in the second half of the nineteenth century is that under these conditions women and children were under-nourished.<sup>164</sup>

Increased sugar use had both positive and negative effects upon working-class life. On the one hand, given that the working-class diet was calorie-short, sugar doubtless provided at least some of the needed calories. It meant sweeter tea (which it came to accompany almost as a matter of course), more biscuits, and more desserts, hence affording variety as well as more calories. As we have seen, Lord Boyd-Orr singled out the increase in sucrose consumption as the most important change in British diet in a century.<sup>165</sup> Yet, at the same time, the caloric increase provided by sugar was had at the cost of alternative nutrition of a better kind. Though the spread

of sugar into the cuisine probably brought about an aggregate decline in eating and preparation time, it is doubtful whether this was accompanied by nutritive gains from what was eaten. As the argument shifts from considerations of real income to matters of what is now called “life style,” the answers seem less authoritative.

The increased number of sugar uses and the rise in sugar consumption coincided with vital changes in the modernization of eating habits and diet. One such was the rise of prepared and conserved foods, particularly but of course by no means only those conserved in sugar: foods in cans, bottles, and packages of various sorts, and substances both hard and soft, solid and liquid. The sugar medium varied from the jams, jellies, and marmalades, made from fruits or conserving them, through the liquid sugars, from treacle and “golden syrup” to the confectioners’ simple syrup poured on or mixed with other foods and added to condensed milk (from which a favorite working-class “custard” was made),<sup>166</sup> to the biscuits (American “cookies”) and cakes for which Britain is famous, and, eventually, to candies, both with chocolate (“soft”) and without (“hard”).

It was only a short step from the multiplication of these uses and products to the industrial work break, instituted in the last years of the nineteenth century, and hastened by the industrial canteens pioneered by producers of foods made from tropical commodities, where tea, coffee, cocoa, biscuits, and candy could be had inexpensively.<sup>167</sup> Prepared foods, in other words, accompany the increasing frequency of meals taken outside the home and outside the familial context. Permitting as they do the freedom to choose one’s foods, these trends free the consumer from the order of courses, from the social discourse of the family dinner table, and from the patterning of meal and time. By the opening of the twentieth century, sugar epitomized the times: it supposedly provided “quick energy.” And since then its blessings have been spread to other lands, where many features of the changes in life in British society before 1900 have been repeated.

The history of sucrose use in the United Kingdom reveals two basic changes, the first marking the popularization of sweetened tea and treacle, from about 1750 onward; and the second, the opening

up of mass consumption, from about 1850 onward. During the period 1750–1850 every English person, no matter how isolated or how poor, and without regard to age or sex, learned about sugar. Most learned to like it enough to want more than they could afford. After 1850, as the price of sugar dropped sharply, that preference became realized in consumption. A rarity in 1650, a luxury in 1750, sugar had been transformed into a virtual necessity by 1850.

Furthermore, it seems certain that the biggest sucrose consumers, especially after 1850, came to be the poor, whereas before 1750 they had been the rich. This reversal marks the final transformation of sugar from a preciousness into a daily commodity and into one of the first consumables fulfilling the capitalistic view of the relation between labor productivity and consumption. The place of sugar in the expanding capitalist economy at home was qualitatively different in 1850 from what it had been by 1750. This difference had to do both with the ongoing development of an industrial economy and with the changing relationships between that economy and the overseas colonies.

It was once thought that plantations producing goods such as raw sugar could benefit the homeland economy in two ways: through direct capital transfers of profits to homeland banks for reinvestment; and as markets for such metropolitan products as machinery, cloth, instruments of torture, and other industrial commodities. Disputes among scholars continue concerning these potential sources of gain to metropolitan capital, but there is yet a third potential contribution: the provision of low-cost food substitutes, such as tobacco, tea, and sugar, for the metropolitan laboring classes. By positively affecting the worker's energy output and productivity, such substitutes figured importantly in balancing the accounts of capitalism, particularly as it developed over time through the integration of the colonial sector.

The differences between the periods 1750–1850 and 1850–1950 help to make this clearer. During the first, sugar—particularly in combination with tea—did not make a significant caloric contribution to English working-class diet, though it did sweeten the tea while adding a small number of easily assimilated calories. More important, sweetened tea probably increased the worker's readiness

to consume quantities of otherwise unadorned complex carbohydrates, particularly breads, while saving time for working wives and expenditures on cooking fuels. Tea and sugar played a fringe role to the core carbohydrates. During the second period, the caloric contribution of sugar rose, for it now appeared not only in tea and cereal but in many other foods as well and in ever-larger quantities. At the same time, we see the partial abandonment of the colonies' interests—or, better, perhaps, the rearrangement of priorities as far as the colonies were concerned. Cheap sugar, the single most important addition to the British working-class diet during the nineteenth century, now became paramount, even calorically. By 1900, it was contributing on average nearly one-sixth of per-capita caloric intake; if that figure could be revised to account for class, age, and intrafamily differentials, the percentage for working-class women and children would be astounding. In this second period, the core-fringe distinction begins to disappear.

The history of sugar consumption in the United Kingdom has been repeated, albeit with important differences, in many other countries. All over the world sugar has helped to fill the calorie gap for the laboring poor, and has become one of the first foods of the industrial work break. There is, moreover, at least some evidence that the culturally conventionalized pattern of intrafamily consumption—with the costly protein foods being largely monopolized by the adult male, and the sucrose being eaten in larger proportion by the wife and children—has wide applicability. Maldistribution of food within poor families may constitute a kind of culturally legitimized population control, since it systematically deprives the children of protein. "There are cogent but not publicly articulated arguments against devoting scarce resources to infant and child nutrition. In oversimplified terms, death of preschool children due to malnutrition is *de facto* the most widely used method of population control."<sup>168</sup> It is painfully easy to see how sucrose could be used in such a system of "population control." The Reagan administration's attempt to define sucrose-rich catsup as a "vegetable" in federally supported school lunch programs is a recent demonstration.

These materials also throw some light on the relationship between

gender and sugar consumption. One (male) observer after another displays the curious expectation that women will like sweet things more than men; that they will employ sweet foods to achieve otherwise unattainable objectives; and that sweet things are, in both literal and figurative senses, more the domain of women than of men. Of course these frequent references are interesting in their own right: that there may be links between women and sweet tastes is a research problem in itself; but it will take far more careful and impartial investigation to solve it.

The history of sugar in the United Kingdom has been marked by many "accidental" events, such as the introduction of bitter stimulant beverages in the mid-seventeenth century. But sugar consumption's rise thereafter was not accidental; it was the direct consequence of underlying forces in British society and of the exercise of power. It is to the nature of that power, and the circumstances of its exercise, that I can now turn.

English consumers, and he makes a good case. But I was not able to reconcile his enumeration of "ranks, degrees and classes" and his calculations of sugar consumed to arrive at any average figures.

88. The first modern writer to point to this issue may have been Eric Williams, in his *Capitalism and Slavery* (1944). But no reader of C. L. R. James's *The Black Jacobins* (1938) will have missed the thread of connection from Marx to James to Williams.
89. Mintz 1979: 215.
90. Mintz 1977.
91. Mintz 1959: 49.
92. Lewis 1978.
93. Orr 1937: 23. Leverett writes: "Dental caries was not prevalent in primitive societies apparently because their diets lacked easily fermentable carbohydrates. Although caries is clearly a disease with multiple causes, the principal mode of caries initiation is acid dissolution of tooth enamel. This acid is produced by several different microorganisms, most notably *Streptococcus mutans*, with fermentable carbohydrates, especially sucrose, as the nutrient source.... In England, for instance, there was a sharp increase in the prevalence of dental caries during the Roman occupation. There was a decline in dental caries after the departure of the Romans in the early 5th century A.D., and it did not significantly increase again until the second half of the 19th century, when sucrose became widely available to all levels of society" (1982: 26-27).

### 3. Consumption

1. A particularly moving representation is Nigerian author Chinua Achebe's (1973) story "Sugar Baby," in which a man's obsessive liking for sugar becomes the crux of his personal crisis during the Nigerian civil war.
2. McKendry 1973: 10.
3. Nonetheless there was some exportation of wheat and barley from England, even as early as the fourteenth century. Cf. Everitt 1967b, *passim*, especially pp. 450 ff.; and Bowden 1967: 593 ff.
4. Drummond and Wilbraham 1958: 41.
5. Appleby 1978: 5.
6. *Ibid.*
7. Drummond and Wilbraham 1958: 88.
8. Such general assertions are of course always risky and subject to exceptions. But J. E. T. Rogers called the fifteenth century "the golden age of the English labourer," and with reason; the depopulation

resulting from the Black Death had created a labor shortage resulting in the doubling of wages in many regions (Bowden 1967: 594). "Not until the nineteenth century," Postan writes, "was the wage-earner's standard of living again so high" (Postan 1939: 161). In the seventeenth century, dearth fell especially hard upon the poor. The evidence collected and assembled by Everitt and by Bowden in their contributions to *The Agrarian History of England and Wales* makes clear that "the third, fourth, and fifth decades of the seventeenth century witnessed extreme hardship in England, and were probably among the most terrible years through which the country has ever passed" (Bowden 1967: 621). These were the years immediately preceding the large-scale introduction of sugar and other commodities (such as tea) into England.

9. Drummond and Wilbraham 1958: 68-69.
10. *Ibid.*: 51.
11. *Ibid.*
12. Murphy 1973: 183.
13. *Ibid.* See also note 8.
14. Not all of these particular items—saffron, for instance—are produced exclusively in tropical or subtropical regions. Nonetheless, most were imported to England; all were rare and costly; and knowledge of their nature was for long imperfect and even fantastic. According to tradition, it was Phoenician merchants who originally introduced saffron to Cornwall and Ireland. Hunt (1963) claims that the Cornish buns and cakes flavored with "saffron" confirm that tradition, while the saffron-dyed shirts of Ireland, the *leine caroiach* worn by chiefs, supposedly are the origin of the tartan. England became a saffron producer in later centuries.
15. Joinville 1957 [1309]: 182.
16. Mead 1967 [1931]: 77.
17. Quoted in Salzman 1931: 461.
18. *Our English Home* 1876: 86.
19. *Ibid.*: 85.
20. *Ibid.*: 86.
21. Salzman 1931: 417.
22. *Ibid.*
23. *Ibid.*
24. Labarge 1965: 96.
25. *Ibid.*: 97.
26. Crane 1975 and 1976: 473.
27. Labarge 1965: 96.
28. Salzman 1931: 231 n.
29. *Ibid.*: 202.

30. Hazlitt 1886: 183.
31. *Ibid.*
32. Mead 1967: 44.
33. *Ibid.*: 55.
34. *Ibid.*: 56.
35. *Ibid.*
36. Austin 1888: ix.
37. R. Warner 1791: Pt. I, 7.
38. *Ibid.*: 9.
39. Lippmann 1970 [1929]: 352 ff.
40. *Ibid.*: 224–25. In an informative paper, K. J. Watson (1978: 20–26) describes the casting of sugar statues duplicating existing bronzes, which became common festive decor for the grand-ducal weddings of the fifteenth to seventeenth centuries in major Italian and southern French cities. Watson was not able to identify any pre-fifteenth-century references for such sculptures, and concluded that sugar's price precluded this kind of display, even for the wealthy, in earlier centuries. But since sugar was being imported to Venice no later than about the eighth century, while refining was being improved there by the thirteenth, earlier experimentation probably did occur. Sugar sculpture in Islamic North Africa was common by the eleventh century. The Italian sugar sculptures, Watson writes, were often called *trionfi* (triumphs): "table decorations for banquets, most frequently wedding banquets... usually... ornaments to delight the eye rather than the stomach... sometimes presented to guests at the end of the event" (1978: 20). The subjects were drawn from heraldic imagery, themes of triumph, architecture, gods and goddesses, narrative groups from Biblical stories or contemporary literature, and animals. This "court art," Watson believes, was partially eclipsed in the early eighteenth century by the beginnings of hard-paste porcelain manufacture. The techniques, as well as the ceremonial specifications, were very likely diffused from North Africa to northern Europe by way of Italy and then France.
41. Le Grand d'Aussy 1815 [1781]: II, 317.
42. Drummond and Wilbraham 1958: 57.
43. *Our English Home* 1876: 70.
44. *Ibid.*
45. W. Harrison 1968 [1587]: 129. William Harrison's *The Description of England* is generally regarded as the fullest single account of British social life in Elizabethan times. It was written, we are told, "to provide the introductory books to Holinshed's Chronicles" (Edelen 1968: xv), and deals with the whole of English society, but provides especially rich accounts of daily life. Harrison refers to sugar only

- twice in his book, the first time to bemoan the sharp rise in price of all spices (sugar included) because they were being reexported; and the second, when describing the fare of the rich and privileged.
46. Warton 1824: I, clix. George Cavendish, the biographer of Cardinal Wolsey (1475–1530), rhapsodizes about the subtleties that graced the table of the Cardinal's installation: "Anon came vppe the Second Course w<sup>t</sup> so many disshes, subtilties, & curious devysis w<sup>ch</sup>e ware above an C<sup>th</sup> in number of so goodly proporcion and Costly/ that I suppose the ffrenchmen neuer sawe the lyke/ the wonder was no lesse than it was worth in deade/ there ware Castelles w<sup>t</sup> Images in the same/ powlles Chirche & steple in proporcion for the quantitie as well counterfeited as the paynter shold haue paynted it vpon a clothe or wall/ There ware, beastes, byrdes, fowles of dyuers kyndes And personages most lyvely made & counterfeit in dysshes/ some fighting (as it ware) w<sup>t</sup> swordes/ some w<sup>t</sup> Gonnes and Crosebowes/ Some vaughtyng & leapyng/ Some dauncyng w<sup>t</sup> ladyes/ Some in complet harnes lustyng w<sup>t</sup> speres/ And w<sup>t</sup> many more devysis than I ame able w<sup>t</sup> my wytt to discribbe/ Among all oon I noted/ there was a Chesse bord subtilly made of spiced plate/ w<sup>t</sup> men to the same/ And for the good proporcyon bycause that frenche men be very expert in that play my lord gave the same to a gentilman of fraunce commaundyng that a Case should be made for the same/ in all hast to preserue it frome perysshing in the conveyance therof in to hys Contrie" (Cavendish 1959 [1641]: 70–71). "Spiced plate" refers to the hardened sugar from which these various forms and figures were sculpted. See also Intronizatio Wilhelmi Warham, Archiepiscopi Cantuar. Dominica in Passione, Anno Henrici 7. vicessimo, & anno Domini 1504. Nono die Martii, in Warner 1791: 107–24.
  47. Partridge 1584: cap. 9 [unpaged].
  48. *Ibid.*, cap. 13 [unpaged].
  49. Platt 1675: nos. 73–79.
  50. McKendry 1973: 62–63.
  51. Glasse 1747: 56.
  52. Warner 1791: 136. Surely one of the most interesting passages ever written about the subtleties is to be found here: "Hence arose an extraordinary species of ornament, in use both among the English and French, for a considerable time; representations of the *membra virilia, pudendaque muliebrina*, which were formed of *pastry*, or *sugar*, and placed before the guests at entertainments, doubtless for the purpose of causing jokes and conversations among them: as we at present use the little devices of paste, containing mottos within them, to the same end... Nor were these obscene symbols confined to the ornaments of the person, or to the decorations of the table, but, in

the early ages, were even admitted into the most awful rites of religion. The *consecrated wafer*, which the pious communicant received from the hands of the priest, on Easter Sunday, was made up into a form highly indecent and improper....” Not until 1263, according to Warner, did the English Church halt the apparently common practice of baking the communion wafers in the shape of human testicles: “Prohibemus singulis sacerdotibus parochialibus, ne ipsi parochianis suis die paschatis *testēs* seu hostias loco panis benedicti ministrent, ne ex ejus ministracione, seu receptione erubescantiam evitare videantur, sed panem benedictum faciant, sicut aliis diebus dominicis fieri consuevit” (Stat. Synod. Nicolae, Episc. Anegravensis An. 1263). Warner adds: “Du Fresne subjoins, ‘Ubi pro *evitare* legendum puto *irritare*, forte enim intelliguntur paniculi, seu oblatae in *testiculorum* figuram formatae, quas in hoc testo Paschali loco panis benedicti dabant’” (Gloss. Tom. III, p. 1109). A revival of such odd practices, now of course entirely divested of any religious associations, is evidenced by occasional stories in the contemporary American press. A January 1982 article in the Baltimore *Evening Sun*, for example, recounts the success of “adult” gingerbread cookies and “erotic chocolates.” “I have people coming in,” marvels one confectioner, “and saying: ‘I want to see the gynecologist special.’ Some women actually take these candies to their doctors and give their doctors candy after an examination.” I intend to deal anthropologically with these rather bizarre materials in a subsequent publication.

53. Wallerstein 1974.

54. Schneider 1977: 23.

55. Pellat 1954. See also Hunt 1963.

56. Levey 1973: 74. It is tempting to try to combine Galenic humoral concepts with the “taste tetrahedron” proposed by Henning (1916) to show the interrelationships among the taste qualities. Galen himself had enumerated more than four taste qualities. But humoral medicine appears to be grounded upon a quadripartite organization of physical reality, and the taste qualities that were most often enumerated were four in number. The four elements of the natural world were air, fire, water, and earth; earth was dry, water moist, fire hot, air cold. Any two elements combined to produce a complexion; there were four, each with its own humor:

<u>Complexion</u>	<u>Qualities</u>	<u>Humor</u>
Sanguine	Hot and moist	Blood
Phlegmatic	Cold and moist	Phlegm
Choleric	Hot and dry	Yellow or green bile
Melancholic	Cold and dry	Black bile

All foodstuffs were made up of the same elements; their suitability as food depended upon these elements, relative to the temperament of the consumer. So lamb, which was considered moist and phlegmatic, was unsuitable for old men, whose stomachs had too much phlegm already. Children, by temperament phlegmatic, were to eat moderately hot and moist meats; as they grew older, becoming either sanguine or choleric, they were to eat cold salads, and colder meats (this is not, of course, a reference to temperature), reverting to hot and moist meats in old age. Appetite was believed to be a function of heat and dryness; digestion, of heat and moisture; retention, of coldness and dryness; expulsion, of moisture and coldness. Since foods had their characteristic states, they could be prescribed in dietary fashion. Moreover, the system was made more elaborate by the notion of degrees (so that, for instance, lettuce was cold and moist, while cabbage was hot in the first degree and dry in the second).

The “hot” and “cold” distinctions (which have nothing to do with temperature, of course, and occur in much-modified form in the contemporary folk medicine of much of the world) figured in Galenic humoral medicine (Kremers and Urdang 1963: 16–17), and were maintained and elaborated by Islamic scholars after the seventh century. Especially important in this semiscientific elaboration (and in its subsequent perpetuation in western medicine for centuries thereafter) was Alkindus (Abū Yūsuf Ya‘qūb ibn-Ishāq al-Kindī), physician to the caliphs al-Ma‘mun and al-Mu‘taṣim at Baghdad. Alkindus “prematurely attempted to establish an exact method of prescribing by applying the law of geometrical progression to the Galenic doctrine of qualities and degrees of complicated mixtures. His geometrical prescribing combined with musical harmony is well illustrated in the following:

Cardamom is	1' warm	½' cold	½' moist	1' dry
Sugar is	2' warm	1' cold	1' moist	2' dry
Indigo is	½' warm	1' cold	½' moist	1' dry
Emblica is	1' warm	2' cold	1' moist	2' dry
Sum	4½' warm	4½' cold	3' moist	6' dry

This, according to Alkindus, means that the compound is dry to the first degree” (D. Campbell 1926: 64).

Honey and sugar were humorally different, it appears. But the humoral characterization of sugar probably developed within the Islamic world itself, later to be diffused to Europe. Because of this, the two substances were not used with complete interchangeability, though their uses overlapped, and sugar replaced honey more and



more. Sweet-tasting foods seem generally to have been considered hot, the other three "qualities" or tastes being cold:

Hic fervore vigent tres, salsus, amarus, acutus,  
Alget acetosus, sic stipans, ponticus atque  
Uctus, et insipidus, dulcis, dant temperamentum.

(Harrington n.d. [1607]: 50)

But a fleeting glance at the relevant materials gives no indication that sweetness was treated for diagnostic purposes as a "quality" separate from the food that produced the sweet sensation. My attempt to find some simple imposition of four tastes upon four humors (upon four fluids, upon four body processes, upon four elements, etc., etc.) failed. But serious study of the incorporation of sugar into the humoral pathology of the European world would probably reveal much about the way it was viewed, particularly in contrast to honey.

57. Levey 1973.

58. *Ibid.*

59. The influence of Arab pharmacology upon western concepts of liquid medicines and beverages is suggested in a small way by contemporary lexicon. It was through that influence that terms such as sherbet, shrub, syrup, and julep entered English; and these contributions of Arabic (and Persian, via Arabic) to English seem to have been based largely on the diffusion of sugar uses.

60. Pittenger 1947. Note that nearly all the ingredients are white in color. The association between purity and whiteness is ancient in Europe. White sugar was commonly prescribed in medicines, and combinations of white foods (chicken, cream, rice flour, almonds, etc.) seem to have enjoyed a popularity at times out of all proportion to their therapeutic efficacy.

61. Lippmann 1970 [1929]: 368.

62. An argument of a kind could be made for sugar's innocence or purity on grounds of its color—not so silly an idea as it sounds. See note 60. "Pure white sugar" still has two quite different meanings, which its manufacturers are happy to treat as one.

63. Pittenger 1947: 8.

64. Lippmann 1970 [1929]: 395.

65. Pittenger (1947) enumerates the following: (1) preservative; (2) antioxidant; (3) solvent; (4) to give consistency or body; (5) stabilizer; (6) to mask bitter and unpleasant-tasting drugs; (7) in syrups; (8) as a demulcent; (9) as a food; (10) as a replacement for glycerin; (11) in elixirs; (12) as a binder for tablets; (13) as an excipient; (14) as a coating; (15) as a diluent and sweetening agent; (16) as a confection base; (17) as an oil sugar base; (18) as an aromatic sugar base; (19) as a homeopathic medicated globule base;

(20) as a homeopathic medicated cone base; (21) as a candy cough lozenge base; (22) as a test diet base; (23) in calcium saccharate; (24) medicinally. Of these, I believe that nos. 1, 3, 4, 5, 6, 7, 8, 9, 11, 13, 14, 15, 16, 18, 21, and 24 were known and employed in the pharmacopoeias transferred to Europe in Latin translation beginning no later than around 1140; that nos. 2, 12, 17, 19, and 20 were possibly practiced; and that only nos. 10, 22, and 23 are probably European and recent. Though I have not consulted specialists in the history of pharmacy concerning this list, I believe the main point—that most such practices were developed or invented in the Islamic world, between the seventh and twelfth centuries—is unassailable.

66. Lippmann 1970 [1929]: 456–66. Serveto's essay on syrups seems innocuous enough to one ignorant of the deeper philosophical implications—which have to do with much more basic conceptions of orthodox Christianity. Pittenger's (1947: 9) suggestion that Serveto may have lost his life because of his hostility to sugared medicines is insouciant, to say the least. *On Syrups* can hardly be called medical in character, no matter how broadly one uses that adjective.

67. Pittenger 1947: 10.

68. *Ibid.*

69. Lippmann 1970 [1929]: 478. The translation by Pittenger (1947: 10–11) is abridged.

70. Vaughan 1600: 24.

71. *Ibid.*: 28.

72. Vaughan 1633: 44.

73. Venner 1620: 103–6.

74. Hart 1633: 96–97.

75. Slare 1715. Thomas Willis was one of London's most successful physicians of the Restoration period. He provided unusually complete descriptions of many diseases, and is especially known for his detailed study of diabetes mellitus ("the pissing sickness") or saccharine diabetes, in which he reported on the intensely sweet character of the urine of diabetics and speculated on the possible particular significance of this aspect of the disease. He is generally regarded as the discoverer of diabetes m. (cf. Major 1945: 238–42). Willis was one of the first medical men of his time to raise serious questions about sugar and health, thus incurring the wrath of Frederick Slare.

76. *Ibid.*: E4.

77. *Ibid.*

78. *Ibid.*: 3.

79. *Ibid.*: 7.

80. *Ibid.*: 8.

81. *Ibid.*: 16.

82. Oldmixon 1708: II, 159.
83. Anderson 1952: 154; Rosengarten 1973: 75.
84. Moseley 1800: 34.
85. Chamberlayn 1685. "As the Chinese would deem us barbarians for putting milk and sugar into our tea," writes Dodd (1856: 411), "so do the coffee-drinkers of tropical countries consider it to be barbarism to introduce such additions to the fragrant decoction of their favourite berry. Lieutenant Welsted gives an amusing illustration of this: 'A party of Bedouins were disputing respecting the sanity of Lady Hester Stanhope,—one party strenuously maintaining that it was impossible a lady so charitable, so munificent, could be otherwise than in full possession of her faculties. Their opponents alleged acts in proof to the contrary. An old man with a white beard called for silence—a call from the aged among the Arabs seldom made in vain. "She is mad," said he; and lowering his voice to a whisper, as if fearful such an outrage against established custom should spread beyond his circle, he added, "for she puts sugar in her coffee!" This was conclusive.'"
86. Strickland 1878, quoted in Ukers 1935: I, 43.
87. Ukers 1935: I, 38–39.
88. *Ibid.*: I, 41.
89. Drummond and Wilbraham 1958: 116.
90. Heeren 1846 [1809]: 172–73.
91. E.g., Drummond and Wilbraham 1958: 116.
92. Ukers 1935: I, 67. The John Company's records reveal that in 1664 2 pounds 2 ounces of "good thea" were purchased by the court of Directors for presentation to His Majesty so that he might "not find himself wholly neglected by the Company" (Ukers 1935: I, 72). In 1666, 22¾ pounds of tea were provided to the king (purchased at 50s. per pound!); not until 1668 does a commercial order for 100 pounds of China tea occur in the records. Only after the English were driven out of Java by the Dutch in 1684 were standing orders for tea placed by the company.
93. Drummond and Wilbraham 1958: 203.
94. Ukers 1935: I, 133–47.
95. D. Forbes 1744: 7.
96. MacPherson 1812: 132.
97. D. Davies 1795: 37.
98. *Ibid.*: 39.
99. Eden 1797: III, 770.
100. Hanway 1767. In an anonymous tract (whose author is undoubtedly Hanway) inveighing against both tea and sugar, we are told: "If you please, then, join them all together, and compute the expence, the loss of time taken in breaking and washing the dishes, sweetening

the tea, spreading the bread and butter, the necessary pause which defamation and malicious tea-table chat afford, and they will largely account for half a day in winter, spent in doing that which is worse, very much worse than doing nothing." That the tea and sugar might serve to make it possible for people to do much more than otherwise does not seem to have occurred to such critics.

Dorothy George has commented insightfully (1925: 14) on the school of opinion Hanway represented. In the latter half of the eighteenth century, there was, she writes, "a general cry of national deterioration. This is based largely on two ideas, one, the terrible effects of increasing luxury, as seen for instance, in the nabob, or the lamplighter with silk stockings, or the labourer's family consuming tea and sugar. The other is the decline of what Defoe called the Great Law of Subordination, a theory of course much stimulated by the fears of Jacobinism roused by the French Revolution. Though connected with opposite schools of thought, the two ideas merged; the well-dressed lamplighter for instance might be regarded as a symbol of either of the two great causes of degeneration. Contemporary denunciations of luxury and insubordination deserve a rather critical attention. They imply a higher standard of living and some improvement in education. The fine clothes, good food and constant tea-drinking so much complained of after 1750 were incompatible with the wholesale consumption of gin of the earlier part of the century. There was something paradoxical in a complaint by Dr. Price in 1773 that 'the circumstances of the lower ranks of people are altered in every respect for the worse, while tea, wheaten bread and other delicacies are necessaries which were formerly unknown to them.'"

But we can see clearly in retrospect that those who feared the moral and political consequences of increased and widened consumption were bound to lose out as the Industrial Revolution approached, the empire expanded, and as the trading, planting, and manufacturing classes grew apace, though not yet locked in competition with each other.

101. Burnett 1966: 37–38.
102. Drummond and Wilbraham 1958: 329.
103. *Ibid.*: 209.
104. Trevelyan 1945: 410; George 1925: 26.
105. Fay 1948: 147.
106. Quoted in Botsford 1924: 27.
107. Drummond and Wilbraham 1958: 112.
108. Ayrton 1974: 429–30.
109. Pittenger 1947: 13.
110. Drummond and Wilbraham 1958: 58.

111. *Ibid.*: 54.
112. Salzman 1931: 413.
113. Mead 1967 [1931]: 155.
114. *Our English Home* 1876: 73.
115. Salzman 1931: 417; see also Lopez and Raymond 1955. Balducci Pegolotti's (1936: 434–35) accounts from the thirteenth century are rich with references to different sorts of sugars reaching Venice (and passing through that city as well), mainly from the eastern Mediterranean. Included here are the once-, twice-, and thrice-“cooked” (refined) sugars; the various loaves (*mucchera*, *caffettino*, *bambilonia*, *musciatto*, and *domaschino*), which differed in form and quality; powdered sugar (*polvere di zucchero* or simply *polvere*); the various imperfectly refined, molasses-heavy sugars (*zucchero rosato*, *zucchero violato*), etc. There is also some mention of molasses, though such references are unsatisfactory. Heyd 1959 [1879]: II, 690–93) notes that such liquids were perceived, at least to judge by their names, as similar to honey: *mel zucarae*, *zuccara mellita*, *miel di calamele*, *meil sucre*, etc. While a reconstruction of both the distinctions among these sugars and some specification of their different uses is possible—Lippmann (1970 [1929]: 339 ff.) actually attempts to classify them—it is a task for the future. By turning instead to developing uses and preferences in England itself, I am able to cover some of the same ground.
116. Pomet 1748: 58–59. Pomet provides more than four pages of descriptive text, as well as a full-page plate of a West Indian cane plantation, showing mill and boiling pans. Each type or kind of sugar—Cassonade, Royal and Demy-Royal, Brown, White and Red Candy, Barley-Sugar, Sugar-Plums, etc.—is described fully, and its medical uses detailed.
117. Torode 1966.
118. Drummond and Wilbraham 1958: 332.
119. Burnett 1966: 70.
120. R. H. Campbell 1966: 54.
121. *Ibid.*: 56.
122. Paton, Dunlop, and Inglis 1902: 79.
123. R. H. Campbell 1966: 58–59.
124. Burnett 1966: 62–63.
125. Torode 1966: 122–23.
126. Austin 1888.
127. Mead 1967 [1931]: 159.
128. *Ibid.*: 160.
129. This issue is discussed in Taylor 1975 and Burnett 1966.
130. The short, unhappy life of Prince Henry, the sickly son of Edward I (who reigned 1272–1307), was sweetened by the prescriptions of

- the court physicians, at a time when the medicinal uses of sugar were gaining recognition—rose sugar, violet sugar, *penidia* (pennet), syrups, liquorice—but all to no avail. They helped no more than did “the candles made to his measure” set to burn at all the famous shrines, or the thirteen widows who prayed all night for his recovery. See Labarge 1965: 97.
131. Hentzner 1757 [1598]: 109.
132. Rye 1865: 190.
133. Nef 1950: 76.
134. Lippmann 1970 [1929]: 288.
135. Renner 1944: 117–18.
136. Crane 1975 and 1976: 475. Eva Crane's excellent study of honey points out how very little formal attention was given to it in Great Britain. The first book on honey in English, John Hill's *The Virtues of Honey*, was not published until 1759, and dealt with honey mainly as a medicine. Crane's work is particularly important because of her insistence that honey was a food, a medicine, and a basis for manufacturing alcohol—but *not* a sweetener. She argues persuasively that sweetening was simply not valued that highly by the English before perhaps the thirteenth century.
137. Hentzner 1757 [1598]: 110.
138. Rye 1865: 190. I discovered too late to include in my discussion the interesting paper by Sass (1981) which deals with aspects of the English sweet tooth in medieval times. Sass indicates eloquently how much more historical research is needed on the subject of sweet preference.
139. Drummond and Wilbraham 1958: 116.
140. *Ibid.*
141. Sheridan 1974: 347–48.
142. Mathias 1967.
143. The new beverages provoked a flood of literature, most of it bad. The author of this poem is not identified, but Allen Ramsay, Robert Fergusson, Hartley Coleridge, and Shelley, among others, rhapsodized poetically about tea. One of the earliest devotees was Nahum Tate, whose “Panacea: A Poem upon Tea” was his most famous work; written in 1700, it includes the lines:
- With silent wonder mutually they Trace  
Bright joys reflected on each other's Face.  
Then thus the Bard—fear no Circean Bowls—this is the  
Drink of Health, the drink of Souls!  
The virtues this, and this the Graces quaff,  
Like *Nectar* chearful, like *Nepenthe* safe.

Not such the Plant which Bacchus first did nurse,  
 Heaven's Blessing changed by Mortals to their Curse,  
 Ah, Syren-Pleasure to Destruction turn'd!  
 Ah, woeful Mirth to be for ever mourn'd!

Not only is there an embarrassing supply of such "literature," but its very production raises interesting questions of social history. Sugar cane apparently excited similar excesses. Of James Grainger's interminable poem about sugar ("The Sugar Cane. In Four Books."), Samuel Johnson scoffed that he might as well have written of a parsley garden or a cabbage patch. But the role of so-called didactic poetry in influencing attitudes about these commodities should not be slighted.

144. Burnett 1969: 275.
145. Sombart 1967 [1919]: 99.
146. Shand 1927: 39.
147. *Ibid.*
148. *Ibid.*
149. *Ibid.*: 43.
150. Dodd 1856: 429.
151. Simmonds 1854: 138.
152. Though Oddy, emphasizing the nonsocial character of proletarian eating habits, cites a Liverpool dock laborer's wife interviewed before World War I, who did not offer tea to her friends because "women wouldn't thank you for a cup of tea" (Oddy 1976: 218).
153. Drummond and Wilbraham 1958: 299.
154. Taylor 1975: xxix-xxxii.
155. Oddy 1976: 219.
156. *Ibid.*: 219-20.
157. Reeves 1913: 97.
158. Drummond and Wilbraham 1958: 299.
159. Reeves 1913: 103.
160. Oddy 1976: 216.
161. Rowntree 1922: 135.
162. Reeves 1913: 98.
163. Oddy 1976: 217.
164. *Ibid.*: 13.
165. "The consumption of sugar was 20 lbs. per head. Now it is 5 times as great. Better class industrial workers in Manchester in 1836 consumed about ½ oz. of tea per head per week and 7 ozs. of sugar. Workers of a corresponding type today consume 3 ozs. of tea and nearly 35 ozs. of sugar in all forms. This five-fold increase in sugar consumption is the most striking change of the nation's diet during the last 100 years. It has, of course, been rendered possible by the

great fall in price. A hundred years ago sugar cost about 6d a lb. It now costs less than half" (Orr 1937: 23).

166. A dessert not yet forgotten. Margaret Drabble's hero, Len, in *The Ice Age*, thinks back: "Custard, the poor man's cream. Len, like many of his generation, did not taste fresh cream until he was a man: for a year or more he had surreptitiously preferred condensed milk, before weaning himself onto the real thing" (Drabble 1977: 97).
167. Burnett 1969: 190.
168. Klein, Habicht, and Yarborough 1971.

#### 4. Power

1. Ragatz 1928: 50.
2. Ellis 1905: 66-67.
3. *Ibid.*: 78.
4. Rogers 1963 [1866]: 463.
5. Pares 1960: 40.
6. K. G. Davies 1974: 89.
7. Davis 1973: 251-52.
8. Quoted in DeVries 1976: 177.
9. *Ibid.*
10. *Ibid.*: 179. "Quotations of this sort," writes Elizabeth Gilboy, "could be multiplied without end," citing Sir William Temple: "... the only way to make them [the laborers] tempered and industrious is to lay them under the necessity of labouring all the time they can spare from meals and sleep, in order to procure the necessaries of life" (Gilboy 1932: 630). The citation in DeVries is from an anonymous 1764 tract entitled *Considerations on Taxes*.
11. *Ibid.*
12. *Ibid.*
13. Hobsbawm 1968: 74.
14. That apostle of colonization Edward Gibbon Wakefield, whom Karl Marx criticized so roundly, has some sprightly remarks upon the beneficial effects of the extension of markets. Of particular interest is his implication that sugar (among other things) reduced the costs of agricultural production in the metropolis: "It is not because an English washerwoman cannot sit down to breakfast without tea and sugar, that the world has been circumnavigated; but it is because the world has been circumnavigated that an English washerwoman requires tea and sugar for breakfast. According to the power of exchanging are the desires of individuals and societies [so much for