

## **Eating from a Corrupted Table: Food Regulations and Civic Health in Barcelona's "First Bad Year"**

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Sometime near the end of the fourteenth century, a Catalan chronicler noted that “in the year 1333, there was a shortage of all foodstuffs, and among ourselves we called this ‘the first bad year.’”<sup>1</sup> Beginning with the summer harvest of 1332, extreme weather conditions caused several consecutive grain crops throughout Catalonia to mature poorly or not at all. In the normally prosperous city of Barcelona, grain prices rose to three times their normal level in a single year, and even at those inflated prices there was still nearly no grain to be had. As the famine wore on, thousands of residents sickened or died while the leaders of Barcelona struggled to bring food to the city.

Ensuring an adequate supply of food during this crisis was the councilors’ primary concern; it was not, however, their only one. This article will examine municipal ordinances regulating the sale and distribution of bread and grain in Barcelona during and around 1333 to understand how and why the municipal authorities policed corruption in their city’s food system during a time of severe shortage. During this period, civic regulations show a growing awareness of the relationship between a well-regulated food system and the public good, a relationship made all the more critical (and thus all the more visible to the historian’s eye) during a time of shortage. I will begin by briefly sketching out the context of the fourteenth-century famine as it affected the city of Barcelona. I will then move on to consider municipal food regulations in two contexts: commercial corruption in the grain and bread trades, and pollution/corruption of the food supply itself. Taken together, these two types of regulation show that the public interest in regulating the food supply went far beyond the simple matter of sufficiency versus scarcity. The actions of both councilors and citizens reflect an understanding of the role that a wholesome food supply and a fair and transparent food trade played in preserving the health of both the individual citizens and the civic body as a whole, and that preventing both kinds of corruption was a public charge.

The issues surrounding food and famine are not new to historians of the medieval Crown of Aragon, whose exhaustive work in the archives has gone a long way in answering many of the fundamental questions surrounding nutritional requirements, rural production capacity, and distribution and transport, as well as exploring some of the social consequences of the 1333 famine in particular.<sup>2</sup> What I propose here is a somewhat different approach; namely, that while food and

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<sup>1</sup> Fr. A. Merino and Fr. J. de la Canal, “De la Santa Iglesia de Gerona en su estado moderno,” *España Sagrada* XLV (Madrid 1826), 394. The term “the first bad year” is most commonly attributed to the late fourteenth-century *Cronicon Barchinonenses* of Barcelona chronicler Guillem Mascaró (see Esteve Bruniquer, *Rúbriques de Bruniquer: Ceremonial dels magnífichs consellers y regiment de la ciutat de Barcelona* (Barcelona: Impr. d’Henrich, 1912), 4, 163). Merino and de la Canal, however, attribute the direct quote above to a “Codice Carbonelli,” which may be referring to the work of Catalan humanist and royal archivist Pere Miquel Carbonell, or to a book in his library, housed in the cathedral archive of Girona (one volume of which, indeed, does contain a brief chronicle, though with the two folios containing the relevant years razored out). Carme Batlle likewise points toward Girona, though in this case to the statutes of the Cathedral of Girona; see Carme Batlle, *Història de Catalunya*, vol. III: *L’expansió baixmedieval (segles XIII-XV)*. Edited by Pierre Vilar (Barcelona: Edicions 62, 1988), 87.

<sup>2</sup> See, for example Pere Benito i Monclús, “Carestía y hambruna en las ciudades de occidente durante la Edad Media: algunos rasgos distintivos.” In *Alimentar la ciudad en la Edad Media* (Nájera: Instituto de Estudios Riojanos; Ayuntamiento de Nájera, 2009), 299–314; Juanjo Cáceres, “La participació del consell municipal en l’aprovisionament cereal de la ciutat de Barcelona (1301-1430).” (Doctoral dissertation, Universitat de Barcelona,

famine may be subjects of study in and of themselves, they can also be used as an analytical framework, a lens through which to understand the workings of a particular society. Ken Albala has argued that the social meaning of food grows stronger at times when class structure is blurred, threatened, or undergoing a period of transition.<sup>3</sup> I argue that the converse is also true: an alimentary crisis such as the 1333 famine brings the values of a society into sharper focus, allowing us to see more clearly the convergence, not just of nature and culture, but of economics, geopolitics, and social structures that form the essential context for a given society's food system, thus allowing us a new window onto the identity of the city as a whole.<sup>4</sup>

### **Food and the City: Barcelona in the Early Fourteenth Century**

While there are undoubtedly commonalities across the later medieval food system in general,<sup>5</sup> individual cities or regions necessarily varied from the overall pattern according to their own particular characteristics. Local distinctions in climate and geography played a primary role, but these necessarily intertwined with sociopolitical and economic variables. In the case of Barcelona, one important factor was the city's position in relation to the other population centers in the Crown of Aragon. While the Crown was a composite monarchy with no official capital, Barcelona was, until the fifteenth century, the primary residence of the count-kings — and, by the later Middle Ages, their primary banker.<sup>6</sup> This position gave Barcelona an advantage relative to the other semi-independent cities of Catalonia: while the count-kings did not take Barcelona's side in every internecine dispute, they did strongly favor it. The city also enjoyed an advantageous economic position: over the course of the twelfth and thirteenth centuries, Barcelona experienced a period of rapid growth to become an important and prosperous commercial and artisanal city with a population that seems to have hovered around 25,000-30,000 throughout the fourteenth century, making it the most populous city in the combined realms.<sup>7</sup> Unlike many other developing urban centers of the high Middle Ages, however, Barcelona's growing prosperity was linked not to its domination of an agricultural hinterland, but to its control of a port: by the end of the thirteenth

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2006); Sebastià Riera Viader, "El proveïment de cereals a la ciutat de Barcelona durant 'el mal any primer' (1333): la intervenció del Consell de Cent i de la Corona," in *Història urbana del Pla de Barcelona: actes del II Congrés d'història del Pla de Barcelona* (Barcelona: Ajuntament de Barcelona, 1989), 1:315–26; Agustín Rubio Vela, "Crisis agrarias y carestias en las primeras décadas del siglo XIV," *Saitabi* 37 (1987): 131–47; as well as the numerous other works by these and other authors. More generally, see Margaret Murphy, "Feeding Medieval Cities: Some Historical Approaches," in *Food and Eating in Medieval Europe*, edited by Martha Carlin and Joel T. Rosenthal (London: Hambledon Press, 1998), 177–20; and Bruno Laurioux, *Manger au moyen âge: Pratiques et discours alimentaires en Europe aux XIVe Et XVe siècles* (Paris: Hachette Littératures, 2002), 8–9.

<sup>3</sup> Ken Albala, *Eating Right in the Renaissance* (Berkeley: University of California Press, 2002), 185.

<sup>4</sup> In this, I am drawing heavily on the work in the field of food geography. See, for example, P. J. Atkins and Ian R. Bowler, *Food in Society: Economy, Culture, Geography* (London; New York: Arnold, 2001), 4–38; David Bell and Gill Valentine, *Consuming Geographies: We Are Where We Eat* (London and New York: Routledge, 1997), 2–12

<sup>5</sup> In addition to the above-cited works by Margaret Murphy and Bruno Laurioux, see Françoise Desportes, *Le Pain Au Moyen Age* (Paris: O. Orban, 1987) and Massimo Montanari, *Alimentazione e Cultura Nel Medioevo* (Rome: Laterza, 1988), as well as the medieval-themed chapters in Jean Flandrin, ed., *Food: A Culinary History from Antiquity to the Present* (New York: Columbia University Press, 1999) and Paul Freedman, ed. *Food: The History of Taste* (Berkeley and Los Angeles: University of California Press, 2007).

<sup>6</sup> Stephen Bensch, *Barcelona and Its Rulers, 1096-1291* (Cambridge [U.K.] and New York: Cambridge University Press, 1995), 314–25; Ferrer i Mallol, "Projecció exterior," 357–58.

<sup>7</sup> Joan F. Cabestany i Fort and Jaume Sobrequés i Callicó, "Evolució demogràfica," in *Història de Barcelona*, vol. 3: *La ciutat consolidada* (Barcelona: Enciclopèdia Catalana, for the Ajuntament de Barcelona, 1992), 86–87; Maria Teresa Ferrer i Mallol, "Projecció exterior," in *Història de Barcelona*, vol. 3: *La ciutat consolidada*, ed. Jaume Sobrequés i Callicó (Barcelona: Enciclopèdia Catalana, for the Ajuntament de Barcelona, 1992), 357–58.

century, Barcelona had established a presence in all the major ports of the Mediterranean, from west to east, and vied with the merchant cities of the Italian peninsula for dominance of the sea lanes of the Mediterranean.<sup>8</sup>

Yet for all this dominance, Barcelona exercised direct control over very little land outside its own walls. The city had two main proprietary food sources: the *raval*, a mostly agricultural district that sat just to the west of the thirteenth-century wall, and that was roughly the same size as the urban territory enclosed by those same walls,<sup>9</sup> and the more extensive Barcelona plain, bounded to the north along the coast by the tower of Montgat (just north of present-day Badalona), to the south and west by the Garraf and Collserola costal mountain ranges.<sup>10</sup> The *raval* was interlaced with a few roads, but was generally dominated by medium-sized agricultural plots planted with vines and orchards, along with the few vegetables that were staples of the artisan diet: cabbage, onion, garlic, leeks, and spinach, plus more seasonal vegetables like squash, root vegetables, or spring greens.<sup>11</sup> The estate holders and small producers of the *pla de Barcelona* further supplemented the urban diet with grapes (likely reserved for wine production), olives, nuts, game, poultry, and secondary products such as eggs and cheeses.<sup>12</sup>

The local food culture was thus possessed of some variety, but the scope of the resources was small, and historians have long noted an increasing imbalance between the amount of food produced by Barcelona's territories and the demands of the city during its period of rapid growth in the high Middle Ages.<sup>13</sup> Grain especially was an essential component of the medieval diet that Barcelona's limited territories did not produce in sufficient supply. The city imported as much as it could from within the Crown lands, but most of Catalonia was relatively grain-poor. As Barcelona grew more and more populous in the late thirteenth and early fourteenth centuries, it came to depend ever more heavily on grain imports from the Crown's Mediterranean interests in Sicily and Sardinia.<sup>14</sup>

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<sup>8</sup> Montserrat Marsiñach Tirvió, "Urbanisme i societat a Barcelona a mitjan segle XIV: La plaça del blat," in *Història urbana del Pla de Barcelona: Actes del II Congrés d'Història del Pla de Barcelona* (Barcelona: Ajuntament de Barcelona, 1989), vol. 1, 120; Jaume Sobrequés i Callicó, *Historia de Barcelona* (Barcelona: Plaza & Janés, 2008), 63.

<sup>9</sup> For more on the displacement of Barcelona's cultivated land for housing during the city's growth period in the twelfth and thirteenth centuries, see Philip Banks, "El creixement físic de Barcelona, segles X-XIII" *Barcelona: Quaderns d'història* 8 (2003), 11-33.

<sup>10</sup> Manuel Riu, "Barcelona dins el marc urbà de Catalunya i la Mediterrània," in *Història de Barcelona*, vol. 2: *La formació de la Barcelona medieval*, ed. Jaume Sobrequés i Callicó (Barcelona: Enciclopèdia Catalana, for the Ajuntament de Barcelona, 1992), 340. The precise boundaries of these territories varied a bit; one council record from 1331/32 delineates the "territory of the city" as encompassing the land "from Muntgat to Castelldefels, and from the coll de Finestrelles to the coll de Cerola, and from la Gavarra and Vall Vidrera, and from the *molins reials de Llobregat* to the sea"; see Arxiu Històric de la Ciutat de Barcelona (hereafter AHCB), Llibres de consell 12, 13v. (December 1332).

<sup>11</sup> Philip Banks, "L'estructura urbana de Barcelona, 714-1300," in *Història de Barcelona*, vol. 2: *La formació de la Barcelona medieval*, edited by Jaume Sobrequés i Callicó (Barcelona: Enciclopèdia Catalana, for the Ajuntament de Barcelona, 1992), 54-55; F. Xavier Medina, "Alimentación, dieta y comportamientos alimentarios en el contexto mediterráneo," in *La alimentación mediterránea: historia, cultura, nutrición*, edited by F. Xavier Medina and R. Alonso (Barcelona: Icaria, 1996), 32-33.

<sup>12</sup> AHCB, Llibres de consell 12, 12r-14r. (December 1332)

<sup>13</sup> Cabestany i Fort, *Evolució demogràfica* 87.

<sup>14</sup> Cáceres, "La participació," 42-43. Catalonia's grain-growing zones were located in the Tarragona plain, the Penedès, Empordà, Lleida and Urgell. For a detailed analysis of both the history of Barcelona's grain commerce in general, as well as the Council of One Hundred's efforts to bring in grain from Mediterranean sources in 1333 and 1334 in particular, see Sebastià Riera Viader, "El proveïment de cereals," 315-26.

Supply problems with grain in particular were especially critical because the diet in Barcelona, like most other places in the medieval West, was still primarily bread-based. The adult consumption of bread ranged anywhere from 400-700 grams daily and comprised up to 50% of an individual's overall caloric consumption.<sup>15</sup> Any problems securing these requirements would be even further amplified by the class-based food culture of medieval cities like Barcelona. During the Middle Ages, there was a close relationship between the consumption of bread and a person's social standing: the lower the social standing, the greater was the proportion of daily calories provided by bread and other grain products. The urban professionals like merchants, notaries, and jurists who formed much of Barcelona's political class, together with the upper class of artisans, enjoyed greater security in getting basic food products such as bread, oil, and wine, and greater diversity of diet beyond these basics. The lower orders, on the other hand, saw a decline in dietary diversity in the later Middle Ages, coming to depend ever more on grain products, with less and less meat in the diet.<sup>16</sup> Bread *type* was class-marked as much as bread amount: well-off families in fourteenth-century Catalonia ate bread made exclusively from wheat (which itself came in several grades), while middling families might eat bread made from mixtures of wheat with other grains such as barley or rye; poor families were more likely to eat bread made exclusively from less expensive grains such as barley, rye, and spelt.<sup>17</sup> Grain markets in Barcelona also sold oats, millet, and sorghum, but these were regarded more as animal feed, and only used in bread for human consumption in times of great necessity.<sup>18</sup>

This dependence on grain, and on wheat in particular, as a caloric source would contribute to a growing crisis as it combined with the well-known environmental changes near the end of the thirteenth century that led to increasing — and increasingly devastating — cycles of famine in the fourteenth. In his now-classic work on fourteenth-century Europe's Great Famine, William Jordan has chronicled how dramatic changes in weather patterns around the beginning of the fourteenth century combined with an increased population and an end of the expansion of arable land produced a food shortage that was both protracted and widespread. Given its duration (from approximately 1314-22, depending on location) and scope (30 million people affected), this famine does seem to merit capitalization.<sup>19</sup> But Jordan takes care to point out that the worst consequences

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<sup>15</sup> Antoni Riera Melis, "‘Tener siempre bien aprovisionada la población.’ Los cereales y el pan en las ciudades catalanas durante la Baja Edad Media," in *Alimentar la ciudad en la Edad Media* (Nájera: Instituto de Estudios Riojanos; Ayuntamiento de Nájera, 2009), 53-54; and by the same author "Jerarquía social y desigualdad alimentaria en el Mediterráneo noroccidental durante la Baja Edad Media. La cocina y la mesa de los estamentos populares," in *La alimentación mediterránea: historia, cultura, nutrición*, edited by F. Xavier Medina and R. Alonso (Barcelona: Icaria, 1996), 89.

<sup>16</sup> Cáceres, "La participació," 64-65; Riera Melis, "Jerarquía social," 89-94; See also Medina, "Alimentación," 32-33. Barcelona's artisan class met the remainder of their caloric requirement with legumes, inexpensive vegetables like cabbage and onion, and (more rarely) salt pork, as well as more seasonal vegetables like squash in the late summer, and spinach in the winter. Fruit was considered a luxury item -- even one looked on with some suspicion -- and was hardly present at all in the artisan diet, and even though Barcelona was a port city, most kinds of fish (with the exception of tuna, sardines, drum, and dolphin) were too expensive for the artisan table. See Antoni Riera Melis, "Jerarquía social y desigualdad alimentaria," 91-94.

<sup>17</sup> Riera Melis, "Jerarquía social," 97-98.

<sup>18</sup> Cáceres, "La participació," 210-14.

<sup>19</sup> William Jordan, *The Great Famine: Northern Europe in the Early Fourteenth Century* (Princeton, NJ: Princeton University Press, 1996). Pere Benito uses a similar definition in his analysis of famine in Catalonia, arguing that the key features in famine, as opposed to shortage, are especially sharp price rises, sudden and unexpected onset (and decline), and "global" nature of the crisis; see Pere Benito, "Carestía y hambruna," 305-13. A broader view is provided by Massimo Montanari, *El hambre y la abundancia: historia y cultura de la alimentación en Europa* (Barcelona: Crítica, 1993), and Cormac Ó Gráda, *Famine: A Short History* (Princeton, NJ: Princeton University Press, 2009).

of this famine seem to have remained largely confined to northwestern Europe.<sup>20</sup> While the Mediterranean shortages that began a few decades later were undoubtedly severe and the beginning of a profound environmental change, the once-iconic status of Catalonia's "First Bad Year" is far less certain than that of the more well-known crisis to the north. In the first place, as historians of Catalonia have begun to point out, 1333 was far from the first of Catalonia's bad years; rather, it was one notably difficult year among many. By the late thirteenth century, the era of the expansion of arable land was coming to an end in the Mediterranean, and cycles of scarcity were beginning to come around more frequently, culminating in the early fourteenth century. Catalonia saw poor harvests in 1315-18 (though not as geographically all-encompassing as those in the north) and below-average harvests for a longer period from 1322-27; the Barcelona chronicles also note a grain shortage and inflated prices in the city in 1331.<sup>21</sup> Nor was 1333 the worst famine of the fourteenth century — the shortages of 1374-76 were notably more catastrophic, and were widespread throughout the Mediterranean.<sup>22</sup>

The idea of 1333 as a "First Bad Year" is thus perhaps best attributed to the undeniable appeal of a chronicler's evocative phrase combined with historians' desire to locate a convenient starting point for the general economic and political decline that Catalonia experienced in the late fourteenth through fifteenth centuries.<sup>23</sup> Nonetheless, the events during and around 1333 are undeniably significant: the Catalan grain trade during this period saw dramatic shortages and price spikes that could not be attributed to the usual fluctuations produced by normal harvest variations or grain speculation. This famine seems to have struck Barcelona particularly hard: grain prices rose rapidly to several times their normal level, and civic officials complained that even at those prices little to no grain could be found.<sup>24</sup> The situation in the city grew even worse as the rural population, who suffered periods of shortage even in good years, gravitated towards monasteries and cities, both of which had mechanisms for grain distribution to the poor; it was further exacerbated by the fact that several of Barcelona's usual grain sources in Catalonia and the Mediterranean were undergoing similar shortages during that same period, and were therefore hesitant to export grain stocks that their own populations needed.<sup>25</sup> It is in this context that we turn to the correspondence and municipal ordinances of Barcelona's Council of One Hundred as they attempted to provide for their city. In these records we see an emerging link between worries about corruption — both commercial and material — and the councilors' own sense of their charge to protect the health of their city.

### Commercial Corruption and Civic Health

While it is clear that the municipal authorities of Barcelona had always paid close attention to the city's food and grain supplies, their concerns before 1332-34 centered primarily on the

<sup>20</sup> Jordan, *The Great Famine*, 7-8.

<sup>21</sup> Cáceres, 109-17; Flocel Sabaté i Curull, *Història de Catalunya*, vol. 2: *Catalunya medieval*. Edited by Albert Balcells (Barcelona: L'esfera dels llibres, 2006), 327; Batlle, *La crisis social y económica*, 45-46.

<sup>22</sup> For a highly useful analysis of the catastrophic 1374-76 famine, see Adam Franklin-Lyons, "Famine: Preparation and Response in Catalonia after the Black Death" (Ph.D. Dissertation, Yale University, 2009).

<sup>23</sup> Agustín Rubio Vela examines this historiographic tendency in "A propósito del mal any primer. Dificultades cerealísticas en la Corona de Aragón en los años treinta del siglo XIV," in *Estudios dedicados a Juan Peset Aleixandre* (Valencia: Universidad de Valencia, 1982), 475-77; for examples, see Pierre Vilar, "El declive catalán de la baja Edad Media. Hipótesis sobre su cronología," in *Crecimiento y desarrollo* (Barcelona, 1964), esp. 328-29; and Carmen Batlle y Gallart, *La crisis social y económica de Barcelona a mediados del siglo XV* (Barcelona: CSIC - Institució Milá y Fontanals, 1973).

<sup>24</sup> AHCB, Llibres de consell 13, 57r-v (February 1334); see also Cáceres, "La participació," 42.

<sup>25</sup> Riera Melis, "Tener siempre bien aprovisionada la población," 27-30; and "Jerarquía social," 85-87.

regulation of commerce rather than of the food supply itself. Some of the Council's early ordinances were protectionist in nature, attempting to prohibit foreigners from selling non-grain items such as legumes, nuts, and cheeses.<sup>26</sup> Many others were attempts to prevent tax evasion, with a special focus on the wholesale trade that took place at the docks of the *ribera* district and the grain market known as the *plaça del blat* just outside the city's eastern gates.<sup>27</sup> Those few ordinances that dealt with retailers — the flour markets in the court of the comital palace, and the shops of millers, the bakers, the oven-tenders, and the *bescuyters* who made the hard-tack known as *bescuyt* ("twice-cooked") that was so essential to the economic wellbeing of this seafaring city — were primarily concerned with small-scale consumer fraud: oven-tenders faced fines if their loaves were not the correct weight; millers were reminded that the grain remains of the milling process belonged to the person who had brought the grain to be milled, and were prohibited from keeping for themselves or allowing third parties to gather it up.<sup>28</sup>

With the onset of the famine, however, municipal regulations reveal new concerns: alongside the older rules regulating tax evasion and fraud we see the councilors attempting to prevent the kind of corruption that might endanger the integrity of the city's food supply more generally. Civic authorities were especially worried about grain hoarding and profiteering. Regulation of this sort of behavior, while present in pre-famine years, is significantly more detailed in shortage years, when the common practice of holding back grain stock to drive up prices — and thus profits — could result in real catastrophe.<sup>29</sup> Already in April of 1333 the councilors felt it necessary to pass an ordinance requiring that every person who had wheat, barley, "red rice," or other grain to sell bring whatever they had to the *plaça* every day and sell it to whomever wanted to buy; violators faced a fine of 200 sous or 200 days in prison, one of the most severe punishments of that year's grain ordinances.<sup>30</sup> Eight months later, in October of 1333, the councilors extended a similar provision to retailers, requiring anyone who had flour to sell to go every day to the most convenient flour market and to sell to anyone who wanted to buy, as much or as little as they wanted to buy. The same ordinance likewise required that bakers bake and offer bread every day that it was customary to do so. The fines for retailers were markedly lower than those imposed on wholesalers — flour-sellers were fined 50 sous for staying away from the market, and only 10 sous per infraction for concealing or holding back flour from a potential buyer; bakers who refrained from baking bread when they had the materials to do so were fined 20 sous.<sup>31</sup> The fines, however, were likely proportional to the smaller volumes sold on a daily basis by retailers rather than the result of lesser concern; the councilors may have seen wholesalers as the source of the problem, but they were interested in preventing corruption in all parts of the city's food supply chain.

Civic authorities also did their best to regulate the middlemen known as *revenedors*, attempting to balance allowing this sort of commerce with keeping a lid on speculation and profiteering.<sup>32</sup> One regulation from December 1333 noted that only citizens of Barcelona were allowed to buy

<sup>26</sup> Cáceres, "La participació," 203-204, citing AHCB, Llibres de consell 5, 9v (1318-19).

<sup>27</sup> AHCB, Llibres de consell 11, 90r-91r & 93r-94r (March 1331)

<sup>28</sup> Cáceres, "La participació," 290-91, citing AHCB, Llibres de consell 1, 7r. (1301-03)

<sup>29</sup> On the question of human agency in shortages and famines, see Benito i Monclús, "Carestia y hambruna," 299-314; also Riera Melis, "Tener siempre bien aprovisionada la población," 35-36, and Cáceres, "La participació," 73-79. More generally, see Laurioux, *Manger au Moyen Âge*, 77-95.

<sup>30</sup> AHCB, Llibres de consell 12, 24v-26r. (April 1333); see a restatement of the same regulation and fine several months later: AHCB 13, 28v (January 1334). These regulations also cover legumes, which could be used as a material of last resort to make bread when grain was not available or affordable.

<sup>31</sup> AHCB, Llibres de consell 12, 41r-v (July 1333)

<sup>32</sup> Cáceres, "La participació," 234-35.

grain in order to resell it, and only in quantities of 5 *quarteres* or less (presumably a daily limit, though the ordinance does not specify), on pain of a 50-sous fine or 50 days in prison.<sup>33</sup> The widespread nature of the famine in the Crown lands eventually led the king to pass anti-speculation ordinances for all his territories in April of 1334, prohibiting *revenedors* from engaging in a sort of futures market by buying grain for a set price in advance of the harvest.<sup>34</sup> We should note that the authorities did not attempt to ban resellers outright: *revenedors*, both large- and small-scale, appear to have been an intrinsic feature of Barcelona's commercial economy that the city leaders did not want to disturb.<sup>35</sup> Yet the breadth and scope of the regulations shows that the Barcelona authorities saw the potential for corruption within the resale economy.

In tandem with guarding against deliberate hoarding and market manipulation, the councilors also began to keep a closer watch on price fluctuations more generally. In Catalonia, grain prices were only lightly regulated in times of crisis, and prices in normal years tended to remain relatively consistent, aside from the usual seasonal fluctuations. In the early fourteenth century in Barcelona, wheat generally sold for about 8 sous per *quartera*, becoming gradually more expensive over the course of the century (+/- 13 sous around 1400-1450). In famine years, however, prices rose sharply, ranging from 27-40 sous during the first third of 1333.<sup>36</sup> Pre-famine regulations had set price levels for wheat and barley, the two most important kinds of grain for human consumption, but these were prices on the sale of a *quartera*, an amount large enough that it was likely only purchased by those using it in bulk: the city's millers, bakers, and *bescuyters*. During the famine year, however, Barcelona authorities expanded their scrutiny to smaller-scale retailers to prevent price-gouging by instituting price controls on the pre-milled flour likely to be used by individual households: the *pesa* (an undetermined weight unit) of wheat flour was set at a maximum of 5 sous 4 diners, barley flour at 3 s. 8 d., white rice flour at 3 s. 6 d., flour made from "red rice" at 3 s. 2 d., and "mustiera" flour at a very low 2 s. 8 d. Overcharging carried a penalty of a 100-sous fine or the corresponding 100 days in prison,<sup>37</sup> suggesting that this was one of either the more common or the more serious offenses taking place in the city at that time.

In contrast with this enforced consistency, the famine brought one major change to the food trade: the city's bakers were now to sell only the penny loaves known as *dinals*, and were prohibited from selling the larger *dobleres*. Violators of this ordinance were to be punished with a fine or five sous or five days in prison, and the *dobleres* in question would be confiscated and given to the poor.<sup>38</sup> This prohibition must have been an emergency measure only, lifted after the crisis had passed, because it was reinstated in other difficult years like 1338-39; in 1376, one-third of the bakers' output had to be in the form of *dinals*.<sup>39</sup> What seems to be going on here is rationing:

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<sup>33</sup> AHCB, Llibres de consell 13, 22v (December 1333). Notably, the ordinance specifies wheat, barley, oats, and spelt — the grains most common for human consumption, as opposed to those used primarily for animal feed: oats and spelt already were fairly far down the list of "emergency" grains, but not as far as the millet and sorghum that were eventually consumed as the famine wore on. The *quartera* was a variable measure of volume, but usually around 60-70 liters/45-55 kilograms for unmilled wheat; see Pere Ortí Gost, "El forment a la Barcelona baixmedieval: preus, mesures i fiscalitat (1283-1345)," *Anuario de estudios medievales* 22 (1992), 393-97.

<sup>34</sup> Rubio Vela, "A propósito del mal any primer," 481.

<sup>35</sup> For Barcelona's small-scale middlemen, see Claude Carrère, *Barcelona 1380-1462: un centre econòmic en època de crisi* (Barcelona: Curial, 1977), vol. 1, 98-108

<sup>36</sup> Riera Melis, "'Tener siempre bien aprovisionada la población,'" 44-45.

<sup>37</sup> AHCB, Llibres de consell 13, 27r (January 1334)

<sup>38</sup> AHCB, Llibres de consell 13, 34v-35r (January 1334)

<sup>39</sup> Cáceres, "La participació," 213-14. The weights of these loaves are only rarely specified, however. Cáceres notes that in 1389 the weight *dobler* was set at 15 ounces, and the *dinal* at half that. But the wild fluctuations in grain prices

the councilors' food-related ordinances, formerly concerned primarily with regulating commerce and taxation, came to focus on a more important priority: keeping a steady supply of bread in the city. Small loaves like the *dinal* might prevent bakers selling only more expensive loaves and thus shutting out the poor entirely.

Despite these measures, documents from the end of the famine's first full year show a rapid deterioration in the health of the city as a social body. One new ordinance from January 1334 punished anyone caught stealing bread, bread dough, or flour, either within the city or the roads leading to it, with a day in jail, suggesting that as the "bad year" of 1333 drew to a close, petty theft of food had become a common occurrence.<sup>40</sup> In addition to these small cracks in the social fabric of the city, records of the Council of One Hundred for the period 1333 are peppered with increasingly panicked references to the "great unrest" and "grave danger" that the city found itself in. By the beginning of 1334, as Barcelona lay deep in the second winter of famine and shortages, the verbiage had grown even more dire: councilors wrote that the city was in danger of "perishing from hunger," and on the verge of "tearing itself apart."<sup>41</sup>

Events of a few months later show that the councilors' talk of "great unrest" and "grave danger" in the city was more than mere rhetoric. In early April 1334, rumors had begun to circulate within the city that the councilors themselves (many of them members of Barcelona's merchant elite) were hoarding grain. At one point, the situation spun so far out of control that the councilors were forced to barricade themselves in their homes for fear of the populace. The mob eventually advanced on the home of one of the councilors, Arnau Bernat, stealing everything they found there and attempting to kill one of his horses; they also broke into the home of Bernat de Marimon, who had been a councilor the previous year. The councilors wrote to the king for aid, concluding their description of events with an ominous warning that the city was in danger of total collapse if he did not intervene personally.<sup>42</sup> This incident was later picked up by a sixteenth-century chronicler who amplified the account to include further stories of class-based violence. According to this later version, the mob ruled the town for a couple of days, locking several of the city's leaders in the prison known as Castell Nou, while others escaped on boats headed for various destinations. The councilors and municipal authorities who remained seemed powerless to stop the violence, and on April 16 they wrote to the king and the crown prince asking for help. A few days later, a representative of the crown prince arrived and began an investigation, capturing and imprisoning 100 people in the Castell Nou and hanging the ringleaders in prominent places as an example to the populace.<sup>43</sup>

This second version of events, while more detailed, comes from a chronicle that should be read with a healthy dose of skepticism, especially when we consider that it was written 200 years after the fact by a chronicler who had himself lived through decades of food shortages and concomitant social unrest that plagued Barcelona during the late sixteenth century.<sup>44</sup> There are nevertheless some lessons that emerge here as we look at the way that food moves through the city and through

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in mid-fourteenth century make it unwise to use this as anything but the roughest estimate of what these loaves weighed in 1333-34.

<sup>40</sup> AHCB, Llibres de consell 13, 27r (January 1334). This same ordinance also begins with a note that anyone who steals bread, bread dough, or flour either within the city or the roads leading to it, will spend a day in jail.

<sup>41</sup> See, for example, AHCB, Llibres de consell 13, 47r-48r (December 1333), 52r-53r (January 1334), and 75r-v (April 1334)

<sup>42</sup> AHCB, Llibres de consell 13, 75v-76r (April 1334)

<sup>43</sup> Batlle, *La crisis social*, 47-50.

<sup>44</sup> Luis Corteguera, *For the Common Good: Popular Politics in Barcelona, 1580-1640* (Ithaca: Cornell University Press, 2002), ix-x.

the civic imagination. First, the city officials set their own food policy, regulating trade in an effort to provide a steady food supply, all the while allowing merchants to turn a reasonable profit. But their reaction to the crisis — the decision to call for royal aid — shows their realization that the city could not function as an island. Second, and perhaps most importantly for the argument here: although the urban food system extended beyond the city walls to encompass both foreign grain sources and royal intervention, from the point of view of most Barcelonans, both the problem and its solution lay entirely within the city itself. The targets of the mob were not just any merchants; they were merchants who were also members of the Council, suggesting a public perception that the city's misery was caused less by act of God than by human actions — more specifically, the actions of their governing officials.

### **“To Prevent Sickness or Danger of Death”: Food and Public Health**

The 1334 riot and the councilors' reactions to it are good indications that both the leaders and ordinary citizens of Barcelona saw commercial corruption as a threat to the health of the civic body, one that it was the city's leaders responsibility to address. Further examination of the civic ordinances shows that the famine prompted concerns about a second sort of corruption: adulteration of the food supply itself. Already in December of 1332, the councilors had begun to forbid millers and grain-sellers from secretly introducing wood shavings, straw, or refuse into their grain sacks in order to fraudulently increase their weight; violators faced a 100-sous fine.<sup>45</sup> Seven months later, the councilors turned their attention to retailers, requiring that all bakers offer “good bread” for sale; those who did not would be closed down and pay a fine of three sous per violation.<sup>46</sup> Ordinances from the following year were more specific as to what constituted “good bread”: the councilors forbade bakers from deliberately adulterating their loaves with flour made from rice, legumes, or anything other than what was advertised, on pain of both a fine of 100 sous (or 100 days in prison) and loss of whatever bread and flour they had in stock, which would be given to the poor.<sup>47</sup>

These regulations might easily be read within the context of earlier concerns about fraud and economic corruption. But I would like to suggest that during this time of severe shortage, part of the councilors' interest lay in maintaining a food supply that was wholesome as well as abundant, and furthermore, that this was part of a broader emerging concept of public health. Scholars have long assumed that the history of public health — that is, health as a social issue, the focus of attention of government officials as well as medical professionals — began only in the early modern era or, at the very earliest, in the age of the Black Death, when epidemiological crisis forced authorities to address sources of contagion as a civic issue rather than a personal medical one.<sup>48</sup> More recently, however, historians of the medieval and early modern periods have pointed out the presentist blind spot that has resulted from a nearly exclusive focus on epidemiological concerns. These same scholars have noted that any society's public health measures will naturally reflect its larger

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<sup>45</sup> AHCB, Llibres de consell 12, 20v-21v (December 1332)

<sup>46</sup> AHCB, Llibres de consell 12, 41v (July 1333)

<sup>47</sup> AHCB, Llibres de consell 13, 21v (December 1333).

<sup>48</sup> Carlo Cipolla, *Public Health and the Medical Profession in the Renaissance* (Cambridge [UK]: Cambridge University Press, 1976), 11; for more recent examples of a growing literature, see Jacme Agramont, *Regiment de preservació de pestilència (Lleida, 1348)*, edited by Jon Arrizabalaga, Luis García Ballester, and Joan Veny (Lleida: Universitat de Lleida and Enciclopèdia Catalana, 1998); Samuel Kline Cohn, *The Black Death Transformed: Disease and Culture in Early Renaissance Europe* (London: Arnold, 2002); and John Henderson, “The Black Death in Florence: Medical and Communal Responses,” in *Death in Towns: Urban Responses to the Dying and the Dead, 100-1600*, ed. Steven Bassett (London and New York: Leicester University Press, 1992), 108-21.

medical assumptions. For most of places in the later Middle Ages, these assumptions would have been built on the work of Galen, who focused on contaminated water and air as sources of illness.<sup>49</sup> Thirteenth-century Catalan physician Arnau de Vilanova, in his *Regimen sanitatis*, identified healthy air as the primary component in good health, asserting what for his day was a truism: that polluted air — *miasma* — was the primary vector of disease.<sup>50</sup> Nor were Galenic concerns limited to the treatises of learned physicians: even before the Black Death, citizens of various cities and towns throughout the Crown of Aragon complained that the filth and stagnant water in the streets were producing illness, or that dyers and tanners were fouling drinking water, causing illness, and demanded that the authorities do something about the problem.<sup>51</sup> Some cities in the Crown even employed an official known as a *mustaçaf* who, while primarily responsible for regulating urban trade and markets, also worked to ensure the cleanliness of public water sources and cooking facilities.<sup>52</sup>

It seems clear then that civic leaders and citizens alike saw a link between contamination of the urban environment and sickness. Might purity of food supply have formed part of this same set of concerns? Potential links between food and health were the subject of a growing interest during the century or so between 1250 and 1360. This, too, followed the work of Galen, who described food as “the first instrument of health.” The health implications here, however, lay in the use of diet to correct imbalances in the body’s humors<sup>53</sup> rather than in how a contaminated food supply might lead to illness; medical manuals thus do not provide the right kind of analytical framework for the type of regulations we are seeing here.

More helpful, perhaps, is an argument by analogy to the city’s regulation of another branch of the urban food system: the meat trade. Meat regulations are numerous in the early fourteenth century ordinance books of Barcelona’s Council of One Hundred. Sometimes they amount to no more than making sure that buyers are clear on what they are purchasing, or where certain items might be sold.<sup>54</sup> Others, however, specifically state that their purpose is “to avoid sickness or danger of death.” In the most severe of these, butchers who sold ewe’s meat in the *carniceria maior*, the *carniceria del mar*, the *carniceria del pont d’en capdera*, or outside the city’s Jewish quarter faced either a fine of 1,000 sous or loss of either a hand or foot (the offender was permitted to choose which), and were permanently banned from their trade.<sup>55</sup> The councilors do not elucidate

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<sup>49</sup> Guy Geltner, “Healthscaping a Medieval City: Lucca’s Curia Viarum and the Future of Public Health History,” *Urban History* 40 (2013), 1-21; Carole Rawcliffe, “Sources for the Study of Public Health in the Medieval City,” in *Understanding Medieval Primary Sources: Using Historical Sources to Discover Medieval Europe*, edited by Joel T. Rosenthal (London and New York: Routledge, 2012), 177-95, and Mary Lindemann, *Medicine and Society in Early Modern Europe* (Cambridge [UK]: Cambridge University Press), 195-99.

<sup>50</sup> Rawcliffe, “Sources for the Study of Public Health in the Medieval City,” 179.

<sup>51</sup> McVaugh, *Medicine before the Plague: Practicioners and their Patients in the Crown of Aragon, 1285-1345* (Cambridge [UK] and New York: Cambridge University Press, 1993), 226. Guy Geltner has also surveyed similar literature from other European cities (especially Italian cities) from before the Black Death; see Geltner, “Healthscaping,” 12-17.

<sup>52</sup> This office, derived from the Islamic market-regulators known as *muhtasib*, was not established in Barcelona until a 1339 ordinance of Pere III, but had been present in Valencia since the Christian reconquest in the thirteenth century. Michael R. McVaugh, *Medicine before the Plague*, 227.

<sup>53</sup> Magdalena Santo Tomás Pérez, “El uso terapéutico de la alimentación en la Baja Edad Media,” in *Alimentar la ciudad en la Edad Media* (Nájera: Instituto de Estudios Riojanos; Ayuntamiento de Nájera, 2009), 467-71; Paul H. Freedman, *Out of the East: Spices and the Medieval Imagination* (New Haven, CT: Yale University Press, 2008), 46-53; Rawcliffe, “Sources for the Study of Public Health,” 179.

<sup>54</sup> AHCB, Llibres de consell 12, 15r-18r (December 1332)

<sup>55</sup> *Item ordonaren per esquivar perill de mort, e malaties, que negun carniçer ne altre persona no tenga ne gos tenir a la carniçeria maior, ne a la carniçeria de la mar, ne a la carniçeria del pont d'en capdera, ne del cayl juych de fora,*

further in this case, but it was likely concerned with some sort of contamination, given that the only other regulation under this same rubric was one that designated the area outside the city's Portaferriça gate as the one place where pork butchers could sell meat from a pig with *mesell* (a kind of parasitic infection), or meat from any animal who was not properly butchered — animals who died sick, smothered, fallen, or killed by wolves or other beasts. Butchers who attempted to sell these marginal meats anywhere else would incur a steep fine of 100 sous per offense, and even when selling at that discount market the butcher was required to declare openly the condition of the animal that the meat in question came from.<sup>56</sup>

The fact that these meat regulations were a dialogue between council and citizens, without explicit reference to the learned discourses of medical practitioners, suggests a growing and shared public consciousness that the integrity of the food supply was, along with wholesome air and water, a contributing factor to the health of the city and its citizens. Given the disproportionate amount of space that the municipal ordinances devote to meat — usually three to six folios, in contrast with the one or two folios each for other common comestibles like oil and wine — it is tempting to view meat regulation as unique, a thing unto itself, rather than part of a larger pattern.<sup>57</sup> Yet the historiographic focus on this one particular area of the food supply may be due in part to our own society's anxieties about meat as a potential dietary contaminant, thus preventing us from seeing meat regulations as part of a broader set of concerns to provide a wholesome food supply for the health of the city. The section labelled *carns* ("meats") may have taken up three times as many folios as the section for *pa cuyt* ("cooked bread"), but when one combines the bread ordinances with those on bakers, oven-tenders, millers, and flour-sellers, the space the two types of food take up in the records is comparable, and authorities' preoccupation with bread becomes much more apparent. It is likely that concerns about commercial fraud formed at least part of the motivation behind the regulations forbidding adulteration of the grain, flour, and bread supply, especially in a time of shortage like the 1333 famine. But our growing knowledge about early civic concerns with public health measures may suggest an additional interpretation for some of these bread and grain regulations, one centered on the wholesomeness of the food supply more generally.<sup>58</sup> Reading these ordinances in the context of regulation of meat markets and the overall health concerns of medieval cities, while far from conclusive, suggests a new line of inquiry, one focusing on whether concerns about impurities of the food supply more generally, together with longstanding concerns about air and water quality, formed a part of a growing consciousness of public health that needed to be safeguarded by council and citizens alike.

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*ovella. E qui contra aço fara pagara per ban cascuna vegada mil sol. E si pagar nols pot, pertra lo peu ho lo puny, qual mes se vulla. E d'aqui avant no us del offici de carniçer en barchinona. E si per sa propria auctoritat usara d'aqui avant del offici ne vendra carn a palos ne en amalgat, que pagara per ban .d. sol. ho estara pres .i. any el castell.* AHCB, Llibres de consell 12, 17v (December 1332). Presumably this meat could be sold in the city's other two markets.

<sup>56</sup> AHCB, Llibres de consell 12, 17r (December 1332).

<sup>57</sup> Historians have long noted the strict regulation of the meat trade in medieval cities; see, for example, Ramon Agustí Banegas López, "Seguretat, qualitat i higiene a la venda de carn a Barcelona durant el segle XIV," *Butlletí de la Societat Catalana d'Estudis Històrics* 16 (2005) 75-95; Josep Maria Llobet i Portella, "La producció i consum de carn a Cervera durant els segles XIV i XV," in *Actes del Col·loqui d'Història de l'Alimentació a la Corona d'Aragó* (Lleida: Institut d'Estudis Ilerdencs, 1995), vol. 1, 53-60; and Josefina Mutgé i Vives, "L'abastament de peix i de la carn a Barcelona en el primer terç del segle XIV," in *Alimentació i Societat a la Catalunya medieval* (Barcelona: CSIC, 1988): 109-36.

<sup>58</sup> Worries about corruption of the food supply might also be behind a 1333 ordinance prohibiting bakers and *bescuyters* of both sexes, as well as their apprentices, from sifting wheat of any kind in the public street. AHCB, Llibres de consell 12, 39v (July 1333)

## Conclusions

While studies of food and famine are important objects of examination in and of themselves, they also have the potential to reveal a great deal about the economics, politics, social structures, and cultural values that necessarily underpin any food system. I want to emphasize that I do not wish to approach this topic in a deterministic manner: telling the story of a city by looking at how it eats — or, in this case, does not eat — does not provide us with a single, definitive answer to the question of what that city was. But food does represent a new way to approach that question. In the case of the regulations presented in this article, concerns about the famine reveal how the normally business-minded members of Barcelona's Council of One Hundred saw their obligations with regard to the city's food supply. Taxation and preservation of commerce remained matters of concern, but the severe shortage saw Barcelona's authorities actively attempting to prevent corruption in order to safeguard the health of the city. While hoarding and speculation were concerns in normal years, the famine required that the city's authorities clamp down on corrupt wholesalers and retailers; the 1334 riot demonstrates that public would literally take the responsibility for inaction to the councilors' door. Municipal documents from this period also highlight the danger surrounding a second type of corruption: in addition to ensuring an adequate food supply, civic authorities were concerned that the grain and bread that was available remain wholesome. A reading of the Council's grain and bread ordinances within the context of other regulations on meat, and in light of the emerging historiographic literature on ideas of public health in the Middle Ages, suggests that the city's councilors regarded maintaining a healthy population as part of their responsibility as governing officials, and saw preventing corruption of the city's food supply as an integral part of that overall obligation. At this point, this second set of ideas is more suggestive than it is conclusive. But it may provide another small piece in the puzzle for researchers attempting to identify the roots of a concept of public health in the Middle Ages.

Ultimately, any attempt to locate the beginnings of a consciousness of public health is in essence an attempt to pinpoint the beginning of a construct. But we may well argue from a reading of these municipal ordinances that the members of Barcelona's Council of One Hundred saw that their responsibilities extended beyond safeguarding the city's political and economic interests. They were also interested in maintaining the health, broadly construed, of the city under their care. This includes the health of the social body, which might be torn apart by urban unrest, as well as the physical health of the city's residents. The city's food policy was influenced by both of these imperatives; councilors and citizens alike recognized that preserving civic health by preventing corruption within the food system was a public charge.

## Works Cited

- Albala, Ken. *Eating Right in the Renaissance*. Berkeley: University of California Press, 2002.
- Atkins, P. J, and Ian R Bowler. *Food in Society: Economy, Culture, Geography*. London; New York: Arnold, 2001.
- Banks, Philip. “El creixement físic de Barcelona, segles X-XIII.” *Barcelona: Quaderns d’història* 8 (2003): 11–33.
- Banks, Philip. “L’estructura urbana de Barcelona, 714-1300.” In *Història de Barcelona, vol. 2: La formació de la Barcelona medieval*, edited by Jaume Sobrequés i Callicó, 25–71. Barcelona: Enciclopèdia Catalana, for the Ajuntament de Barcelona, 1992.
- Batlle y Gallart, Carmen. *La crisis social y económica de Barcelona a mediados del siglo XV*. Barcelona: [Institución Milá y Fontanals], 1973.
- Batlle [i Gallart], Carme. *Història de Catalunya, Vol. III: L’expansió Baixmedieval (segles XIII-XV)*. Edited by Pierre Vilar. Barcelona: Edicions 62, 1988.
- Bell, David, and Gill Valentine. *Consuming Geographies: We Are Where We Eat*. London and New York: Routledge, 1997.
- Benito i Monclús, Pere. “Carestía y hambruna en las ciudades de occidente durante la Edad Media: algunos rasgos distintivos.” In *Alimentar la ciudad en la Edad Media*, 299–314. Nájera: Instituto de Estudios Riojanos; Ayuntamiento de Nájera, 2009.
- Bensch, Stephen. *Barcelona and Its Rulers, 1096-1291*. Cambridge [U.K.] and New York: Cambridge University Press, 1995.
- Bruniquer, Esteve. *Rúbriques de Bruniquer: Ceremonial dels magnífichs consellers y regiment de la ciutat de Barcelona*. Barcelona: Impr. d’Henrich, 1912.
- Cabestany i Fort, Joan F., and Jaume Sobrequés i Callicó. “Evolució demogràfica.” In *Història de Barcelona, vol. 3: La ciutat consolidada*, 73–90. Barcelona: Enciclopèdia Catalana, for the Ajuntament de Barcelona, 1992.
- Cáceres Nevot, Juanjo. “La participació del consell municipal en laprovisionament cereal de la ciutat de Barcelona (1301-1430).” Doctoral dissertation, Universitat de Barcelona, 2006.
- Carrère, Claude. *Barcelona 1380-1462: un centre econòmic en època de crisi*. Barcelona: Curial, 1977.
- Cipolla, Carlo. *Public Health and the Medical Profession in the Renaissance*. Cambridge [U.K.]: Cambridge University Press, 1976.
- Corteguera, Luis. *For the Common Good: Popular Politics in Barcelona, 1580-1640*. Ithaca: Cornell University Press, 2002.
- Ferrer i Mallol, Maria Teresa. “Projecció exterior.” In *Història de Barcelona, vol. 3: La ciutat consolidada*, edited by Jaume Sobrequés i Callicó, 355–91. Barcelona: Enciclopèdia Catalana, for the Ajuntament de Barcelona, 1992.
- Freedman, Paul H. *Out of the East: Spices and the Medieval Imagination*. New Haven, CT: Yale University Press, 2008.
- Geltner, Guy. “Healthscaping a Medieval City: Lucca’s Curia Viarum and the Future of Public Health History.” *Urban History* 40 (2013): 1–21.
- Jordan, William C. *The Great Famine: Northern Europe in the Early Fourteenth Century*. Princeton, NJ: Princeton University Press, 1996.
- Lauriou, Bruno. *Manger au Moyen Âge: pratiques et discours alimentaires en Europe aux XIVe et XVe siècles*. Paris: Hachette Littératures, 2002.

- Lindemann, Mary. *Medicine and Society in Early Modern Europe*. 2nd ed. New Approaches to European History. Cambridge: Cambridge University Press, 2010.
- Marsiñach Tirvió, Montserrat. "Urbanisme i societat a Barcelona a mitjan segle XIV: La plaça del blat." In *Història Urbana del pla de Barcelona: Actes del II Congrés d'Història del Pla de Barcelona*, 1:119–32. Barcelona: Ajuntament de Barcelona, 1989.
- McVaugh, M. R. *Medicine before the Plague: Practitioners and Their Patients in the Crown of Aragon, 1285-1345*. Cambridge [UK] and New York: Cambridge University Press, 1993.
- Medina, F. Xavier, and R. Alonso, eds. *La alimentación mediterránea: historia, cultura, nutrición*. Barcelona: Icaria, 1996.
- Merino, Antolín, José de La Canal, and Agustinos Calzados. *España sagrada: Tomo XLIV. Tratado LXXXII. De la santa iglesia de Gerona en su estado moderno*. Madrid: J. del Collado, 1826.
- Murphy, Margaret. "Feeding Medieval Cities: Some Historical Approaches." In *Food and Eating in Medieval Europe*, edited by Martha Carlin and Joel T. Rosenthal, 117–31. London: Hambledon Press, 1998.
- Ortí Gost, Pere. "El Forment a La Barcelona Baix-medieval: Preus, Mesures i Fiscalitat (1283-1345)." *Anuario de Estudios Medievales* 22 (1992): 377–423.
- Rawcliffe, Carole. "Sources for the Study of Public Health in the Medieval City." In *Understanding Medieval Primary Sources: Using Historical Sources to Discover Medieval Europe*, edited by Joel T. Rosenthal, 177–95. London and New York: Routledge, 2012.
- Riera Melis, Antoni. "'Tener siempre bien aprovisionada la población.' Los cereales y el pan en las ciudades catalanas durante la Baja Edad Media." In *Alimentar la ciudad en la Edad Media*, 23–57. Nájera: Instituto de Estudios Riojanos; Ayuntamiento de Nájera, 2009.
- . "Jerarquía social y desigualdad alimentaria en el Mediterráneo noroccidental durante la Baja Edad Media. La cocina y la mesa de los estamentos populares." In *La alimentación mediterránea: historia, cultura, nutrición*, edited by F. Xavier Medina and R. Alonso, 81–107. Barcelona: Icaria, 1996.
- Riera Viader, Sebastià. "El proveïment de cereals a la ciutat de Barcelona durant 'el mal any primer' (1333): la intervenció del Consell de Cent i de la Corona." In *Història urbana del Pla de Barcelona: Actes del II Congrés d'Història del Pla de Barcelona*, 1:315–26. Barcelona: Ajuntament de Barcelona, 1989.
- Riu, Manuel. "Barcelona dins el marc urbà de Catalunya i la Mediterrània." In *Història de Barcelona, vol. 2: La formació de la Barcelona medieval*, edited by Jaume Sobrequés i Callicó, 333–66. Barcelona: Enciclopèdia Catalana, for the Ajuntament de Barcelona, 1992.
- Rubio Vela, Agustín. "A propósito del mal any primer. Dificultades cerealísticas en la Corona de Aragón en los años treinta del siglo XIV." In *Estudios dedicados a Juan Peset Aleixandre*, 3:475–87. Valencia: Universidad de Valencia, 1982.
- Santo Tomás Pérez, Magdalena. "El uso terapéutico de la alimentación en la Baja Edad Media." In *Alimentar la ciudad en la Edad Media*, 459–90. Nájera: Instituto de Estudios Riojanos; Ayuntamiento de Nájera, 2009.
- Sobrequés i Callicó, Jaume, ed. *Història de Barcelona*. 6 vols. Barcelona: Enciclopèdia Catalana: Ajuntament de Barcelona, 1991.
- Vilar, Pierre. *Crecimiento y desarrollo: economía e historia, reflexiones sobre el caso español*. Barcelona: Ariel, 1964.