

Urban Agriculture and Urban Food Provisioning in Pre-1850 Europe: Towards a Research Agenda

Abstract: “Feeding the city” has been a prominent topic in historical literature for many decades. Most of this literature, however, remained based on the assumption that cities above a certain population level are essentially fed through the market, with rural agricultural surpluses being exchanged for the products of urban industry and trade. Stimulated by recent articulations of alternative ways of urban food provisioning, this article reconsiders the importance of urban agriculture in European towns before 1850 from the perspective of “urban food alternatives”. The scattered evidence suggests that in many European towns a significant part of the urban population was directly involved in food production, but also that important differences persisted both between towns and between households in a town. While traditional interpretations – for instance, those linking urban agriculture with small towns, poverty, or the rise of commercial horticulture – fail to explain this spatial, social, and temporal variation, a better understanding of the success and decline of urban agriculture in different market configurations and in different social contexts might offer an important historical contribution to present-day debates on the viability and social dynamics of such urban food alternatives.

Key Words: urban agriculture, urban food supplies, horticulture, market gardening, famine

Introduction: reconsidering urban food provisioning in the past

How to feed a premodern city? For Henri Pirenne, founding father of European medieval history, the answer was quite simple: cities were based on industry and commerce, while food was produced in the countryside.¹ Hence city-dwellers were obliged to convert part of their income into food, for which they had a wide variety of markets and shops at their disposal. Six centuries before Pirenne, Ambrogio Lorenzetti, painter of the famous *Buon Governo* fresco in the Palazzo Pubblico of Siena, presented us with a similar picture of a bucolic, though hard-working, *contado* supplying the urban shops and markets with a perpetual flow of food. In

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1 Henri Pirenne, *Histoire économique et sociale du moyen âge*, 3rd ed., Paris 1963, 65.

neighboring Florence this was estimated to be 4,000 oxen, 60,000 sheep, 20,000 goats, 30,000 pigs, 25 million quarters of wine and 474,500 bushels of grain per year for a pre-Black Death population of about 110,000 inhabitants.² And yet a small detail in the cityscape of Lorenzetti's *Buon Governo* fresco reminds us that urban food supply might be more complex than the straightforward case of rural supply meeting urban demand at the market: within the city walls a man is herding a small herd of goats. Does the tiny scene represent the delivery of fresh meat from the surrounding countryside to the urban butchers? Possibly. However, the goats are clearly being guided towards the city wall, not the urban market. The goats remind us of the importance of animal life within the medieval city, as witnessed by their appearance in countless urban regulations and, increasingly, restrictions in an ever more complicated urban "environmental law".³ One of the key goals of such regulation was precisely to manage the access to alternative forms of food supply that parts of the urban population enjoyed, thereby bypassing the market. Apart from animal husbandry, urban households might engage in horticulture, wine-growing, or even cereal cultivation. Also, these foods might be supplied by tenants or sharecroppers working a piece of land they owned in the countryside – in a city like Siena in the fourteenth century, urban households, and not just those of the elite, owned massive amounts of land in their *contado*.⁴ In addition they might benefit from occasional or regular gifts of food distributed by charitable foundations, elite families supporting their retinue, confraternities sharing a meal, or close relatives making a testamentary bequest.

When focusing on the level of households, the history of urban food supply might be much more complex than food history allows us to believe. Since Fernand Braudel and other historians working in the tradition of the French *Annales* school started to investigate the material conditions of urban life in the 1960s, urban food supply automatically became a central issue in historiography. In an environment which was inspired by both Malthusian and Marxist models, food was about calories and class. It was considered in terms of access to staple foods like grain, beer, wine, and the like, which had to ensure the subsistence of the average city-dweller.⁵ Feeding the city hence seemed above all a question of acquiring sufficient quantities of grain – and to a lesser extent, meat – and assuring that there were enough foodstuffs available even during difficult times such as those of harvest failure or war. Since Braudel, numerous studies have been published about the food supply of individual cities before 1800, in addition to the organisation of comparative roundtables.⁶

2 Daniel Curtis, *Florence and its Hinterlands in the Late Middle Ages: Contrasting Fortunes in the Tuscan Countryside, 1300–1500*, in: *Journal of Medieval History* 38/4 (2012), 472–499, 475.

3 To cite but one example: Dolly Jørgensen, *Running Amuck? Urban Swine Management in Late Medieval England*, in: *Agricultural History* 87 (2013), 429–451.

4 Giovanni Cherubini, *Signori, Contadini, Borghesi. Ricerche sulla società Italiana del Basso Medioevo*, Florence 1974, 231–238.

5 Fernand Braudel, *Civilisation matérielle, économie et capitalisme, XVe–XVIIIe siècle*, vol. I, Paris 1979, 90–100.

6 Denis Menjot (ed.), *Manger et boire au Moyen Age*, Paris 1984; *L'approvisionnement des villes de l'Europe occidentale au moyen âge et aux temps modernes* (Cinquièmes Journées internationales d'histoire du centre culturel de l'Abbaye de Flaran, 16–18 septembre 1983), Auch 1985; Simonetta Cavaciocchi (ed.), *Alimentazione e nutrizione, secc. XIII–XVIII. Atti della "ventottesima settimana di studi"*, 22–27 aprile 1996, Florence 1997; Antoni Riera I Melis et al. (eds.), *Crisis frumentàries, iniciatives privades i polítiques públiques de proveïment a les ciutats catalanes durant la baixa edat mitjana*, Barcelona 2013; Erik Thoen/Piet van Cruyningen (eds.), *Food Supply, Demand and Trade. Aspects of the Economic Relationship between Town and Countryside (Middle Ages – 19th Century)*, Turnhout 2012.

Scholarship has usually distinguished between two basic strategies enabling such a massive transfer of food from the countryside to the hungry city: *coercion* (usually the coercive power of the “state”) and the *market*. In European history, the importance of providing food to cities through coercion probably had its heyday in the *annona* politics of the Roman Empire, when free grain distribution had to feed – and appease – the imperial capitals of Rome and, later, Constantinople.⁷ Moreover, it was also a strong defining feature of the privileged position of Paris in the grain policies of Early Modern France⁸ and in the close link between food supply and territorial expansion in Renaissance Venice.⁹ On the other hand, the standard example of market-driven food provisioning is provided by the strategies of medieval London before 1300, as elaborated in the very influential “Feeding the City” project. Elaborating on von Thünen’s model of concentric land use surrounding the “isolated city”, Bruce Campbell, Derek Keene, and others were able to demonstrate how growing urban demand induced a gradual intensification of land use in an expanding hinterland, with supply and demand being matched through a relatively “open” market which included multiple buyers and sellers.¹⁰ Research on other premodern cities arrived at similar results.¹¹ The demand-driven logic of the “Feeding the City” model was underpinned by the work of urban geographers explaining the gradual demise of food production near the built environment of the city: in a context of urban growth, higher bid-rents for residential and industrial land use inevitably pushed out agricultural and horticultural activities.¹² Explaining evolutions in urban food supply thus requires economic historians to be attentive both to the development of the coercive power of cities and their rulers, and to patterns of population densities and market integration.¹³

The dichotomy between a food-producing countryside and a food-consuming city is even more prominent in recent literature on “urban metabolism”, which aims to map the continuous flows of energy, food, and raw materials imported from the hinterland and needed to sustain urban “life”. Existing work on the urban food metabolism is based on two binary pairs of almost antagonistic categories: “town” and “hinterland”, “consumption” and “production” – the so-called “metabolic rift”.¹⁴ Hence, metabolic thinking is intimately linked to commodification: food and other resources are processed as commodities and traded through or from the city.¹⁵ From a metabolic view, urban growth is conceived as an expanding wave

7 Paul Erdkamp, *The Grain Market in the Roman Empire: A Social, Political, and Economic Study*, Cambridge 2005.

8 Steven Laurence Kaplan, *Les ventres de Paris. Pouvoir et approvisionnement dans la France d’Ancien Régime*, Paris 1988.

9 Fabien Faugeton, *Nourrir la ville: ravitaillement, marchés et métiers de l’alimentation à Venise dans les derniers siècles du Moyen Âge*, Rome 2014.

10 Bruce Campbell et al., *A Medieval Capital and its Grain Supply: Agrarian Production and Distribution in the London Region c. 1300*, London 1993.

11 Franz Irsigler, *L’approvisionnement des villes de l’Allemagne occidentale jusqu’au XVIe siècle*, in: *L’approvisionnement des villes*, 117–144.

12 Jeremy Whitehand, *The Making of the Urban Landscape*, Oxford 1992.

13 Karl Gunnar Persson, *Grain Markets in Europe, 1500–1900: Integration and Deregulation*, Cambridge 1999; Stephan R. Epstein, *Freedom and Growth: The Rise of States and Markets in Europe, 1300–1750*, London 2001.

14 Nathan McClintock, *Why Farm the City? Theorizing Urban Agriculture through a Lens of Metabolic Rift*, in: *Journal of Regions, Economy and Society* 3/2 (2010), 191–207.

15 Nick Heynen et al. (eds.), *In the Nature of Cities – Urban Political Ecology and the Politics of Urban Metabolism*, New York 2006.

gradually encroaching upon low-productive land and transforming its natural resources into commodities transported to an ever-hungry city.¹⁶

On the other hand, the awareness that urban food supply may work very differently from one household to another has been an essential feature of famine history over the past three decades. Inspired by the work of Nobel Prize winner Amartya Sen, famine history saw an important shift away from the aggregate level of cities or regions to the level of individual households.¹⁷ According to Sen, food shortage was usually not induced by insufficient food availability in society as a whole, but rather by the insufficient “entitlements” to food enjoyed by some groups and individuals within a given society. Entitlement, conceived by Sen as “the ability of people to command food through the legal means available in that society”, is a powerful concept capable of embracing all kinds of access to food. These include food production on one’s own land, the “endowment”, which produces “direct entitlements”; the conversion of labour and capital into food via the market, referred to as “exchange entitlements”; as well as other legal rights to food mobilised through distributions, gifts, or solidarities. While the concept of entitlement provides us with an ideal analytical tool for grasping the multiplicity of paths of food supply at the household level, most entitlement scholars, including Amartya Sen himself, were primarily interested in the role of the market as an – imperfect – allocator of food in times of famine.¹⁸ Direct entitlements as well as entitlements via other legal rights have received only scant attention.

But what about Lorenzetti’s goats, then? Is it possible that historians have dramatically underestimated the importance of such alternative entitlements to food provisioning in cities? Food studies of present-day cities increasingly point to the myriad ways in which urban households experiment with alternative ways of providing for food, outside regular market arrangements and outside direct involvement of the public authorities. Consumers themselves are producing food in all kinds of urban and peri-urban agriculture (UPA) – from rooftop gardens via guerrilla gardening to community farms.¹⁹ They are also exploring other “alternative food networks” by buying food on farmers’ markets or engaging in community-supported agriculture, or they acquire access to food through a new kind of “sharing economy”.²⁰ While the motivations behind these practices are highly variable and the notion of “market independence” is often questionable,²¹ they all challenge mainstream

16 Gilles Billen et al., Grain, Meat and Vegetables to Feed Paris: Where Did and Do They Come From? Localising Paris Food Supply Areas from the Eighteenth to the Twenty-First Century, in: *Regional Environmental Change* 12/2 (2012), 325–335; Sabine Barles, The Main Characteristics of Urban Socio-Ecological Trajectories: Paris (France) from the 18th to the 20th Century, in: *Ecological Economics* 118 (2015), 177–185.

17 Amartya Sen, *Poverty and Famines: An Essay on Entitlement and Deprivation*, Oxford 1982.

18 Stephen Devereux, Sen’s Entitlement Approach: Critiques and Counter-critiques, in: *Oxford Development Studies* 29/3 (2001), 245–263; for a recent analysis of famine in medieval Europe inspired by Sen: Philip Slavin, Market Failure during the Great Famine in England and Wales (1315–1317), in: *Past and Present* 222/1 (2013), 9–49.

19 McClintock, *Why Farm the City?*; Frank Lohrberg et al. (eds.), *Urban Agriculture Europe*, Berlin 2015.

20 David Goodman et al. (eds.), *Alternative Food Networks: Knowledge, Practice and Politics* (Routledge Studies of Gastronomy, Food and Drink), London 2013.

21 Chiari Tornaghi, Critical Geography of Urban Agriculture, in: *Progress in Human Geography* 38/4 (2014), 551–567.

food systems based on traditional agro-industry and on the anonymous globalised food distribution chains.²²

Given the potential multiplicity of sources of food supply at the level of individual urban households, historians too have to question the self-evidence of markets and/or states as allocators of food. For pre-industrial cities, scattered literature already suggests the importance of urban gardens,²³ the presence of rural “food farms” directly supplying elite households,²⁴ and the importance of food gifts.²⁵ However, because of the lack of systematic research on food strategies at the household level (and not only for urban upper-class households), it remains difficult to explain why such alternative ways of food provisioning disappeared in particular contexts while they persisted and grew in others. Based on the available, and highly fragmented, literature, the rest of this contribution hence offers a very preliminary survey of the changing importance of such alternative sources of urban food supply in European history before 1850, with particular emphasis on the role of UPA.

Mapping the variety and significance of urban agriculture in European history

In the preceding section, we argued that historians should broaden their analysis of urban food supply to include all kinds of alternative food supply chains. The direct production of food through forms of urban agriculture – and urban husbandry – constitutes an important aspect of such alternative urban food supply, although the two are not synonymous. While alternative food supply can include food produced by rural producers, urban agriculture – defined here as food production by urban dwellers – can also be firmly embedded in market arrangements.

Mapping the variety and significance of urban agriculture in the past, however, is far from easy, just as it is today,²⁶ given that many activities take place in the private sphere, out of sight of official registration and taxation. Generally speaking, the available literature tends to distinguish three contexts in which urban agriculture flourished. First of all, few historians will doubt the importance of agricultural activities in the many small towns which constituted the backbone of the European urban network before 1850. In a small town like Colchester in England, two thirds of all taxpayers in 1301 were involved in some form of food produc-

22 Robert Biel, *Sustainable Food Systems: The Role of the City*, London 2016.

23 Joan Thirsk, *Alternative Agriculture. A History from the Black Death to the Present Day*, Oxford 1997; Jean-Pierre Leguay, *Terres Urbaines. Places, jardins et terres incultes dans la ville au Moyen Âge*, Rennes 2009; Clément Gurvil, *Les paysans de Paris du milieu du XVe au début du XVIIe siècle*, Paris 2010.

24 Cf. Philip Slavin, *Church and Food Provisioning in Late-Medieval England, 1250–1450: Production Costs and the Decline of Direct Demesne Management*, in: Francesco Ammanati (ed.), *Religione e istituzioni religiose nell'economia europea, 1000–1800*, Florence 2012, 597–617; José María Cruselles Gomez, *Producción y auto-consumo en contratos agrarios de la huerta de Valencia: siglos XIV y XV*, in: *Actes Ier Colloqui d'Història de l'Alimentació a la Corona d'Aragó*, vol. 2/2, Lleida 1995, 61–78.

25 Chris M. Woolgar, *Gifts of Food in Late Medieval England*, in: *Journal of Medieval History* 37/1 (2011), 6–18.

26 Cf. *Mapping Urban Agriculture: Lessons from Rome and Chicago*, in: *Farming the City*, <http://farmingthecity.net/?p=5621> (last visited 25 Aug. 2019).

tion.²⁷ Rodney Hilton saw a figure of 2,000 inhabitants as the threshold in distinguishing between town and countryside.²⁸ Such small towns, or *Ackerbürgerstädte* as they are labelled in German literature, can even be considered an integral part of medieval peasant society.²⁹ And although most urban and even rural historians would argue that involvement in food production did not necessarily diminish the industrial or commercial essence of such small towns, nor their urbanity in regard to culture, legal status, or identity,³⁰ access to food that was unmediated by the market is by and large considered as incompatible with urban growth, or as Peter Clark has argued: “accelerating urbanization was only made possible by increasing agrarian imports from urban hinterlands and the growth of [...] markets”.³¹

Secondly, alternative urban food entitlements are often associated with contexts of poverty and crisis. For nineteenth-century municipalities and charitable organisations, the promotion of allotment gardening proved an ideal instrument for improving subsistence levels without having to raise wages, while at the same time “protecting” workers from subversive socialist influences.³² During both World Wars, bare necessity drove urban households to direct food production on a massive scale.³³ In the pre-industrial period as well, the persistence of food production by urban households might be associated with the typical makeshift economy of the urban poor: one pig, some poultry, and some home-grown vegetables might foster survival in uncertain times.

And thirdly, on the opposite face of the same coin, we find the rise of commercial horticulture – the specialised cultivation of fresh products such as vegetables or dairy – for the urban market, typically found in the inner circle of a von Thünen model. In different parts of northwestern Europe, horticultural activities apparently experienced a tendency towards professionalisation in the Early Modern period. English historians even speak of a horticultural “revolution” from the late sixteenth century onwards, which tends to be associated with Dutch immigrants fleeing the horror of religious persecution during the Eighty Years’ War.³⁴ Near London in particular, some districts saw a proliferation of horticultural activities providing the growing city with an increasingly diverse supply of vegetables such as melons, asparagus, cucumbers, and so forth, produced by professional horticulturalists who continuously refined their production techniques throughout the seventeenth and eighteenth centuries, from glass bells to hotbeds. In 1718 the post-mortem inventory of one Robert

27 Richard H. Britnell, *Growth and Decline in Colchester, 1300–1525*, Cambridge 1986, 16–17.

28 Rodney H. Hilton, *The Small Town as Part of Peasant Society*, in: Rodney H. Hilton, *The English Peasantry in the Later Middle Ages*, Oxford 1975, 76–94, 81.

29 Cf. Kurt-Ulrich Jäschke/Christhard Schrenk, *Ackerbürgertum und Stadtwirtschaft: Zu Regionen und Perioden landwirtschaftlich bestimmten Städtewesens im Mittelalter*, Heilbronn 2002; Annika Björklund, *Historical Urban Agriculture. Food Production and Access to Land in Swedish Towns before 1900*, Stockholm 2010.

30 Rolf Kiessling, *Die Stadt und ihr Land. Umlandpolitik, Bürgerbesitz und Wirtschaftsgefüge in Ostschwaben vom 14. bis ins 16. Jahrhundert*, Cologne/Vienna 1989; Peter Stabel, *Dwarfs among Giants. The Flemish Urban Network in the Late Middle Ages*, Leuven 1997; Christopher Dyer, *Medieval Small Towns and the Late Medieval Crisis*, in: John Drendel (ed.), *Crisis in the Later Middle Ages: Beyond the Postan-Duby Paradigm*, Turnhout 2015, 35–52.

31 Peter Clark, *European Cities and Towns, 400–2000*, Oxford 2009, 45.

32 Jeremy Burchardt, *The Allotment Movement in England, 1793–1873*, Woodbridge 2002.

33 For Belgium, see Yves Segers/Leen Van Molle, *Worker’s Gardens and Urban Agriculture. The Belgian Allotment Movement within a Global Perspective (from the Nineteenth to the Twenty-First Century)*, in: *Zeitschrift für Agrargeschichte und Agrarsoziologie* 62/2 (2014), 80–94.

34 Malcolm Thick, *The Neat House Gardens. Early Market Gardening around London*, Totnes 1998.

Gascoine listed no fewer than 1,240 bellglasses in three gardens.³⁵ For Paris, a recent study by Gurvil revealed a similar tendency towards professionalisation in a somewhat earlier period. Whereas fifteenth-century Paris was still home to quite a few proper farmers (*laboureurs*) practicing a rather mainstream agriculture, sometimes even within the city walls, in the sixteenth century the *laboureurs* gave way to *jardiniers*, organised in a guild.³⁶ While most of the gardens were situated at the outskirts of the city or in the *banlieue*, each new extension of the city walls paradoxically entailed an increase in the amount of gardens and fields *intra muros*. At the same time some professional gardening areas persisted at a short distance from the city centre – such as the *Couture du Temple*, which from the fifteenth to the seventeenth century transformed from a cereal field into a gardening space and then into a residential quarter.³⁷

Mediterranean Europe had a much older tradition of urban horticulture, often concentrated in irrigated areas of intensive cultivation near the city. Like many Iberian towns, Valencia had an important irrigated zone of intensive agriculture and horticulture in its immediate neighborhood: the *hortas* or *huertas*, which built on elaborate irrigation structures pre-dating the Christian conquest.³⁸ In the later Middle Ages, agriculture in the *hortas* was based on intensive smallholding farms which increasingly incorporated commercial cash crops like sugarcane and mulberry trees.³⁹ Even though parts of the *horta* laid outside direct urban jurisdiction, it was profoundly urban in terms of how it was regulated (the *guardia de l'horta*), in terms of landownership (parts of it belonged to the city-based nobility), and in terms of its labourers, who were recruited among city-dwellers. Finally, apart from horticulture we should not underestimate the importance of dairy production within or near the city walls. Milk was one of the most difficult food products to transport over long distances. As a consequence, even mid-nineteenth-century London, at that time the largest city in Europe, saw 80 percent of its milk consumption still produced in the immediate vicinity of the city.⁴⁰

Over the past years, however, new research has increasingly shown that many instances of urban agriculture do not fit into any of these categories. First of all, urban food production by non-professional producers (“home food gardens”) was not limited to small cities or *Ackerbürgerstädte*. In Rennes in the 1450s, 43.5 to 59 percent of the houses in the medieval parts and still 17 percent of the houses in the densely built Roman town centre had a vegetable garden or *potager*.⁴¹ Fifteenth-century Rennes, the capital of the independent duchy of Brittany, was a medium-sized city of about 12,000 inhabitants. In his study of medieval Toulouse, which numbered 20,000 to 30,000 residents, Philipp Wolff also noted that only a few urban households were *not* self-sufficient in both grain and wine – although their fields

35 Ibid., 106.

36 Gurvil, *Paysans de Paris*.

37 For 1608, a detailed inventory of this area provides a glimpse of the activity of the *maîtres jardiniers*, mostly tenants cultivating *asperges, le pourpier, pimprenelle, estragon, persil, Thym, chicorée, la poirée, marjolaine, artichaut* as well as fruit (Gurvil, *Paysans de Paris*, 103–104, 464).

38 Thomas F. Glick, *Irrigation and Society in Medieval Valencia*, Cambridge 1970.

39 Antoni Furió/Ferran Garcia-Oliver, *Household, Peasant Holding and Labour Relations in a Mediterranean Rural Society. The Valencian Country in the Late Middle Ages*, in: Erich Landsteiner/Ernst Langthaler (eds.), *Agrosystems and Labour Relations in European Rural Societies (Middle Ages–Twentieth Century)*, Turnhout 2010, 31–56.

40 P. J. Atkins, *London's Intra-Urban Milk Supply, circa 1790–1914*, in: *Transactions of the Institute of British Geographers* 2/3 (1977), 383–399.

41 Leguay, *Terres Urbaines*, 119.

and vineyards were not necessarily situated in the immediate vicinity of the town.⁴² Geo-archaeological research also provides compelling new evidence for the importance and persistence of urban food production in both smaller and larger towns.⁴³

Secondly, in some contexts home food gardens may have been more important for the middling and upper layers of society than for their poorer neighbours. Control over food supply was an important asset in a premodern society and hence an excellent social indicator. In the Catalan city of Manresa, most households disposed of food stocks exceeding 100 daily rations. The 20 percent poorest households, however, did not possess such food stocks, and hence were more dependent on daily market purchases than their wealthier neighbours.⁴⁴ In a late medieval Mediterranean context, drinking one's own wine was a matter of status: Francesco di Marco Datini, the famous fourteenth-century merchant of Prato, produced a wine befitting "great gentlemen" and used it as a gift within his extended commercial network.⁴⁵ However, it was probably the middling classes – ranging from the rank and file of the urban craft guilds to the administrative professions and small merchants – who were crucial in the history of urban agriculture. Through their household and occupational model, they disposed of both access to land, from the backyard of their shop or house to a rented plot of land outside the city wall, and family labour, which was theoretically available to grow food. In present-day Central Europe (Poland and the Czech Republic) as well, middling groups have a much higher probability of engaging in home food gardening than labourers.⁴⁶ It would hence be interesting to see if and how urban agriculture was impacted by the increasing social polarisation and the erosion of middling groups visible in many parts of Europe throughout the Early Modern period.⁴⁷

And thirdly, the Early Modern professionalisation of horticulture was not a universal phenomenon. In the Low Countries, for instance, many cities did not display an inner von Thünen circle of specialised horticulture.⁴⁸ In some cities professional guilds of gardeners (*hoveniers* or *fruiteniers*) existed, but as in the case of Antwerp, they might be more active in retailing vegetables and fruit rather than producing them themselves.⁴⁹

So, while urban agriculture should certainly not be seen as limited to contexts of poverty or immature urban development, we should not *a priori* overestimate its historical importance either. We should keep in mind that a city of 10,000 inhabitants in 1600 needed about 90

42 Philippe Wolff, *Commerces et marchands de Toulouse (vers 1350–vers 1450)*, Paris 1954, 175 and 192.

43 See for instance on Brussels: Yannick Devos et al., *An Integrated Study of Dark Earth from the Alluvial Valley of the Senne River (Brussels, Belgium)*, in: *Quaternary International* 460/1 (2017), 175–197; on Scotland: Richard Oram, *Waste Management and Peri-Urban Agriculture in the Early Modern Scottish Burgh*, in: *Agricultural History Review* 59/1 (2011), 1–17.

44 Jeff Fynn-Paul, *The Rise and Decline of an Iberian Bourgeoisie: Manresa in the Later Middle Ages, 1250–1500*, Cambridge 2016, 269.

45 Maria Giagnacovo, *La tavola di Francesco e della sua famiglia allargata*, in: Giampiero Nigro (ed.), *Francesco di Marco Datini: l'uomo, il mercante*, Florence 2010, 105–118, 110.

46 Joe Smith et al., *Quietly Does It: Questioning Assumptions about Class, Sustainability and Consumption*, in: *Geoforum* 67 (2015), 223–232, 229–230.

47 Guido Alfani/Wouter Ryckbosch, *Growing Apart in Early Modern Europe? A Comparison of Inequality Trends in Italy and the Low Countries, 1500–1800*, in: *Explorations in Economic History* 62 (2016), 143–153.

48 See the contribution of De Graef and Ronsijn to this volume.

49 Reinoud Vermoesen, *Boerende stedelingen of verstedelijkte boeren: een verkennend onderzoek naar urban farming in vroegmodern Antwerpen*, in: *Tijdschrift voor Geschiedenis* 128/4 (2015), 533–555.

Figure 1: Jan Wildens, Zicht op Antwerpen, 1636 (detail). Bird's-eye view of Antwerp, with the gardening district south-east of the city at the bottom.



Source: Amsterdam, Rijksmuseum, SK-A-616, <https://www.rijksmuseum.nl/en/collection/SK-A-616>.

square kilometres or 9,000 hectares to produce the bread grain it needed.⁵⁰ Strictly localised food provisioning was thus out of the question. Even in a sparsely populated country such as Sweden, where cities were granted large swathes of agricultural land by the crown, urban food production seldom accounted for more than 30 percent of urban food consumption.⁵¹ There were notable exceptions, however, both in Sweden and elsewhere, and in many cases demography alone cannot explain why urban experiences with regard to urban agriculture were so divergent. At present, we remain largely ignorant of the importance of both home food gardens and professional or semi-professional horticulture for most parts of Europe throughout their history. Historians hence should urgently engage in mapping the contribution of urban and peri-urban agriculture (UPA) as well as other alternative urban food entitlements to the quality and quantity of urban food supply in different contexts.

Explaining the resilience and decline of urban agriculture

Confronted with a still very uncertain geography and chronology of urban food production, we can only formulate very modest suggestions on why urban agriculture boomed in one context but disappeared in others. Based on the available literature, a few questions and hypotheses can be formulated.

Access to land

From a supply-side perspective, historical variations in UPA might first of all be explained by access to land. Most forms of agriculture are land-based, and variations in access to land may strongly affect involvement in urban or peri-urban agricultural production. Access to land depends on the social distribution of land, which may have evolved in parallel to wealth inequalities, but also on institutional arrangements of landownership and land use, both within and beyond the city. In the urban hinterland, the rise of short-term leasehold or sharecropping provided a different potential for urban food production. In some cities, customary law was flexible enough to allow the fragmentation of property rights to urban real estate, which significantly increased the number of citizens owning parts of houses and gardens.⁵² In many parts of Western Europe, the later Middle Ages also saw an increasing simplification of urban property relations towards uniform landlord-tenant relationships, with both actors operating on an increasingly transparent, anonymous, and volatile housing market.⁵³ Such evolutions greatly affected the access to urban land, and its potential to generate alternative food flows. The potential of land to generate food – rather than merely rent – explains why

50 E.A. Wrigley, *Urban Growth in Early Modern England: Food, Fuel and Transport*, in: *Past and Present* 225/1 (2014), 79–112, 98–99.

51 Björklund, *Historical Urban Agriculture*, 103–154.

52 This was for instance the case in late medieval Ghent as argued by Martha Howell, *Commerce before Capitalism in Europe, 1300–1600*, Cambridge 2010.

53 As argued for London by Vanessa Harding, *Space, Property and Propriety in Urban England*, in: *Journal of Interdisciplinary History* 32/4 (2002), 549–569.

many urban households strove to acquire secure property rights to land, both inside and outside the city. In the opposite scenario, increased accumulation of rural land and urban real estate might have ended this strategy.

Household income formation

Secondly, many forms of urban agriculture are developed as by-employment, and hence are subject to the availability of labour in the household economy. While older occupational stratigraphies typically attributed a single profession to households, based on the prime activity of the (male) head of household, there is an increasing awareness that most European households well into the Modern period can be understood as “pluriactive” economic units.⁵⁴ In practice many households combined different activities, both at home and outdoors, and food production might form an important part of these. On the other hand, we should refrain from seeing all premodern households as engaged in farming as by-employment: not all of them had the assets – especially land –, the time, or the incentive to do so.⁵⁵ Changes in the size and composition of the household of course affect food requirements as well as access to food, be it through direct production or the conversion of wages and capital. According to some scholars, late medieval cities in the northwest of Europe saw an increased importance of the nuclear family compared to extended family relations, delayed marriage (Hajnal’s European Marriage Pattern), and increased legal and economic opportunities for working-class and middle-class women to participate in the labour market.⁵⁶ Nevertheless, in most late medieval cities nuclear households with two or more wage-earning members will have remained a strict minority. In general, however, we can hypothesise that the importance of food production as by-employment might be positively related to the size of the household, but inversely related to the importance of wage-labour in the household budget.

Commercialisation of agriculture

We should never forget that a large percentage of food was always traded via markets, both before and after the Black Death, and that the history of urban agriculture can never be isolated from the history of food markets. The commercialisation of food clearly did not remain constant. On the production side, changes occurred in the share of agricultural output which was brought to market. Whereas the subsistence of the peasant family remained the primary goal of production in some regions, in others specialisation and market-oriented production

54 Cf. Annie Antoine/Martine Cocard, *La pluriactivité dans les sociétés rurales. Approche historiographique*, in: Gérard Le Bouëdec (ed.), *Entre Terre et Mer. Sociétés littorales et pluriactivités (XVe–XXe siècles)*, Rennes 2004, 13–33; Laurence Fontaine/Jürgen Schlumbohm (eds.), *Household Strategies for Survival, 1600–2000: Fission, Faction and Cooperation*, Cambridge 2001.

55 Sebastian A. J. Keibek/Leigh Shaw-Taylor, *Early Modern Rural By-employments: A Re-examination of the Probate Evidence*, in: *Agricultural History Review* 61/2 (2013), 244–281.

56 Tine De Moor/Jan Luiten van Zanden, *Girlpower. The European Marriage Pattern (EMP) and Labour Markets in the North Sea Region in the Late Medieval and Early Modern Period*, in: *Economic History Review* 63/1 (2010), 1–33.

clearly gained in importance.⁵⁷ The importance and geography of long-distance trade in food changed as well. In the North Sea area, inter-regional integration of cereal markets was higher in 1500 than it was in 1300.⁵⁸ This market integration did not result in declining price fluctuations; often the opposite was and is true. Urban agriculture might decline as food markets became more integrated and urban access to food became primarily organised through the market. On the other hand, some forms of urban agriculture might expand in parallel to agricultural commercialisation, either as urban specialisations like grapes for wine, hops for beer, woad for textile colouring, and the like, as argued by Erich Landsteiner;⁵⁹ or as a reaction to mitigate the uncertainties of the food market. In peripheral regions, the continued reliance of urban economies on the production and provisioning of agrarian commodities supplied to core regions might be part of more general patterns of unequal development. Within the city, retail circuits changed: quite a few Mediterranean cities saw a transition from professional bread *baking*, of bread prepared at home by the consumers, to bread *making* in this period, implying a shift in access to cereals and flour from consumers to professionals.⁶⁰

And finally, the expectations of consumers might have shifted from more “moral” attitudes to the market to more “commercial” ones. While food has always been traded in one way or another, it should not be automatically seen as a commodity, as a long historiographical tradition elaborating on E. P. Thompson’s “moral economy” has demonstrated.⁶¹ For Thompson, access to food at a “just price” was an essential feature of the precapitalist economic mentality, and the gradual retreat of such considerations in favour of purely commercial ones in the course of the eighteenth and nineteenth centuries inspired multiple food riots. While the moral economy has been investigated for other contexts and periods as well,⁶² the way by which direct food production could also be approached as part of a moral food economy remains to be explored. What seems certain, however, is that neither the increasing commercialisation of agriculture nor the integration of European food markets automatically erased urban agricultural activities.

Politics

In today’s cities, the decision to grow food in an urban context often cannot be explained by purely economic models, neither at the macro-level of the city nor at the micro-level of indi-

57 For the existence of opposite regional economic trajectories at short distances from one another, see: Erik Thoen/Tim Soens, *The Family or the Farm: A Sophie’s Choice? The Late Medieval Crisis in Flanders*, in: Drendel (ed.), *Crisis*, 195–224.

58 Richard W. Unger, *Maritime Transport and the Integration of Low Countries Grain Markets in the Late Middle Ages*, in: Thoen/van Cruyningen (eds.), *Food Supply*, 101–122.

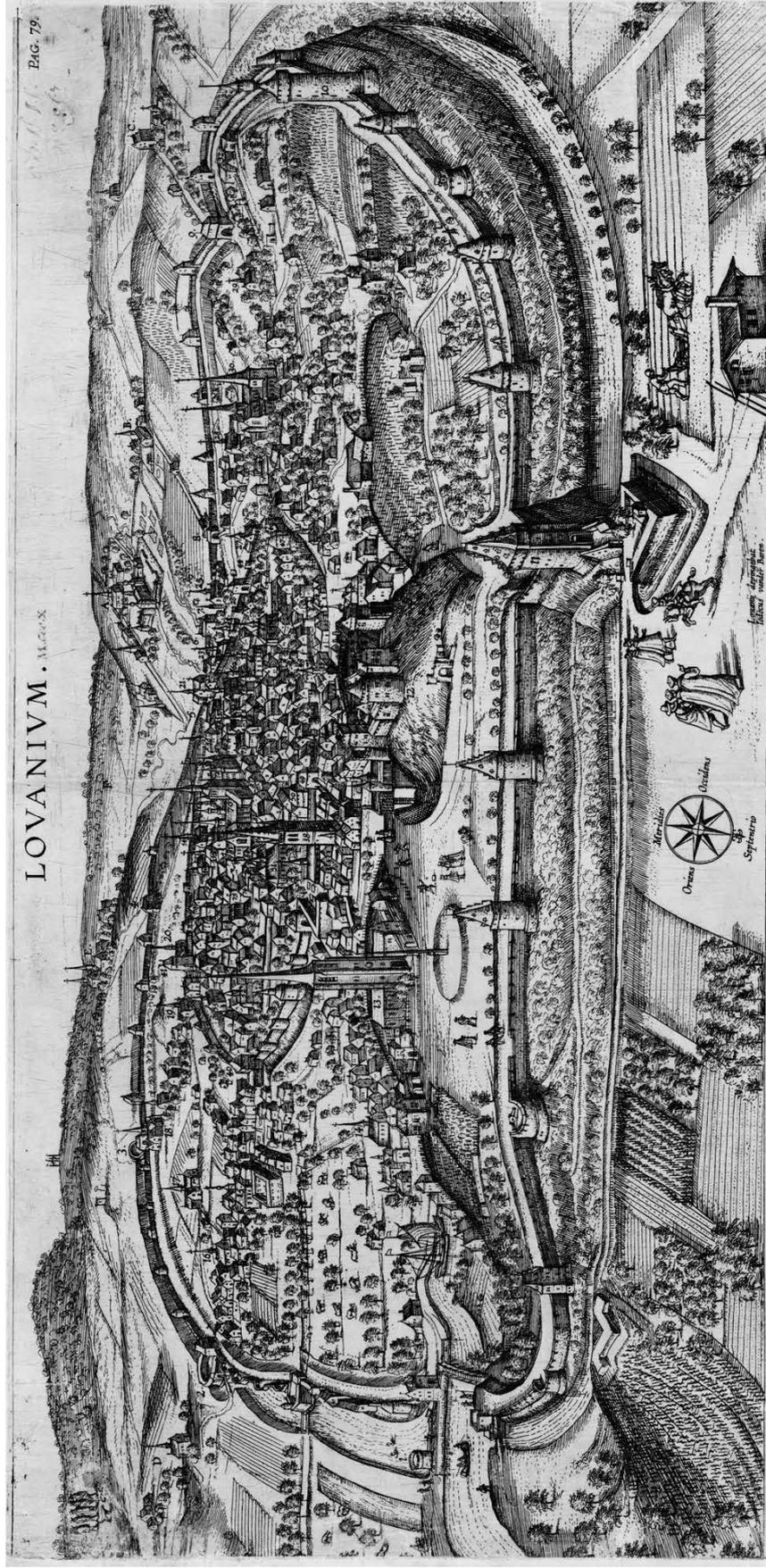
59 See the contribution of Erich Landsteiner to this volume.

60 Pere Benito Monclus, *Famines sans frontières en Occident avant la ‘conjoncture de 1300’: à propos d’une enquête en cours*, in: Monique Bourin et al. (eds.), *Les disettes dans la conjoncture de 1300 en Méditerranée occidentale*, Rome 2011, 37–86.

61 John Bohstedt, *The Politics of Provisions: Food Riots, Moral Economy, and Market Transition in England, c. 1550–1850*, Aldershot 2010.

62 See for instance discussions on the importance of “everyman’s right” to collect wild berries (and firewood) in Scandinavia: Marjatta Hietala/Tanja Vahtikari (eds.), *The Landscape of Food: The Food Relationship of Town and Country in Modern Times*, Helsinki 2003.

Figure 2: Jodocus van der Baren, *Lovanium*. Bird's-eye view of Leuven, originally inserted in *Justus Lipsius, Ivsti Lipsi Lovanium: sive opidi et academiæ eius descriptio, libri tres, Antwerpen 1605*. The artist clearly depicts the many vineyards, fields and trees both within and immediately outside the city walls.



Source: Public Domain, [https://commons.wikimedia.org/wiki/File:Josse_van_der_Baren_-_View_of_Leuven_\(from_Lovanium\).jpg](https://commons.wikimedia.org/wiki/File:Josse_van_der_Baren_-_View_of_Leuven_(from_Lovanium).jpg).

vidual urban households. Urban and supra-urban authorities may conceive policies which directly affect the potential for urban agriculture. As Björklund has shown, for instance, the persistence of direct urban food provisioning in Sweden cannot be understood without taking into account the policies of the Swedish crown, which in the seventeenth and eighteenth centuries not only provided cities with agricultural land, but also intervened in the distribution of land, pursuing more or less egalitarian policies that contrasted with the previous situation in which urban elites had enjoyed a much more pronounced grip on urban and peri-urban land. Broader institutional arrangements, such as those regarding access to (common) land or the organisation of taxation, might also influence urban agriculture. Cities and states intervened – directly or indirectly – in the organisation of urban agriculture, in ways that included fiscal policies in regard to land or animals, restricting the presence of animals in the city for sanitary reasons,⁶³ or regulating the urban commons. On the other hand, urban households might actively pursue food security themselves, complementing or supplementing municipal strategies, and urban agriculture could play an important role in these strategies. Within the field of peasant studies, the concept of “food sovereignty” has been advanced as an analytical tool to look at this assertion of control over food resources by smallholding producers supplying a localised market.⁶⁴ The food sovereignty agenda, which is as much a social movement as a theoretical approach, aims at replacing the social relations of an anonymous food “from nowhere” with a more tangible food “from somewhere”.⁶⁵ Although the food sovereignty approach has been criticised for its unilateral focus on a supposedly homogeneous “peasant class”, the concept can also be transferred to an urban context, and to the control of town-dwellers over the food they consume.⁶⁶

Food cultures

Food is an essential part of daily life. Not surprisingly, it is embedded in a thick web of codes, preferences, and traditions, interacting with a more economic or political logic of calories and control.⁶⁷ Hence, the persistence of UPA in some contexts might also be part of cultural traditions or social conventions.⁶⁸ In many cultures food, and specific types of food in par-

63 The relation between sanitation and the disappearance of urban agriculture is very intriguing, as indicated for instance by Richard Oram for Early Modern Scottish cities. Dung hills – vital for fertilisation – were increasingly considered a nuisance by the literate elite, who were themselves less and less likely to be cultivating their own ground (Oram, *Waste Management*, 13–14).

64 Jan Douwe van der Ploeg, *Peasant-Driven Agricultural Growth and Food Sovereignty*, in: *The Journal of Peasant Studies* 41/6 (2014), 999–1030.

65 Eric Vanhaute, *From Famine to Food Crisis: What History Can Teach Us About Local and Global Subsistence Crises*, in: *The Journal of Peasant Studies* 38/1 (2011), 47–65.

66 Daniel Block et al., *Food Sovereignty, Urban Food Access, and Food Activism: Contemplating the Connections through Examples from Chicago*, in: *Agriculture and Human Values* 29/3 (2012), 203–215.

67 Bruno Laurioux, *Manger au moyen âge: pratiques et discours alimentaires en Europe aux 14e et 15e siècles*, Paris 2002; Massimo Montanari, *A Cultural History of Food in the Medieval Age*, London 2012; Chris M. Woolgar, *The Culture of Food in England, 1200–1500*, Yale 2016.

68 See for instance, in the case of Spain, the persistence but also merger of Christian and Muslim food regimes, the latter associated with milk, almonds, butter, and honey, cf. Olivia Remie Constable, *Food and Meaning: Christian Understandings of Muslim Food and Food Ways in Spain, 1250–1550*, in: *Viator* 44/3 (2013), 199–235.

ticular, were used to broker social relationships: hence the enthusiasm, according to Carole Goodson, of upper-class families in early medieval Rome for converting open spaces in the shrunken city to gardens and fields.⁶⁹ Changes in food regimes also had an impact on urban agriculture. Historians have described various nutritional transitions in cities, such as the increased consumption of meat in the late Middle Ages,⁷⁰ the “horticultural revolution” of the seventeenth century,⁷¹ and the growing urban preference for expensive white bread.⁷² As argued by Joan Thirsk, economic imperatives and preferences of taste often interacted to provoke changes in food production and supply. For her, the diversification of food production in the seventeenth century, with the increasing importance of horticulture, but also poultry, was part of a recurrent phase in the history of agriculture, away from mainstream agriculture towards diversification, small scale, and self-provisioning. To a certain extent, this was an adaptation to a new economic situation with lower grain prices, but it also had to do with taste and quality; after all, “a lot of flavor went out of food as it was produced commercially”, as Thirsk provocatively concluded.⁷³

Crisis

Subsistence crises and price spikes on the urban grain market were a recurrent feature of premodern city life.⁷⁴ While the rhythm of these crises might be partly dictated by spells of bad weather inducing harvest failures and “food availability declines” (FAD), hunger was never without social bias. It might hit particular households or groups in society, by their loss of ability to mobilise enough resources to acquire the necessary food: by “food entitlement declines” (FED), as formulated by Amartya Sen.⁷⁵ As mentioned above, direct entitlements to food produced on one’s own land (or “endowment” in Sen’s terminology) might be an important asset to counter recurrent urban food crises. However, as John Drendel recently argued with regard to food crises in premodern Mediterranean cities, we largely do not know the

69 Carole Goodson, Garden Cities in Early Medieval Italy, in: Ross Balzaretto/Julia Barrow/Patricia Skinner (eds.), *Italy and Medieval Europe: Papers for Chris Wickham’s Birthday*, Oxford 2018, 339–355. In the urbanised world of late medieval Italy as well, control of food was needed to legitimise social advance, consolidate the power of individual clans, and retain private armed men and faithful clients (*consorterie*): Giuliano Pinto, Honour and Profit. Landed Property and Trade in Medieval Siena, in: Trevor Dean/Chris Wickham (eds.), *City and Countryside in Late Medieval and Renaissance Italy. Essays presented to Philip Jones*, London 1990, 81–91, 86; Philip Jones, *Economia e società nell’Italia medievale*, Torino 1980, 43–47.

70 Tim Soens/Erik Thoen, Vegetarians or Carnivores? Standards of Living and Diet in Late Medieval Flanders, in: Simonetta Cavaciocchi (ed.), *Economic and Biological Interactions in the Pre-Industrial Europe from the 13th to the 18th Centuries*, Florence 2010, 483–515.

71 Thick, *Neat House Gardens*.

72 Jan de Vries, *The Price of Bread. Regulating the Market in the Dutch Republic*, Cambridge 2019.

73 The quote by Thirsk comes from the discussion in Cavaciocchi, *Alimentazione*, 918. See also Thirsk, *Alternative Agriculture*.

74 There is a substantial literature on grain prices and their evolution from the later Middle Ages onwards, see for instance: Franz Irsigler, *Getreidepreise, Getreidehandel und städtische Versorgungspolitik in Köln, vornehmlich im 15. und 16. Jahrhundert*, in: Franz Irsigler et al. (eds.), *Die Stadt in der europäischen Geschichte. Festschrift Edith Ennen*, Bonn 1972, 571–610; Franz Irsigler/Dietrich Ebeling, *Getreideumsatz, Getreide- und Brotpreise in Köln 1368–1797*, 2 vols., Köln 1976/1977.

75 An overview in Guido Alfani/Cormac O’Grada (eds.), *Famine in European History*, Cambridge 2017.

extent to which urban gardens helped to mitigate vulnerability to food shortage and famine.⁷⁶ Was there a direct link between the expansion of urban farming and the recurrence of food crises? Karl Polanyi famously distinguished between two basic ways of coping with food shortages: “market economies” and “redistributive” systems, the latter characterised by the prevalence of granaries and staple politics.⁷⁷ A strong reliance on UPA for urban food supplies might be a feature of either, or alternatively, a third way of coping with food crises. Did UPA decline in response to either the increasing integration of food markets or the disappearance of hunger – the two being not necessarily related, as early integration of grain markets did *not* reduce the occurrence of price spikes? And conversely, do we see an increase in direct food production in times of war and uncertainty, as normal food chains were disrupted (as suggested by the popularity of UPA during both World Wars)?

Further outlook

While an increasing number of historical studies have revealed the wide variety of food-producing activities in cities and their immediate hinterland, it is now time to move the debate one step further, and explore the role that urban agriculture in all its variety played in the food provisioning of urban households. From what precedes it is clear that in many European cities – though not all –, urban food production retained its importance for at least some households in conditions where most economic models would not expect this. It remains to be seen whether this primarily had to do with a quest for food security in a context where food markets remained highly volatile; with a certain cultural habitus discovering the pleasure of home-grown food; with speculation on the urban land market; or with the existence of considerable labour surpluses in the urban economy. Moreover, explanations might be different from context to context. So, in order to understand the importance, the resilience, and the decline of urban agriculture in European history, a comparative and long-term approach is needed, comparing individual trajectories of cities and urban households engaging in direct food production. By doing so, we might rewrite the history of urban food supply and the urban food metabolism, which until today remains written as a history of market expansion and increasing food flows from the urban hinterland. In my opinion, such comparative exploration of urban agriculture should not limit itself to the macro-level of the city: only by disaggregating the city into the different households and their income and food strategies can we hope to unravel the driving and sustaining forces underlying the efflorescence, resilience, or decline of urban agriculture in history.

76 John Drendel, Conclusion, in: Monique Bourin et al. (eds.), *Les disettes dans la conjuncture de 1300 en Méditerranée occidentale*, Rome 2011, 417–422, 422.

77 Karl Polanyi, *Trade and Markets in Early Empires*, Glencoe, IL 1957, 243–270. Medieval and Early Modern historians today usually see granaries for staple foods against a context of increasing market integration, see for instance Dominik Collet, *Storage and Starvation: Public Granaries as Agents of Food Security in Early Modern Europe*, in: *Historical Social Research* 35/4 (2010), 234–252.