

## Oysters and rye bread: Polarising living standards in Flanders, 1800–1860

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This article presents the results of an extensive inquiry into urban consumption of foodstuffs in Flanders between 1800 and 1860. The *octroi* tax, an indirect tax levied on various consumer items, formed the principal source. During the initial phase of Belgian industrialisation the inhabitants of the eight cities under study (Antwerp, Bruges, Brussels, Courtrai, Ghent, Lokeren, Leuven and Mechelen) experienced a sharp decrease in the consumption of bread grains, meat, fish, beer, wine and gin. A number of other indicators suggest at the same time an accelerated widening of the gap between rich and poor. This process of impoverishment and pauperisation, which occurred in all cities (small or large, industrial or merchant centre), is explained as a result of Malthusian tensions. The rapid population growth, which started around 1750, generated the division of arable land and a sharp increase in land prices. The growing demand for food, stagnating agricultural output, and the trade and agricultural policy of the government led to a significant increase in the price level of foodstuffs. The capitalism hypothesis of Lis and Soly, elaborated for Antwerp, is rejected.

Many economic historians have studied the social impact of industrialisation in the past. This generated the so-called ‘standard-of-living debate’ that led to heated debates, especially in Great Britain. The whole controversy concentrated around the question as to what impact the Industrial Revolution had on the living conditions of the (worker) population: does industrialisation breed inequality and poverty? Is there a trade-off between growth and equity? Two schools of thought took shape during the debate. The ‘optimistic school’ dwelt on the positive effects of increased state welfare provision and the political emancipation of a large part of the population. Many adherents of this theory situated a substantial improvement of the living standard in an early stage of the Industrial Revolution. The ‘pessimistic school’, on the other hand, laid the emphasis on impoverishment, the deplorable working and housing conditions and the growing gap between rich and poor.<sup>1</sup>

<sup>1</sup> A current state of the controversy was reviewed recently by Feinstein (1998, pp. 626–631); see also Williamson (1991, 1997) and the contributions in Nunez (1998).

Traditionally, much attention has been paid to the collection and construction of wage data, price series and cost-of-living indices.<sup>2</sup> This method is not without its critics and has been increasingly questioned. The constructed real wage series do not always take account of payment in kind, nor of money earned by women and children. Their representativeness is, moreover, not equally high because of the lack of wage data for specific professional groups such as farmers, day labourers or journeymen, maids or domestic servants. The development of the standard of living is therefore also linked to a number of alternative indicators: family income, housing conditions, literacy and education, demographic ratios (life expectancy, mortality), people's height, consumption and nutrition.<sup>3</sup>

The study of spending patterns is the most appropriate method, since this perspective focuses on the actual expenditure of the consumer and no longer makes reference to purely theoretical concepts such as 'available purchasing power' (Lebergott 1996, pp. 3–8). Changes in purchasing power are reflected well-nigh immediately in the composition of the larder. Up to the eve of the First World War, the average European would spend the bulk of his money on provisions (food and drink). Recent macroeconomic research for Belgium reveals that their share went from approximately 65 per cent in 1845 to 55 per cent in 1910.<sup>4</sup> Food consumption and calorie intake therefore suggests itself as a useful approach for gaining an impression of the quality of life in the early nineteenth century. Food and drink habits are reliable witnesses of the stages of society's development.<sup>5</sup>

A number of Belgian researchers in former years have studied food consumption during the initial phase of industrialisation, both at national and at local level. During the late 1970s, Vandenbroeke and Lis and Soly based themselves on the municipal *octroi* registers to research the development of food consumption in Ghent and in Antwerp between 1800 and 1859. They found that the average *per capita* consumption in these cities declined as regards quantity and quality. The (admittedly broadly estimated) daily

<sup>2</sup> The classical studies for Belgium in this connection are Michotte (1936); Peeters (1939) and Neiryneck (1944). Alternative series were compiled in Scholliers (1992a, 1993a). An international overview is given in Scholliers and Zamagni (1995); see also Feinstein (1998).

<sup>3</sup> A recent overview concerning food consumption in Europe is given in Teuteberg (1992). For Belgium, see Scholliers (1992a).

<sup>4</sup> Calculations based on own database and current Ph.D. research: 'Economic growth, living standards and consumption in Belgium, 1800–1913'. Relative expenditure on food and beverages did not really begin to decrease visibly in total family spending until after the First World War, see Schroeven (1994). The budget surveys conducted among workers' families indicate a similar trend. On this point see Creten (1982). For other European countries: Johansen (1998, p. 12); Grytten and Minde (1998, p. 53); Heikkinen (1998, p. 65) and Horlings and Smits (1996, pp. 23–5).

<sup>5</sup> Scores of historians have pointed out the particular importance of food consumption as an indicator of the standard of living: Vandenbroeke (1983, pp. 221–2); Teuteberg (1992, pp. 1–3); Lis (1986, p. 86).

calorie intake in Antwerp in 1820–1829 and 1850–1859 fell from 2,592 to 2,367 calories. Vandenbroeke put the average calorie intake in Ghent at around 2,400 to 2,450 calories.<sup>6</sup> Recently Bekaert, who also studied the increasing polarisation between rich and poor, allied himself to their cause. Basing himself on the macroeconomic data collected by Goossens, he examined the development of calorie intake in Belgium from 1812 to 1846. Despite various indications of an increasing pauperisation, the total calorie range remained at the same level for all Belgians during this period. Bekaert subscribed to Kuznets' hypothesis of a growing inequality during the early decades of industrial development.<sup>7</sup>

The above conclusions all fit within a 'pessimistic' vision of the development of the standard of living in Belgium during the first half of the nineteenth century. This contribution aims, in the first instance, to subject the above consensus to a thorough investigation. Taking the *octroi* tax, a municipal indirect tax on the supply and consumption of a broad range of consumer goods, we shall examine whether the quantitative and qualitative decline of food consumption also affected other Flemish towns, and then whether any polarisation took place.<sup>8</sup> In addition to the existing series for Antwerp and Ghent, extensive archive research also yielded long-term information for consumption in Brussels, Courtrai, Leuven, Lokeren and Mechelen. Taken together, the towns in question had a total population of approximately 550,000 inhabitants, respectively 43 per cent and 12 per cent of the urban and total Belgian population. The compiled data set, unique in Europe, now provides data serving as a basis for the study of food consumption before 1860 for an extended group of towns, each with its specific development, at a socioeconomic and demographic level.<sup>9</sup> By and large, the towns can be classified into four groups.

- (1) Towns with a major industrial presence: Ghent and, in a certain sense, also Mechelen. An important cotton industry expanded around Ghent from the beginning of the century. By the late 1820s, roughly 16,000 workers were employed in 63 factories; these had comprehensive plant and machinery (700 units)

<sup>6</sup> Lis and Soly (1977, pp. 475–81); Vandenbroeke (1973, pp. 139–41). The Netherlands and France also levied local excise duties to map out the consumption of food products at local level, see *inter alia* Laurent (1960); Mandrou (1970); Knotter and Muskee (1986).

<sup>7</sup> Bekaert (1991, pp. 633–55); Williamson (1985). Van Zanden, by contrast, suggests that the Kuznets curve occurred in pre-industrial times as well. Soltow and Van Zanden (1998).

<sup>8</sup> It was not possible to outline the consumption patterns of a Walloon township or city due to a lack of long-term data, caused by the low accessibility/availability of local archive material in the South of Belgium. This is extremely unfortunate, especially considering that industrialisation in Belgium between 1800 and 1860 took place mainly in the Walloon Region.

<sup>9</sup> British consumption statistics before 1850 are inadequate and unreliable, see Mitchell (1988, p. 707); Hobsbawm (1957, p. 57); Hartwell (1961, pp. 406–7).

(Hannes 1994, p. 13). In Mechelen, the expansion of the Belgian railway network sparked off a modest industrialisation process. The railways set up a central workshop in Mechelen around 1840, employing some one hundred workers. A number of mechanical flax mills and wool mills were also being founded around the same time (Marchau 1959, pp. 121 and 151; Pluymers 1988, pp. 167–72; Van Uytven and Installé, 1991, pp. 181–218).

- (2) Towns where a process of deindustrialisation took place: Antwerp, Bruges and Brussels. These three cities had an important traditional textile industry up to the end of the eighteenth century. However, the local entrepreneurs paid no attention to technical innovation. With the opening of the Scheldt, Antwerp began to develop as a port and services metropolis. Drawn by more lucrative trading activities, the merchant-entrepreneurs of early nineteenth-century Bruges refused to invest in the fustian industry. Brussels grew as the capital city of the new Kingdom of Belgium to become the administrative and financial centre of the country. The few remaining cotton mills failed to survive the crisis of the French period (Van den Eeckhout and Hannes 1981, pp. 440–1).
- (3) Towns where the entrepreneurs clung to the traditional, old-fashioned linen industry: Lokeren and Courtrai. The sector drifted into a severe crisis resulting from the loss of the French and Dutch markets and its stubborn resistance to the introduction of modern production techniques (De Vliegheer 1961, p. 390; Vriens 1968, pp. 228–9).
- (4) In Leuven, the traditional trade sector remained dominant during the first half of the century. The city would not experience any industrial development for the time being, despite her position as an interchange between roads and waterways and the rapid connection of the railways (Magits 1974, p. 24; Matthijs *et al.* 1997, p. 25).

In the second instance, an explanation is offered for the established mutations. Lis and Soly (1977) refer us to increasing industrialisation and the introduction of the capitalist production method as the most important explanatory factors for the falling standard of living. But can this hypothesis be maintained when food consumption fell just as sharply in towns with a markedly trade-based economy, or in localities then in the throes of a deindustrialisation process?

The present article is made up of four parts. The first section discusses the most important characteristics of the local excise duty and the methodology applied in the processing of the data. The results are then presented

in the second section. Attention is here focused on the long-term trend for the consumption of meat, fish and beverages. Was there a pronounced decline in consumption in all towns between 1800 and 1860? The third section, drawing on additional consumption data, for instance, on luxury products, tests the polarisation hypothesis. The fourth part sets off in search of an explanation for the established developments.

### I. Sources and methodology

The basic sources of information for this study are the registers and annual lists drawn up by the administration of the municipal excise duty. The excise duties, or '*octrois communaux de bienfaisance*', were municipal indirect taxes levied on the supply and consumption of five broad groups of products: (1) beverages, (2) foodstuffs for human consumption, (3) cattle feed, (4) fuel and (5) furniture and building materials. The French government, which had originally abolished all indirect taxation from the *Ancien Régime*, restored, by a law of 1 December 1798, the right to collect consumer taxes in towns with budgetary problems. The first Belgian city to be granted such authorisation was Courtrai on 17 December 1799; the other above-mentioned towns followed suit a year or two later. Bowing to great pressure from the population, from traders, manufacturers and certain municipalities, Minister of Finance Frère-Orban abolished consumer taxation on 20 July 1860. At the time, 78 towns and larger boroughs, grouping together one quarter of the population of Belgium, were collecting excise duties on a wide range of consumer goods.<sup>10</sup>

As stated in the introduction, the city archives of Antwerp, Bruges, Brussels, Ghent, Courtrai, Leuven, Lokeren and Mechelen yielded sufficient information to support a long-term study of food consumption. However, it was not possible to study consumption for each city between 1800 and 1860 uninterrupted. For one thing, not all excise forms and registers have come down to us. Certain 'blind spots' may nonetheless be filled in from studies and statistics published by the authorities.<sup>11</sup> The preserved registers and lists provide a monthly and/or yearly overview of the influx of products, in certain cases even broken down per city/port. They record the incoming quantity for each product, the applicable tax rate, the excise return and, sometimes, even the average trade price.

The source material displays certain limitations. Not all towns levied

<sup>10</sup> For information on the introduction, organisation and abolition of the octroi tax in Belgium, see Segers (2000).

<sup>11</sup> For instance: *Statistique de Belgique* (1839); Nothomb (1845, vol. 1); Stevens (1847). The excise statistics for Brussels for the period 1834–1860 can be found in *Annuaire de l'Observation de Bruxelles*, 1834–1860. By way of control, the published data were compared with the statistical information in the original source material. In most cases, the deviations were non-existent or insignificant (maximum 7 per cent).

taxes on the same food products. This contribution considers the consumption of meat, fish and beverages (beer, wine and gin). Unfortunately enough – for the historian at least – the consumption of potatoes was not liable to taxation, while the consumption of rye and wheat was taxed only in Antwerp, Ghent and Mechelen. In other words, the excise duties give us only a partial picture of the food-parcel. On the other hand, we have the advantage of information to hand on the consumption of luxury products (such as oysters, liqueurs, game and poultry, and so on). The calculated *per capita* consumption data for each city hide differences of age and sex, of occupation and income, of religious and cultural habits. They are all grouped together in an arithmetic average. These annual figures only reflect certain trends of development. The major advantage of *per capita* data is that they are relatively easy to estimate (there is not always detailed information available) and they provide a basis for comparison.

Nor, furthermore, did the calculation of *per capita* consumption using excise duty statistics run smooth. To ascertain the total supply and internal production (of beer and gin), certain difficulties had to be resolved. The current units of liquid capacity and weight changed regularly (especially during the early period), which sometimes caused metrological vagueness. Fish were sometimes delivered in barrels (which could vary in content according to the type of fish), sometimes in baskets. Cattle arriving on the hoof, divided into various weight categories, had to be recalculated via standard slaughter weights into kilograms of consumed meat. The production of beer and gin was not always expressed in litres. In many towns, the local authorities tried to estimate the real production from the quantities of ingredients or raw materials used. However, this led to heated discussions about the efficiency of the production units and to less reliable production and consumption estimates. The biggest problems are discussed in the next section.<sup>12</sup>

The conversion of supply and production data into *per capita* consumption data presented another difficulty. The excise duties provide a picture of the consumption behaviour of the inhabitants of the city centre. The law in force stipulates clearly that only local consumption is liable to taxation, '*c'est à dire les objets consommés par les habitants de la localité même, et que l'on abstienne de frapper les objets consommés par les forains*' (Nothomb 1845, p. XIV). The excise lists and registers generally record the total number of inhabitants each year, but, on closer inspection, these figures begin to look less reliable. An annual population figure can still be pieced together for each town or city on the basis of certain national censuses conducted by central government (1829, 1846, 1856 and 1866), local censuses and data from the specialist literature (Table 1). However, the problem still persists of the travellers, tourists and traders who were not counted in the standard popu-

<sup>12</sup> Segers (2000); De Vos (1984, pp. 151–2 and 158–9).

Table 1. *Urban population, 1800–1866 (index: 1829 = 100).*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1800	55,925 (79)	34,026 (87)	66,297 (69)	55,161 (66)	13,736 (72)	18,200 (71)	12,016 (75)	19,200 (79)
1810	60,000 (84)	32,990 (83)	74,000 (78)	57,693 (69)	13,941 (73)	22,958 (90)	13,005 (81)	20,285 (83)
1820	55,650 (78)	33,948 (86)	79,166 (83)	65,764 (78)	16,198 (85)	21,233 (83)	14,475 (90)	21,422 (88)
1829	72,962 (100)	39,519 (100)	98,279 (100)	83,783 (100)	19,036 (100)	25,643 (100)	16,069 (100)	24,436 (100)
1846	88,487 (120)	49,308 (125)	123,874 (130)	102,977 (123)	21,571 (113)	30,278 (118)	16,479 (103)	29,693 (122)
1856	102,761 (144)	48,673 (129)	152,828 (160)	108,925 (130)	22,216 (116)	30,765 (120)	17,091 (106)	31,371 (128)
1866	117,269 (165)	47,015 (119)	157,905 (165)	115,354 (138)	22,945 (120)	31,198 (122)	17,226 (107)	34,205 (140)

(1) = Antwerp; (2) = Bruges; (3) = Brussels; (4) = Ghent; (5) = Courtrai; (6) = Leuven; (7) = Lokeren; (8) = Mechelen

Sources: Antwerp and Ghent: Lis and Soly (1977, p. 465); Vandenbroeke (1973, p. 113). Bruges: De Vos (1984, p. 175). Mechelen: Kocken (1973, pp. 174–7); Verbeemden (1955, pp. 63–98). Brussels: Cosemans (1966); Vanhamme (1947); Verniers (1935). Kortrijk: Augustyn (1987); Maddens (1983, p. 95). Leuven: Camerlinckx (1960, pp. 174–5); Matthijs *et al.* (1987, pp. 9–12). Lokeren: Coene (1981, p. 98).

lation censuses. Lis and Soly (1977) compensated for this by including the inhabitants *extra muros*, but that seems a rather arbitrary approach. The present study takes no account of this floating group of persons, for two reasons. (1) The home population (merchants, diplomats, representatives, sailors) was not always in the town or city and consequently did not always consume there. It appears to us that the group of strangers and the group of home traders more or less balance each other out. (2) A possible underestimation of the population would also exert a corrective influence on the consumption figures which, allowing for a limited presence of smuggling and/or fraud, underestimate reality.

Interpreters must always remember that the *per capita* consumption figures are prone to distortion through smuggling or fraud. After all, no single system is watertight. People were stopped at the city gates trying to smuggle in a leg of ham, a sack of oats or a pound of butter practically every day. Of course, some objects lent themselves to smuggling more readily than others: it was easier to slip a bottle of wine past the excise men than to drive a sheep or pig past them unnoticed. The city authorities issued stringent regulations to counter smuggling and fraud. Research in various municipal archives shows that the numerous rules and regulations were usually applied to the letter. Irregularities were rare because of the strict controls at the city gates and in the harbour; the tough sanctions for individuals, merchants and functionaries, and the ever-improving organisation of the tax service. The staffing of the *octroi* services increased considerably between 1800 and 1860. Moreover, city authorities were keen to prevent fraud because they derived the majority of their income from the *octroi* tax. Smuggling would have been especially minimal in cities where the defensive moats and walls were still mostly intact (Antwerp, Bruges, Ghent, Brussels and, to a lesser extent, Leuven). In towns with a more open-plan character, such as Lokeren, there was a greater chance of contraband. But despite these reservations, the excise duty registers remain a reliable foundation for the analysis of urban district (food) consumption.<sup>13</sup>

## 2. Consumption of fish, meat and beverages

### 2.1. Meat

Meat may be regarded as a luxury product with high income elasticity of demand. A reduction of purchasing power is almost immediately reflected in a downturn in meat consumption. Meat consumption, then, is a very interesting barometer of the development of the standard of living. The celebrated economist Juglar formulated this at the end of the nineteenth

<sup>13</sup> Segers (2000); Lis and Soly (1977, p. 464). Fraud and smuggling also remained limited in the Netherlands, where a similar consumer tax existed in the local excises. Knotter and Muskee (1986, pp. 156–7).

century as follows: *'la consommation de viande, qui indique le plus ou le moins de bien-être de la population des villes, permet de juger le degré des périodes heureuses ou malheureuses'* (Vandenbroeke 1983, p. 223). The calculation of the quantities of meat available for consumption proceeded by a number of steps.

A first obstacle concerned the inconstant registration in the excise registers. The different kinds of cattle were not always taxed separately. Some years, the accounting system made no distinction between sheep and lambs or between bulls and oxen. Other years all bovine animals were lumped together in a single heading. Determining average slaughter weight was a second problem.<sup>14</sup> After all, the bulk of the meat came to town on the hoof. An average slaughter weight could be found for most urban districts. However, that was not the case for Courtrai and Lokeren. They are allocated respectively the averages for Bruges and Ghent, since animal husbandry in the countryside around these cities displayed comparable structure. It was further assumed that the slaughter weight remained unchanged during this period, a hypothesis also advanced by other authors.<sup>15</sup> The average slaughter weight varied considerably from place to place (Table 2), depending as it did on, say, the fertility of the soil. An ox

Table 2. *Average dead weight of different kinds of livestock, 1800–60 (kg).*

	(1)	(2)	(3)	(4)	(5)	(6)
Ox	350	250	352	290/300	312	367
Cow	240		275	210/220	230	222
Heifer	120	150		220/230		100
Calf	75	50	64	60/70	70	54
Pig	100	75	82	75/85	85	108
Sheep	25	30	24	25/30	25	24
Lamb	10		5/10			

(1) = Antwerp; (2) = Bruges and Courtrai; (3) = Brussels; (4) = Ghent and Lokeren; (5) = Leuven; (6) = Mechelen

*Sources:* Goossens (1992, pp. 123–5); De Vos (1984, pp. 74–5); Vandenbroeke (1973, p. 133); City Archives, Leuven, Modern Archief, no. 10604; *Consumptions* (1830–32, p. 72).

<sup>14</sup> Although the slaughter weights and their development are very important for agricultural history, relatively little research has thus far been conducted on the subject. One exception is Bruneel (1983).

<sup>15</sup> Lis and Soly (1977, p. 465); Vandenbroeke (1973, p. 133); Goossens (1992, p. 122). Guy Dejongh's figures regarding the evolution of the acreage available for fodder crops also point in the same direction. A period of considerable increase in all regions between 1760 and 1812 was followed by a period of recession in most regions between 1812 and 1846. Kint, however, seems to be alone in positing a significant increase of the slaughter weight (more precisely, 20 per cent from 1820 to 1846). Kint (1989, pp. 119–120).

from the Bruges area would weigh on average 250 kilograms; bred in Mechelen, the same ox would weigh 367 kg, or half as much again.

A third obstacle resided in the very principle underlying the excise statistics. The registers provide an indication of meat deliveries to the various towns, but not of final meat consumption. In order to know the total meat consumption, account must also be taken of the livestock reared within the city walls. Information on this subject is very thin on the ground. In Brussels, cows and pigs reared in the city centre were taxed from 1845 and 1850 respectively. Their numbers were rather limited: in 1855, they accounted for only 3 per cent of the total imports of cows and pigs.<sup>16</sup> The low figures for the capital city come as no surprise. The densely built-up space and the high population density within Brussels city walls made the raising of livestock there virtually impossible. The same remark also applies to the other big cities, Antwerp and Ghent (Vandenbroeke 1973, pp. 119–120; Lis and Soly 1977, p. 464). In smaller towns and cities (Courtrai, Bruges, Lokeren, Leuven and Mechelen), where there was often still a good deal of open space inside the town walls or city limits, the relative numbers of own livestock in the total meat supply would undoubtedly have been rather higher. However, its importance should not be overrated. The data from the slaughterhouse in Bruges, available since 1849, confirm the accuracy of the excise duty statistics in any case.<sup>17</sup> Nonetheless, it is clear that our figures – especially for the smaller cities – are minimum values, since account must also be taken of illegal slaughterhouses. Table 3 gives an outline of the total *per capita* meat consumption in the eight urban districts under review.

The *per capita* meat consumption decreased in all the above urban districts during the first half of the nineteenth century: by 10 per cent in Leuven and Mechelen, by 15 per cent in Ghent, Courtrai and Lokeren, and by approximately 25 per cent in Brussels, Antwerp and Bruges. It is interesting to note the large differences between these cities, whereby a certain connection appears to exist between the size of the city and the scale of meat consumption. The big cities of Brussels, Ghent and Antwerp had a minimum *per capita* meat consumption of 50 kg at the beginning of the nineteenth century. In Bruges (approx. 35 kg), Courtrai (approx. 33 kg) and certainly Lokeren (approx. 25 kg), the meat consumption figures were significantly lower. Mechelen, with a *per capita* meat consumption that fluctuated around 45 to 50 kg, is an exception to the rule, although these figures might be distorted by the available high slaughter weights. Meat consumption in the smaller townships largely approximated that in the surrounding countryside where, similarly, little meat was eaten.<sup>18</sup> Near the middle of the

<sup>16</sup> City Archives, Brussels, Finances, *Octrois*, I–V.

<sup>17</sup> De Vos (1984, pp. 75–6). No information is available on own livestock for the other towns.

<sup>18</sup> Goossens (1992, pp. 119–20) estimated rural *per capita* meat consumption in 1812 and 1842 at barely 14 kg to 15 kg per year.

Table 3. *Average annual per capita meat consumption, 1800–59 (kg).*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1800–04			68.6					41.2
1805–09	48.7	37.6	64.6	49.1			26.9	47.7
1810–14	56.0	33.3	64.7	46.7			23.5	52.2
1815–19	45.3	32.4	70.6	53.2	40.3	48.2	20.3	
1820–24	42.1	29.0	65.4		31.7		23.8	
1825–29	44.6		60.7		30.6			
1830–34	34.7	21.8	52.8	44.1		46.9		48.1
1835–39	37.3	27.5	57.5		35.4	46.6	20.2	46.3
1840–44	37.3	29.7	52.6	38.1	34.5	43.4	21.0	44.0
1845–49	37.5	26.2	50.3	39.2	32.6	42.3	19.4	39.4
1850–54	38.9	26.8	50.7	41.7	35.0	45.4	21.2	37.7
1855–59	36.9	27.7	47.2	41.1	33.2	44.5	22.8	

(1) = Antwerp; (2) = Bruges; (3) = Brussels; (4) = Ghent; (5) = Courtrai; (6) = Leuven; (7) = Lokeren; (8) = Mechelen

*Sources:* Lis and Soly (1977, p. 466); City Archives, Bruges, Contemporary Archives; City Archives, Brussels, Finances, nrs. XXVIII–XXXIII; Vandebroeke (1973, pp. 144–5); City Archives Courtrai, nos. 4254, 6663, 6665; City Archives, Leuven, nos. 10631; City Archives, Lokeren, not classified; City Archives Mechelen, nos. 2923–32; Statistique de Belgique (1839).

century, the mutual differences began to flatten out somewhat, which can mostly be ascribed to a more visible fall in meat consumption in the larger conurbations.

It is no accident that the highest meat consumption figures are recorded in Brussels. The capital city was the residence of many nobles, industrialists and higher civil servants moving in Court circles and attached to various government institutions. The relatively large group of the well-to-do exerted a strong upwards pressure on the average consumption of other products (see below). Compared with other European capital cities, meat consumption in Brussels was rather low around 1850. Parisians ate an average of approximately 72 kg, the Viennese as much as 81 kg. Conversely, *per capita* meat consumption in Amsterdam was barely 30 kg.<sup>19</sup>

As the existing literature points out, the consumption of meat in the Belgian towns was predominantly a matter of the consumption of beef (Table 4), which also happened to be the case for France (Vandebroeke 1983, p. 223; Désert 1975, p. 526). Beef consumption, in absolute terms, was initially highest in the capital (more than 50 kg during the period

<sup>19</sup> Lis and Soly (1977, p. 466). Concerning meat consumption in other European cities, see Mandrou (1970); Teuteberg and Wiegmann (1972, p. 115); Bennassar and Goy (1975, p. 413); Laurent (1960, Annex VII); Knotter and Muskee (1986, pp. 157 and 176).

Table 4. Average annual per capita meat consumption, different kinds of quality, 1800-59 (kilograms).

	Antwerp				Bruges				Brussels				Courtrai			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1805-09					29	4.5	3.8	0.4	50.3	7.7	4.7	2.2				
1815-19	29.9	3.8	2.6	9.1	24.9	5.2	1.6	1.0	58.7	4.1	6.3	1.5	36.7	2.1	0.5	1.0
1825-29	29.7	4.2	1.9	8.5	19.0	2.7	2.1	0.8	44.8	3.0	6.6	6.3	26.3	1.5	1.2	1.6
1835-39	22.6	3.5	1.3	10.0	21.8	2.9	1.9	0.9	39.9	2.7	6.3	8.6	31.8	1.2	0.7	1.6
1845-49	21.7	2.4	1.0	12.4	21.1	2.5	1.6	1.0	36.5	2.5	4.1	7.1	29.2	0.8	1.0	1.7
1855-59	21.3	2.6	0.9	12.2	22.1	3.0	1.5	1.1	35.5	3.1	3.7	4.9	28.0	0.9	1.0	3.3
	Leuven				Lokeren				Mechelen							
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)				
1805-09																
1815-19	46.4	2.4	6.0	0.3	17.2	7.3	0.2	2.1	31.1	13.9	1.2	1.4				
1825-29					12.1	5.7	0.1	2.4								
1835-39	41.2	5.7	2.5	0.2	12.7	5.0	0.1	2.5	32.8	9.9	0.8	2.7				
1845-49	35.3	4.5	2.1	0.4	12.2	4.4	0.0	2.7	28.0	7.5	0.7	3.1				
1855-59	35.9	5.8	2.0	0.7	15.2	4.6	0.0	3.0								

(1) = beef; (2) = pork; (3) = mutton; (4) = cut and prepared meat

Sources: See Table 3 and City Archives Antwerp, Modern Archieff, nos. 26907-10, 830/2-3.

1800–1820) but, from 1835, Leuven found itself on the same level as Brussels, with approximately 35 kg. Measured as a proportion of total meat consumption, Courtrai and Ghent come jointly first with approximately 90 per cent. Beef comes bottom of the table in Lokeren and Antwerp, where it represents only slightly more than 60 per cent. In Lokeren, on the other hand, as in Mechelen, the preferred meat was pork. Around the turn of the century, pig meat, with respectively 14 and 17 kg, accounted for about 30 per cent of total meat consumption. Pork consumption fell sharply during the following decades, even before the potato blight of the late 1840s. This phenomenon affected all towns and cities with the exception of Leuven.

Mutton and lamb was really a luxury product during the nineteenth century. This is also reflected in the consumption figures. In Mechelen, Courtrai and Lokeren, its share of total meat consumption was marginal, with 3 per cent at most. Mutton and lamb was mostly eaten in Brussels and in Leuven. Rather surprisingly, the share of this meat was also not inconsiderable in Bruges (1805–1809 = 10 per cent, 1855–1859 = 6 per cent). However, the supply and consumption of cut and prepared meat (such as hams, sausages, and so on) rose steadily everywhere during the first half of the nineteenth century. Particularly in Antwerp – and, to a lesser extent, also in Brussels and Lokeren – this category scored very high, with 15 to 30 per cent of total meat consumption. Nor should we overlook the fact that these are minimum values, as this category was more sensitive to smuggling and fraud.

### 2.2. *Fish: an alternative for meat?*

The foregoing section showed that meat consumption in all eight cities underwent a small but significant fall between 1800 and 1859. Was this decrease compensated by any increase in the consumption of fish? The question is less straightforward than it might appear, because the cities in question did not always tax the same species of fish. The situation is further complicated because the catch-all category ‘sea fish’ was not taxed by weight, but *ad valorem*. Since it is difficult, if not actually impossible, to deduce the *per capita* consumption for this group (given, among other things, the lack of retail prices), Table 5 shows only the consumption of cod, herring and stockfish.<sup>20</sup> These three categories of fish were by far the most popular among consumers. Given the lack of long-term, detailed numerical data, we are unable to trace the evolution of *per capita* fish consumption for Ghent and Mechelen. Vandenbroeke estimated consumption in Ghent during the first half of the nineteenth century at roughly 6 kg, of which approximately 3 kg were stockfish, 1.5 to 2 kg cod, and 0.5 to 1 full kg

<sup>20</sup> Michotte is the only author to date to have published retail prices for individual species of fish, exclusively for the City of Leuven; see Michotte (1936, pp. 356–7).

Table 5. *Average annual per capita fish consumption, 1800–59 (kg).*

	(1)	(2)	(3)	(4)	(5)	(6)
1800–04						
1805–09		7.3	4.6			
1810–14	8.5	7.8	4.9			
1815–19	8.5	8.9	5.1			
1820–24	7.2	6.6	5.0			
1825–29	6.0	9.2	4.8		4.6	
1830–34	4.9	7.2	4.7		4.8	
1835–39	5.4	9.6	5.8		4.0	
1840–44	4.9	8.7	5.4	2.8	3.4	0.9
1845–49	4.9	6.5	5.7	2.0	3.9	0.9
1850–54	4.6	6.2	5.5	1.8	3.7	0.8
1855–59	4.0	6.5	6.6	1.1	3.9	1.2

(1) = Antwerp; (2) = Bruges; (3) = Brussels; (4) = Courtrai; (5) = Leuven; (6) = Lokeren

Sources: See Table 3.

herring (Vandenbroeke 1973, p. 137). Approximately 4 kg of fish were eaten in Mechelen between 1830 and 1850: 2.5 kg dried fish, 0.25 kg salted fish and 1.5 kg fresh fish.<sup>21</sup>

The consumption of fish decreased in practically all the cities under study. Fish consumption in Antwerp and Courtrai fell by half. A less pronounced downturn occurred in Bruges and in Leuven. There are indications of a similar shrinking of fish consumption in Mechelen. *Per capita* consumption of fish decreased between 1800 and 1813 from approximately 3.5 kg to 2 kg. In Lokeren, however, there was a slight increase; while fish consumption in Brussels began to show a substantial increase. Where hardly 5 kg of fish were eaten in the capital around 1810, fish consumption had risen to 6–7 kg by the late 1850s.

Initially, the largest quantities of (sea) fish were eaten in Bruges and in Antwerp. This is, of course, no great surprise, bearing in mind their geographical position and the presence of a local fishing fleet. The high levels of fish consumption in Bruges, which would exceed 9 kg in some years, went some way towards compensating the very low meat consumption. Fish consumption in the capital began to rise more significantly after 1840, which is probably to be explained by the construction of the Brussels–Ostend railway line towards the end of the 1830s (Cloquet 1842, pp. 324–6). The expansion of the railway network fostered swift inland consignments of

<sup>21</sup> City Archives, Mechelen; Modern Archives, nos. 2923–2932.

fresh fish. This resulted in reduced supplies in the coastal area itself, and what remained was also of poorer quality. The City Council of Bruges noted in 1845, and not without reason, '*de beste visch word verzonden per ijzerweg ten allen kante, waer de zelve meer weerde heeft dan te Brugge*' ('the best fish are sent by rail hither and yon, where they are better value than we have in Bruges') (De Vos 1984, p. 117).

Hardly any information is available regarding the consumption of freshwater fish, caught in rivers, canals and ponds. This category was taxed only in Leuven and, sad to relate, by value. If we assume that the price of freshwater fish evolved in the same way as that for saltwater fish (cod and stockfish), we then have reason to believe that consumption increased between 1828 and 1859. Having said this, the lack of data is such that little can be said with any certainty as to the share of freshwater fish in total fish consumption. Contemporary authors insist on its minor importance: professional fisheries and coarse angling on the inland waterways had declined considerably during the eighteenth century.<sup>22</sup> The development of a government-financed offshore fishing fleet, the creation of the necessary infrastructure (wharfside fish markets, railways, cold stores) and the increasing pollution of the inland waterways appear to be the most convincing explanations for this trend. That and the overfishing, which even led to the final dying-out of a considerable number of species from the end of the nineteenth century (Materné 1988, p. 162; Van Neer and Ervynck 1993, pp. 36–7).

### 2.3. Consumption of beverages: beer, wine and gin

The excise duty registers contain ample information on the production and consumption of beer, wine and gin. Beer had been the no. 1 national beverage for centuries. The poor quality of the drinking water and the salty, drab taste of the food pushed beer consumption to all-time highs. Beer was also a cheap source of calories. The evolution of beer consumption over the period 1800–1859 is set out in Table 6. One first observation is (again) the sizeable difference between cities in terms of absolute consumption levels. Far greater quantities of beer were consumed in the towns and cities of Brabant than elsewhere in Flanders. During the opening decades of the nineteenth century, the people of Antwerp, Brussels, Leuven and Mechelen drank on average at least 300 litres of beer per year. Average *per capita* consumption in the capital even rose to a staggering 400 litres. The inhabitants of Ghent and Bruges consumed only a half or a third as much. These large regional differences had already existed since the late Middle Ages. Aerts seeks to explain low beer consumption in Flanders by high imports of

<sup>22</sup> According to Ducpétiaux and Cloquet, the Belgians almost exclusively ate sea fish, especially cod and herring. Ducpétiaux (1850, p. 253); Cloquet (1842, p. 326).

Table 6. *Average annual per capita beer consumption, 1800–59 (litres).*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1800–04			303					382
1805–09	303	129	373	213			225	
1810–14	306	114	342	237			176	343
1815–19	213	96	333	207			169	
1820–24	258	110	369	126			228	
1825–29	243	95	388	115	192	330	170	377
1830–34	177	69	241	143	179	342	176	356
1835–39	163	80	305	141	167	368	157	370
1840–44	149	80	278	120	133	320	129	324
1845–49	137	65	224	95	105	287	58	222
1850–54	133	64	207	94	114	270	90	177
1855–59	128	74	225	88	119	267	102	

(1) = Antwerp; (2) = Bruges; (3) = Brussels; (4) = Ghent; (5) = Courtrai; (6) = Leuven; (7) = Lokeren; (8) = Mechelen

Sources: See Table 3.

French wine and Dutch quality beer (Aerts, 1998, p. 55). The quality of the water probably also entered into the equation. Beer was an alternative for the contaminated water in towns with a high population density and large-scale industrial establishments. The consumption data given in Table 6 must in any case, be interpreted as minimum values. Indeed, the excise registers took little or no account of '*cleyen bier*'. This low-quality 'small beer', brewed from used ingredients, was loved mainly by the lower strata of the population.

While there were considerable differences between cities, the general trend remained the same: beer consumption fell perceptibly during the first half of the nineteenth century. *Per capita* consumption was halved in Antwerp, Ghent, Lokeren and Bruges; in Brussels it was reduced by over one third. There was even a short-term but significant reduction in Leuven and Courtrai. Beer consumption decreased by 20 per cent and 40 per cent respectively between 1825 and 1859.

In just the same way as beer consumption, wine consumption also displayed great local differences (Table 7). Around 1800, the inhabitants of Brussels would drink some 12 litres of wine, while the people of Lokeren would not drink one litre. These figures surely refute Aerts' (1998) hypothesis that more wine was drunk in Flanders than in Brabant during the nineteenth century. More wine was consumed in Antwerp, Brussels and Leuven than in the towns and cities of East and West Flanders. Everywhere, except in Lokeren, wine consumption follows a visible downward gradient between

Table 7. *Average annual per capita wine consumption, 1800–59 (litres).*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1800–04			12.4					7.8
1805–09	10.4	11.0	9.6	9.0			0.7	
1810–14	11.1	9.6	9.1	7.4			0.8	4.7
1815–19	8.5	6.5	12.5	5.9	5.3		0.5	
1820–24	7.4	5.6	10.4	4.9	5.0		0.5	
1825–29	6.3	2.4	10.6	4.8	5.0	5.1	1.0	3.2
1830–34	3.5	3.5	7.7	2.7		5.1		4.3
1835–39	4.8	3.9	6.1	4.0	5.6	3.8	1.1	6.1
1840–44	5.4	3.9	7.6	3.6	4.8	4.5	0.9	5.2
1845–49	6.0	3.5	7.7	3.8	3.7	4.9	0.8	4.3
1850–54	5.9	3.7	7.8	3.9	3.8	5.0	1.4	4.2
1855–59	5.0	3.1	7.2	4.0	5.0	4.3	1.3	

(1) = Antwerp; (2) = Bruges; (3) = Brussels; (4) = Ghent; (5) = Courtrai;  
(6) = Leuven; (7) = Lokeren; (8) = Mechelen

Sources: See Table 3.

1800 and 1860.<sup>23</sup> Consumption fell in Antwerp, Ghent, Mechelen and Brussels by roughly half. The sharpest downturn was in Bruges, where wine consumption fell by a good 7 litres (from 10 or 11 litres to barely 3 litres), or a 72 per cent decrease.<sup>24</sup>

It was not possible to calculate the gin consumption figures for all towns. Calculation first requires the solution of a number of problems inherent in the source material. The excise registers do not always keep to clear, readily identifiable categories. Gin, potable spirits, rum, arrack and other distilled beverages (often subdivided according to alcoholic strength) are sometimes taxed, sometimes not. In addition, the available information for most towns concerns only the total gin production in the city. Only rarely do they state explicitly the quantity of gin intended for export. However, a number of sporadic indications regarding exports do allow a rough estimate of consumption in Mechelen and in Lokeren. It should be obvious that the results for these towns – as for Antwerp and Ghent – are of a more approximate nature. The numerical data for Brussels, Leuven, Courtrai and Bruges are taken from the publication by Stevens, and are necessarily limited to the years 1825–45.

<sup>23</sup> Compared with wine consumption in the 15th and 16th centuries, consumption after 1800 was minimal. Around 1500, *per capita* consumption figures of 20 to 30 litres for Flanders, Brabant and Hainault were not exceptional. Vandembroeke (1975, pp. 392–5).

<sup>24</sup> Stevens explained this sharp fall by reference to the crisis in the linen industry. Stevens (1847, p. 388).

Table 8. *Average annual per capita gin consumption, 1800–59 (litres).*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1800–04								3.2
1805–09							2.1	
1810–14							2.1	5.3
1815–19	9.1						4.2	
1820–24	7.6						5.0	
1825–29	8.6	8.2	7.4				5.1	
1830–34	9.6			14.0				3.3
1835–39	12.5	8.0	13.0	19.6	2.6	19.2	3.6	2.9
1840–44	10.7	7.6	11.3	14.7	1.0	12.5	3.1	2.0
1845–49	6.8	6.4	10.5	11.2	1.6	8.8	1.9	1.7
1850–54	4.7			10.0			1.6	
1855–59	6.3			8.9			2.0	

(1) = Antwerp; (2) = Bruges; (3) = Brussels; (4) = Ghent; (5) = Courtrai;  
 (6) = Leuven; (7) = Lokeren; (8) = Mechelen

Sources: See Table 3; Stevens (1847, pp. 418–33).

In exactly the same manner as beer and wine consumption, there was a sharp decline in the consumption of gin, a typical working class drink, during the first half of the nineteenth century (Table 8). In Antwerp and in Ghent, where gin was drunk in large quantities, and in Lokeren and in Mechelen, where the *per capita* consumption was only a few litres, the decline set in with the coming of the 1830s in particular. The scant information on other towns and cities confirms this trend. The crisis years 1840–50 forced the urban working classes to curb their spending on gin (Scholliers 1996, p. 151).

On the whole, alcohol consumption fell sharply in the towns in question between 1800 and 1860, which corresponds with the account in the existing literature (Vandenbroeke 1975, p. 55). This decreased alcohol consumption can partially be ascribed to the growing popularity of coffee, chicory and, to a lesser extent, tea. Vandenbroeke put the *per capita* coffee consumption by the end of the *ancien régime* at 0.5 kg (Vandenbroeke 1975a, p. 569; Scholliers 1996, pp. 150–1). The average *per capita* coffee consumption continued to rise in Belgium between 1830 and 1860, from 1.1 to 3.9 kg. Coffee consumption was to stabilise during the following decades at around 4 kg. But not everyone could afford a cup of real coffee. The less affluent mixed coffee, if they drank it at all, with the much cheaper chicory. The consumption of chicory grew between 1830 and 1860 from barely 1 to about 3 kg per person (Segers and Dejongh 2001). Such little information as we have would suggest that the drinking of coffee was originally more of an

urban phenomenon. Coffee consumption in Brussels over the period 1800–1804 averaged out at 17.9 kg per person, though this figure appears greatly exaggerated.<sup>25</sup> We may further assume that periods of crisis saw the urban consumer go back to very low-quality beer and gin (cf. *'cleyen bier'*) with little nutritional value. Unfortunately, it was precisely these cheaper categories that for the most part eluded the eyes of official statisticians.

### 3. Diminishing living standards and growing inequality?

The previous sections showed clearly that major parts of the popular diet experienced a sharp decline in the eight cities in question between 1800 and 1860. By the middle of the nineteenth century, the average city-dweller was consuming less meat, fish, beer, wine and gin than at the start of the century. Table 9 illustrates the decline in food consumption expressed in calories.<sup>26</sup>

Table 9. *Average per capita consumption of meat, fish and beverages, 1815–54.*

Kcal, per day								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1815–19	690	390	990	760	500	910	370	850
1850–54	490	300	640	500	390	660	270	500
Index, 1815–19=100								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1815–19	100	100	100	100	100	100	100	100
1850–54	72	78	65	65	79	72	72	59

(1) = Antwerp; (2) = Bruges; (3) = Brussels; (4) = Ghent; (5) = Courtrai;  
(6) = Leuven; (7) = Lokeren; (8) = Mechelen

Sources: Average *per capita* consumption based on Tables 3, 7, 8, 9, 10 and own database; calorific intake on *Belgische voedingsmiddelen tabel* (1992).

<sup>25</sup> City Archives, Brussels, Finances, Octrois, no. XXVIII.

<sup>26</sup> Since information on all food categories was not available for all cities, a number of estimates had to be made. Fish consumption in Mechelen and in Ghent during the two pivotal periods were recalculated on the basis of the average growth in other cities and the average consumption figures given in section 2.2. The same method was applied to extrapolate the data in connection with gin consumption. Much has already been published concerning the problems of determining the calorific value of food products in the past. It is incorrect to calculate the calorific value of nineteenth-century food products by retrojecting data for their modern namesakes. However, in the absence of contemporary calorie values, the historian can do no more than make an educated guess. See, for instance: Aymard (1975, pp. 431–2).

The calorie intake from the above-mentioned product groups fell by at least one quarter between 1815–19 and 1850–54; Mechelen even experienced a decrease of approximately 40 per cent. The sharp reduction of calorie intake is spectacular, and may well give rise to questions as to the reliability of the source material, but it was certainly not exceptional. In Amsterdam, the consumption of meat and beverages fell by approximately one quarter during the same period (Knotter and Muskee 1986, p. 158).

The considerable differences between the cities under study loom into full view once again: with 900 to 1,000 calories, the consumption levels in Brussels and in Leuven at the start of the century were more than twice as high as those for Bruges and Lokeren (approximately 380 calories). A few decades later, this relation had hardly changed (approximately 650 calories as against 300). Given that Table 9 explains only part of the popular diet, no definite pronouncements may be made on the evolution of total food consumption. Bread grain (mainly wheat and rye) and, more especially, potatoes were, after all, the main elements of the average nineteenth-century menu. An increasing consumption of these staple foods, complemented by dairy products (milk, eggs and cheese), could still compensate the above-mentioned calorie loss. However, this is most unlikely. *Per capita* consumption of butter decreased in Leuven between 1838 and 1859 from 17 to 13 kg. The average *per capita* consumption of cheese declined slightly from 650 grams in 1847 to 600 grams in 1859. National data on the average *per capita* consumption support this trend. *Per capita* consumption of butter, milk, buttermilk and cheese declined noticeably between the end of the eighteenth century and the years 1855–1859: butter from 10 to 8 kg, milk from 30 to 20 litres, buttermilk from 150 to 110 litres and cheese from 350 to nearly 200 grams (Vandenbroeke 1975, p. 593; Segers and Dejongh 2001).

Data concerning urban consumption of potatoes and bread grain (the primary food products), is very scarce. Nonetheless, they confirm the general decrease in food consumption and, thus, the diminishing living standard (see Table 10). Consumption of bread grain in Antwerp fell from approximately 190 litres around 1810 to about 155 litres per person *per annum* by the late 1850s (Lis and Soly 1977, pp. 467–8). Vandenbroeke also alleged a decreasing grain consumption for Ghent, Bruges, Brussels and Lier in comparison with the eighteenth century, although he might have underpinned his conclusion in a rather more satisfactory manner (Vandenbroeke 1973, pp. 125–7). A more detailed examination is quite possible for Mechelen. The excise statistics provide an insight into the consumption of ready-baked bread and bread grain in the city between 1828 and 1850. *Per capita* bread grain consumption fell abruptly from 134 litres in 1828, passing 106 litres in 1840, to a mere 100 litres in 1850 (or a drop of almost 25 per cent). The growing consumption of baked bread – from 2.5 kg per person *per annum* in the early 1830s to 4.5 kg by the late 1840s –

Table 10. *Average annual per capita grain consumption and share of wheat, 1800–59 (litres, %).*

	Antwerp		Mechelen		Ghent
	(1)	(2)	(1)	(2)	(3)
1810	190				
1821	100				
1825–29	160	65	134	60	
1830–34	159	69	135	67	116
1835–39	158	77	106	68	122
1840–44	156	74	109	77	117
1845–49	168	81	106	78	122
1850–54	158	86	102	79	123
1855–59	154	84			121

(1) = total grain consumption in litres; (2) = share wheat consumption (%);  
 (3) = wheat consumption in litres

Sources: Lis and Soly (1977, pp. 467, 471; Vandenbroeke (1973, p. 117); City Archives Mechelen, Modern Archief, nos 2923–32.

could certainly not compensate for the sharp decrease in bread grain consumption.<sup>27</sup>

As the consumption of grain diminished, the potato was becoming increasingly popular practically everywhere. Countless notes in government and public health reports and agricultural studies bear this out. The Belgian agricultural production figures speak volumes. In 1812, the Belgian population could count on a *per capita* potato production of 116 kg per year. In 1846, the figure had gone up to 192 kg (Goossens 1992, pp. 167–8). However, it is still difficult to advance exact quantities regarding urban district consumption. It was deemed fit, out of social considerations, not to subject the production and consumption of this crop to excise duty. Estimated consumption in Antwerp between 1820–1829 and 1850–1859 grew from 600 grams to 700 grams per day, but that was not enough to keep the total calorie intake up to an acceptable level. Various studies appear to indicate that, at most, the increasing consumption of potatoes made up for the calorie loss resulting from the decreasing consumption of grain.<sup>28</sup>

<sup>27</sup> City Archives, Mechelen; Modern Archives, nos. 2923–2932.

<sup>28</sup> Lis and Soly (1977, pp. 472–5). Vandenbroeke (1971). The calorie-share of the potato in the menu of the Brussels beggars' home Terkameren rose from 31 per cent to 55 per cent between 1811 and 1850, while that of bread grain fell back from 54 per cent to 42 per cent. Scholliers (1993b, p. 23). The calorie-share of potatoes rose from 12 per cent to 20 per cent between 1812 and 1846 at national level, while the importance of bread grains slipped from 58 per cent to 51 per cent. Bekaert (1991, p. 635).

There are sufficient elements that point towards a radical polarisation of the consumption patterns of the Belgian population. This hypothesis has been developed with particular reference to Antwerp. The growing consumption of wheat (+ 20 per cent) and the falling consumption of rye (– 60 per cent) during the years 1827–59 induced Lis and Soly to conclude that ‘in the first half of the nineteenth century, not only a process of impoverishment but also of polarization was taking place’. Not only was dearer grain consumed, the more expensive beer brewed outside the city was also more in demand, its share rising from 25 per cent to approximately 75 per cent. Vandembroeke reached the same conclusions. In Ghent, not only more wheat was being eaten (+ 25 per cent), but also the share of that type of grain in total deliveries to the town markets increased (if only very slightly) from some 68 per cent around 1810 to 72 per cent around 1860. In Brussels, the production of wheat underwent a much greater expansion during the same period: from approximately 80 per cent to plus/minus 95 per cent (Vandembroeke 1972, p. 99; Vandembroeke 1973, pp. 140–50; Lis and Soly 1977, p. 480). A similar shift also occurred in Mechelen. The importance of wheat in total bread grain consumption increased from 60 per cent during the late 1820s to almost 80 per cent two decades later. The weight of wheat bread in total bread production also increased: from a mere 10 per cent to approximately 40 per cent.<sup>29</sup> The above findings correspond with the general development of Belgian grain production between 1812 and 1846. While the production of rye rose by barely 17 per cent, the more expensive wheat crop increased by no less than 63 per cent. Farmers apparently saw the way the wind was blowing and anticipated the socioeconomic shifts and the growing (urban ?) demand for better-quality bread grain (Goossens 1992, p. 146).

The hypothesis of a growing gap between rich and poor can be further examined via an analysis of the consumption of certain characteristic luxury products. Again, the excise duty registers provide an interesting perspective. Although (comparable) information is not available for every city, a clear trend can still be discerned. In Leuven, supplies of salted salmon rose from 7,000 barrels in the late 1820s, passing 12,000 barrels in the early 1840s, to reach approximately 30,000 barrels during the 1850s.<sup>30</sup> The consumption of oysters also soared. Brussels took delivery of approximately 1.7 million oysters during the late 1840s. Ten years later, imports had already reached nearly 3.2 million. Deliveries to Bruges between 1835 and 1859 remained

<sup>29</sup> City Archives, Mechelen; Modern Archives, nos. 2923–2932.

<sup>30</sup> City Archives, Leuven; Modern Archives, no. 10631. These figures must be read in the light of the fact that a barrel does not equal one thousand kg. However, it is not clear how many kg salmon make up one barrel. For comparison: a barrel of cod in nineteenth-century Antwerp held approximately 120 kg.

stable at around 392,000 units (De Vos 1984, p. 123). We can also examine the consumption of liqueurs in certain cities. In Bruges, total imports tripled (from ten to 30 hectolitres) between the late 1820s and the late 1850s; in Courtrai, imports doubled over the same period of time. A slight fallback occurred in Leuven between 1838 and 1859 (from approximately 11 to around 9 hectolitres).<sup>31</sup> Consumption data also exist for Leuven and Brussels in connection with certain more expensive varieties of meat. Imports to the capital of game (fallow deer, wild boar and roe deer) and poultry (chicken, turkey, pheasant and cock) rose considerably between 1840 and 1859.<sup>32</sup> In Leuven, imports of fresh game and pâté also increased appreciably.<sup>33</sup>

There are also a number of other indicators suggesting a widening gap. The share of wine imported into Bruges in bottles, which must include the better and more expensive qualities, had risen from barely 3 per cent around 1820–25 to nearly 15 per cent during the 1850s. A similar development was noted in Courtrai: the share of bottled wines grew from 7 per cent in 1816 to more than 20 per cent during the 1850s. The weight of the dear beer (because) brewed outside the city likewise increased considerably – exactly as it had done in Antwerp – from approximately 12 per cent during the 1815–35 period to nearly 30 per cent by the late 1850s.<sup>34</sup>

#### **4. The shrinking diet: a Malthusian story ?**

Between 1800 and 1860, the average food basket in all studied cities grew steadily more bare, not only as regards quantity, but also as regards quality. What were the causes of this negative development? Lis and Soly concluded in their study of Antwerp: ‘The absolute pauperization of large sectors of the Belgian population (...) was a general feature, (...) the explanation must be sought in the definite breakthrough of the capitalist mode of production, causing widespread social dislocation, of which the repercussions were felt both in the country and in the towns, irrespective of their specific economic function’ (Lis and Soly 1977, p. 481). But are they not overestimating the

<sup>31</sup> City Archives, Leuven; Modern Archives; City Archives, Courtrai; Modern Archives, nos. 4254, 6663 and 6665; De Vos (1984, p. 206).

<sup>32</sup> The number of imported game rose from 155 units in 1838 to 329 units in 1859. The other categories rose between 1845 and 1859 as follows: pheasant, from 17,600 to 25,000 units; cocks, from 175,000 to 440,000 units; other game fowls and poultry, from 390,000 to 460,000 units.

<sup>33</sup> Imports of game rose from 18 units in 1847 to 26 units in 1859; imports of game in cut form grew from barely 10 kg to 133 kg. Imports of pâté also increased noticeably during the same period: from 107 to 237 kg. City Archives, Leuven. Modern Archives, no. 10631.

<sup>34</sup> City Archives, Courtrai; Modern Archives, nos. 4254, 6663 and 6665; De Vos (1984, p. 148).

role of industrialisation, which, certainly in the beginning of the nineteenth century, was a gradual and spatially very limited process? The compiled consumption data appear to show that food consumption had decreased in towns with significant industrialisation (Ghent and, to some extent, Mechelen) and in towns where a process of 'de-industrialisation' and transformation had run its course (Antwerp, Bruges and Brussels). The same evolution was also in evidence in smaller localities, such as Leuven, Lokeren and Courtrai, where the trades were still dominant. The declining food consumption and standard of living must therefore be ascribed to three major explanatory factors: (1) the exponential growth of the Belgian population since 1750; (2) the crisis in the linen industry; and (3) the spectacular increase of food prices caused by the inability of Belgian agriculture to keep food production up to the required levels, plus ineffectual government intervention.

#### *4.1. A demographic explosion*

From the mid-eighteenth century, the population living in the territory that was later to become Belgium started to grow as it had never grown before. The main reason for this development was a decline in mortality, which was the result of reduced fatality from infections, and to a lesser extent better nourishment and improving medical knowledge, public health and personal hygiene (Tranter 1985, p. 87). The number of inhabitants rose from 2,279,200 in 1750 to 4,650,774 in 1860, that is to say, it doubled in a little over one hundred years. Compared with the past, that was impressive by any standards. During the previous three centuries (1450–1750), the population had increased by only 50 per cent. The most significant acceleration of growth occurred during the first half of the nineteenth century. The annual growth percentages evolved as follows: 0.37 per cent in the period 1700–1750; 0.49 per cent in 1750–1810 and 0.92 per cent in 1810–1850. There was no deceleration until after the mid-nineteenth century, with 0.84 per cent between 1850 and 1900.<sup>35</sup> The population growth between 1750 and 1800 manifested itself in rural districts in particular. The degree of urbanisation in Belgium receded from 21.8 to 20.5 per cent between 1750 and 1806. However, by turn of the century the towns – in Flanders at least – began to grow in importance again. Between 1812 and 1846, the urbanisation process spread across the provinces of Antwerp, West Flanders, East Flanders and Limburg. Only in Brabant were the towns demographically weaker (Goossens 1992, p. 192).

The unprecedented population explosion put rural communities under

<sup>35</sup> The population data up to 1830 are based on Goossens (1992, pp. 366–8) and Dejongh (1999b); population data after 1830 based on the population reconstruction in Duchêne and Segers (2000).

pressure. The lack of sufficient cultivable ground led to a miniaturisation and splitting up of the available land in Flanders, more specifically in South and Inner Flanders and in Flemish Brabant. Around the turn of the century, ‘dwarf’ farms represented 60 to 70 per cent of the total number of agricultural enterprises, but they cultivated barely 10 to 20 per cent of the total agricultural acreage. The growing demand for agricultural land also drove rent and sales prices of land to new heights. The return on these smallholdings was insufficient to provide a living. Small farmers and land labourers had no option but to look for additional income from outwork in the cottage industry (spinning and weaving). By the end of the eighteenth century, a quarter of the Flemish rural population earned a supplementary income in the linen industry (Verhaegen 1961, pp. 93–4; Vandembroeke 1981, p. 138; de Kezel 1988, pp. 89–90).

#### *4.2. The rural linen industry under pressure*

With the turn of the century, a variety of factors made it increasingly difficult to top up the family income through outwork. Competition from mechanically and more cheaply produced goods, protectionist trade policies and changes in fashion all led to a fundamental crisis in the linen industry. To keep products competitive, substantial pay cuts were made. Between 1750 and 1830–40, income in the traditional and proto-industrial linen industry had fallen by roughly half.

The combination of increasing land prices and falling wages caused a situation whereby part of the population left the countryside and moved to the towns, where the public and private social assistance was usually better developed. The industrialising areas in Wallonia were unable to use the large surplus of labour. The urban population increased considerably during the period 1800–60 (Table 1). In Brussels, the population increased by approximately 140 per cent, the number of inhabitants doubled in Antwerp and Ghent, while Mechelen and Leuven experienced a population explosion of 78 and 71 per cent respectively. Other towns grew less rapidly: Lokeren + 43 per cent and Bruges + 38 per cent. The growth of the urban population had two major upshots. The abundant supply of untrained workers depressed daily wages and, consequently, average family incomes in the towns. Even skilled craftsmen and artisans had to tighten their belts. Between 1820 and 1846 for example, the daily wages of workers in the clothing and food industries and leather and wood processors fell by 10 per cent to 15 per cent (Scholliers 1993b, pp. 13–14). In addition, there was great pressure on the housing market. Rents in Antwerp increased by a factor of 3.5 and doubled in Brussels. Rent levels in Ghent, Courtrai and Leuven increased by one half. Only in Bruges did prices remain more or less unchanged (Segers 1999, pp. 220–1).

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*4.3. Non-dynamic agriculture and growing retail prices*

Purchasing power in rural areas and in urban districts was not only undermined by increasing rent and sales prices of land, and falling income from employment. Other forces were also at work. The retail prices of basic foodstuffs took a sudden upswing, which had an immediate impact on the composition of the food basket. Belgian agriculture, which had displayed a 'traditional' character up to 1850, was not in a position to satisfy the growing demand for food. The available land was limited and techniques remained more or less unchanged. Between 1812 and 1846 Belgian agriculture grew by an average of 0.85 per cent per annum. This cannot be considered as disappointing, but the increase in agricultural output lagged significantly behind the annual population growth of 0.99 per cent over the same period. Imports of food products remained very limited up to around 1840. The result was a mounting Malthusian tension between supply and demand (Goossens 1992, p. 313; Scholliers 1992b, pp. 153–4; Dejongh 1999a, p. 28).

The price developments of basic foodstuffs naturally had far-reaching repercussions for the (urban) consumer. Only when the prices of bread (rye and wheat) and potatoes were low, could more butter, cheese, meat and other extras (also non-food items) be purchased. A spectacular increase in the market prices of the primary food products took place between the end of the eighteenth century and 1860. On the town markets the price of the bread grains wheat, rye and spelt rose visibly (+ 135 per cent) between 1780 and 1817, with peaks in 1801–05 and 1816–17. Potatoes doubled in price during the same period (+ 113 per cent). The years 1817 to 1825 brought a short-lived end to the price increases. Overproduction caused the price of potatoes and grain to fall by approximately 50 per cent. However, prices began to rise again from 1825 onwards. Demand for food was now well in excess of supply. The price of bread grain rose during the period 1825–60 by around 70 per cent. Potatoes doubled in price during the same period. Peaks came in the crisis years 1845–47 and 1853–55, when the grain and potato harvests failed due to blight and bad weather conditions. Other foodstuffs also became much dearer. The price of beef, the most common meat in the towns, continued to rise after the turn of the century until 1820 (+ 25 per cent), disregarding a slight interruption around 1810. Meat prices fell by about one third during the agricultural crisis of 1817–25, but this was followed by a more or less uninterrupted upward trend. The average price of meat had increased by approximately 40 per cent around 1860. The price of butter, cheese and eggs followed a similar course (Avondts and Scholliers 1977, pp. 2–29; Gadisseur 1990, pp. 816–29).

The Belgian government initially undertook few measures to contain the rapidly increasing food prices. The interests of the large landowners shaped the general agricultural policy – after all, high prices meant high profit mar-

gins. Bread riots and growing criminality were met with repression by the local authorities and police. The government did not set about rethinking its policy until the failed harvests of the 1840s. It prohibited exports of potatoes and reduced import duties on grain, potatoes and other food products. The government also tried to increase employment by launching large-scale public works. But these short-term initiatives had little impact, and were mainly designed to maintain public tranquillity. There was no radical change in the political landscape until August 1847, when a homogeneous liberal government came to power. They gradually dismantled the import duties on (basic) foodstuffs. The average tax rate was lowered from 5.1 per cent between 1841 and 1850 to 4 per cent in the 1850s and even to 2.4 per cent in the 1860s (Gadisseur 1980, p. 119). In so doing, social order could be maintained and the labour costs for Belgian employers contained. These low wage costs became one of the country's trump cards in industrial competition. For the same reason the *octrois* tax was abolished in 1860 (Delfosse 1983; 1990, pp. 71–95; Scholliers 1992b, pp. 162–5; Segers 2000, pp. 359–60).

A clearer idea of the price dynamics between the primary foodstuffs is obtained by examining the relative price development of arable crops, meat and dairy products. Between 1750 and 1850, the prices of arable crops (grain and potatoes) rose significant faster than the prices for animal husbandry products. That is not surprising. Vegetable products were the cheapest foodstuffs for the population, and the demand therefore was price-inelastic. In periods of rapid population growth, the prices of these foodstuffs therefore rose faster than the price of meat (Overton 1996, p. 68). Belgian farmers saw this shift of demand coming. The share of the arable sector in the gross output of Belgian agriculture rose from 59 per cent in 1760 to 68 per cent in 1812 and 1846. The real output of arable farming rose, on an annual basis twice as fast as the output of cattle breeding (0.74 per cent *versus* 0.30 per cent). In the cultivation of cereals, wheat gained most ground. The production of wheat rose during the years 1760–1846 by 116 per cent, rye and spelt by respectively 25 and 2 per cent (Dejongh 1999, pp. 221–3 and 273–5).

The modal urban consumer felt obliged to cut spending back severely on non-primary products such as meat, fish, beer and wine. The increase of food, rent and land prices combined with a reduction in the family budget was disastrous for the purchasing power of the urban consumer. The decline in the standard of living and the quality of life of the Flemish population found expression in other areas too. A growing part of the population became dependent on social assistance. The numbers of the poor and needy in the urban population increased from approximately 10 per cent at the beginning of the century to roughly 25 per cent around 1845–50. The number of parish welfare cases in rural areas in the mid-nineteenth century rose to nearly 30 per cent (Vandenbroeke 1985, pp. 266–8). Average heights

of conscripts living in East Flanders declined between 1805–6 and 1846 from 1m 66 to 1m 62. This fall was most significant for day labourers and textile workers. The share of refused, undersized conscripts grew in the same period from 5 per cent to 22 per cent (Roosemont 1987–88, pp. 409, 416–18). Vandebroek studied the height of conscripts living in Zwevegem, a rural village in West Flanders. He found out that the average height decreased from 1m 64 in the years 1820–21 to 1m 58 and 1m 60 in respectively 1840–41 and 1850–51. This study also suggested that the decline in average height was more significant for day labourers, textile workers and domestic servants (Vandebroek 1981, pp. 260–64).

However, not everyone saw his quality of life go downhill in that period. The affluent urban middle classes, which had been buying huge country estates since the eighteenth century, profited to the maximum from population pressure by splitting up the land they owned into small and vulnerable parts. The romantic dream of a plot of land of one's own and the stay-at-home, hearth-hugging nature of the Flemings ensured steadily increasing land prices.<sup>36</sup> Also, a small group of industrialists and financiers amassed fortunes from industrialisation. From the first half of the century, the cities began to expand to become lively tertiary growth poles, with an extensive banking and insurance network, a constantly expanding administration and a diversified range of services. The purchasing power of the highest income groups (bourgeoisie, clergy, upper middle classes) was practically unaffected, if not growing rapidly. The compiled numerical data concerning imports of luxury products illustrate as much. The social middle groups (free professions, civil servants, certain craftsmen) also stood to gain from these developments. Rural areas experienced a similar dualisation of society. The increase in agricultural prices meant that independent farmers who owned their own land, and who could sell the bulk of their production on the (urban) market, enjoyed boom conditions. The increased purchasing power of these farmers, the new bourgeoisie and the urban craftsmen engaged in the production of luxury products undoubtedly meant a powerful stimulus for the incipient process of industrialisation. The demand for (luxury) goods and services from the urban sectors, partially also driven by a demonstration effect of the aristocratic life-style, consequently reached new highs (de Vries 1994; Van der Wee 1995).

### Conclusion

This article presents the results of an extensive study of the evolution of food consumption in the major Flemish cities during the initial phase of

<sup>36</sup> A substantial number of Flemish poor looked for employment as factory workers in the Walloon industry or as land labourers in France. They did not migrate definitively, but chose to commute. Scholliers (1992b, p. 160).

industrialisation. The new data, supplemented by the published tables for Antwerp and Ghent, form a broad basis from which to examine the impact of industrialisation in Flanders between 1800 and 1860. Did food consumption decline significantly during this period, and was there a growing social inequality as Lis and Soly (1977) suppose?

The eight cities studied, with their different population size and different socioeconomic profile, all experienced a sudden decrease in the consumption of meat, fish, beer, wine and gin. Converted into calories, the consumption of this select group of foodstuffs fell by approximately 20 per cent in Bruges and Courtrai, around 30 per cent in Antwerp, Leuven and Lokeren, and around 35 to 40 per cent in Brussels, Ghent and Mechelen. Although impoverishment was soon rife in the cities, absolute consumption there remained at a much higher level in the larger cities. Twice as many calories were obtained from meat, fish and alcohol in Brussels and Leuven as in Bruges and Lokeren. Why the absolute consumption level should be higher in the one town than in the other, and why the consumption of individual products should differ so markedly, are questions that fall outside the scope of the present contribution. Micro-research can shed some light in those areas.<sup>37</sup>

The reduction of the above-mentioned range of products and the many indications regarding the consumption of grain and potatoes lead to the conclusion that the range of foodstuffs consumed by the average Flemish town-dweller, whether he lived in a big industrialised city or in a sleepy provincial town, became considerably less varied between 1800 and 1860. A number of indicators further suggest an accelerated widening of the gap between rich and poor in all the cities under study, a process that had already set in during the second half of the eighteenth century. The increase in wheat consumption, combined with the decrease in rye consumption and the growing popularity of the potato is a first sign in this direction. It can also be established that the importation and consumption of various expensive foodstuffs and beverages (from oysters to game and poultry to quality beer) reached new highs.

The process of impoverishment, which manifested itself in all the cities studied, must be explained by a Malthusian tension. The explosive population growth starting around 1750 led to a radical splitting up of the available farming-land and rising rent and sales prices of land. The labour market was flooded with unskilled workers, which resulted in a sharp reduction in wages and family incomes. The increasing demand for food and the inability of Belgian agriculture to meet that need, in combination with the government agricultural policy of the day, caused a sharp increase in the retail prices of foodstuffs and certain industrial products (such as beer and gin). As a result

<sup>37</sup> Stevens (1847, p. 409) mentioned the need for detailed research to explain the evolution in different towns.

of these developments, broad sections of the population lost a large part of their purchasing power, which was reflected in a poorer and more monotonous food consumption and growing social inequality.<sup>38</sup> The Industrial Revolution, which even now gets top billing, functioned in this process as a catalyst that may well have accelerated pre-existing mutations at socio-economic level, but was certainly not, in itself, a decisive factor in the process of impoverishment (Van den Eeckhout and Hannes 1981, pp. 474–5).

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<sup>38</sup> Recent estimates suggest that the real GDP *per capita* of Belgium remained almost static between 1810 and 1850. Horlings and Smits (1997, pp. 85–6).

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