

# DIETS, HUNGER AND LIVING STANDARDS DURING THE BRITISH INDUSTRIAL REVOLUTION\*

What happened to the living standards of ordinary men, women, and children during the British industrial revolution? For most of the twentieth century, this question formed one of the best-known and most lively historical debates of our profession. By the 1950s, the protagonists had divided themselves into ‘optimists’ and ‘pessimists’ and begun to exploit a wide array of historical material in order to develop their arguments.<sup>1</sup> Although an attempt to quantify what happened to real wages lay at the heart of these investigations, all understood the need to grasp the qualitative nature of this transformation. Thus quantification formed just one element of the standard of living debate: social and cultural historical approaches provided an important contribution to the unfolding debate as well.

Yet in the past two decades, this once heterogeneous methodological perspective has narrowed and today’s standard of living debate looks very different. All recent contributions have come from just one of our discipline’s subfields, economic history. Economic historians have turned to an impressively wide variety of measures — real wages, family incomes, ‘well-being’, life expectancy, child mortality, consumption of tea and coffee, calorie availability and nutrition, heights, work intensity, and child labour.<sup>2</sup> But while their points of entry have been numerous and varied, the methodological approach remains fundamentally the same. In each instance, scholars identify one

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<sup>1</sup> A flavour of the interchange between Ashton, Engerman, Gilboy, Hartwell, Hobsbawm and Thompson can be found in Arthur J. Taylor (ed.), *The Standard of Living in Britain in the Industrial Revolution* (London, 1975).

<sup>2</sup> Full references for this large literature are given in nn. 6–12 below.

or more variables which can be quantified, tabulated and evaluated. In the 1960s, E. P. Thompson took aim at the intellectual poverty of quantitative approaches and scoffed at the fact that the industrial revolution had earned the working-class not much more than 'a great many articles in the *Economic History Review*'.<sup>3</sup> But in the past two decades the joke has definitely turned on Thompson. The nebulous thing that Thompson called 'experience' scarcely now figures in discussions of the standard of living.<sup>4</sup> Social, cultural and qualitative attempts to make sense of the human experience of economic modernization have been largely eclipsed by the inexorable march of statistics.

Perhaps more concerning than this narrowing of the methodology of the living standards debate, however, is the straitening of historical argument that has simultaneously occurred. Over the past twenty years, economic history has produced a vast literature looking at various elements of living standards, yet we find much the same conclusion repeated over and again: real wages were largely stagnant, while according to all other measures life actually worsened. This wide agreement concerning a historical question that has traditionally sharply polarized scholars is something worth underscoring. After all, economic history is no more drawn towards consensus than any other field of intellectual enquiry.<sup>5</sup> It is therefore curious that the once fraught question of what happened to working people's living standards no longer divides opinion, that a large and lively literature on the standard of living debate is now characterized by consensus rather than controversy.

In this article, I seek to problematize this newfound consensus. I will demonstrate that the evidence of stagnant living standards sustained across a large range of indicators is far more ambiguous than quantitative historians are prepared to admit. Furthermore, in seeking to interpret all results within a pessimistic framework,

<sup>3</sup> E. P. Thompson, *The Making of the English Working Class* (London, 1963), 351.

<sup>4</sup> See, though, Emma Griffin, *Liberty's Dawn: A People's History of the Industrial Revolution* (New Haven, 2013).

<sup>5</sup> To give one example, the *Economic History Review* published no fewer than seven angry interventions in the space of a few years over one relatively small historical problem: whether or not smallpox caused stunting. See Hans-Joachim Voth and Timothy Leunig, 'Did Smallpox Reduce Height? Stature and the Standard of Living in London, 1770–1873', *Economic History Review*, xlix (1996), and the responses in *Economic History Review*, li (1998); liv (2001); lix (2006).

the possibility of a fundamental split between the experiences of different sections of the population — urban/rural, adult/child, male/female — has not been properly incorporated into our understanding of this historical transition. This article uses evidence on working-class diets, some of it already familiar to historians and some if it entirely new, and introduces a new measure for living standards — hunger — in order to shed new light on the human experience of industrialization.

My aim, however, is not simply to provide a new assessment of the impact of the industrial revolution on working people's standard of living. Rather it is to illustrate the valuable, and too often neglected, interpretations offered by non-statistical historical approaches. It is surely no coincidence that the homogenization of methodology has occurred in tandem with the muting of historical argument. The marginalization of alternative perspectives from social and cultural history has helped to iron out disagreement, and been to the detriment of our understanding. I will show not only that it is possible to incorporate cultural change into our analyses, but also that it is necessary to do so in order to grasp this historical moment in all its complexity.

## I

Since its inception, the standard of living debate has placed real wage estimates at the centre of enquiry, and for all their drawbacks they continue to provide an anchor for our interpretations. The estimates of Charles Feinstein, published in 1998, have proved enormously influential, and provided a lodestar for all subsequent scholars seeking to map this terrain.<sup>6</sup>

<sup>6</sup> Charles H. Feinstein, 'Pessimism Perpetuated: Real Wages and the Standard of Living in Britain During and After the Industrial Revolution', *Journal of Economic History*, lviii (1998). See also further discussion of this article in n. 36 below. For recent citations see, for example, R. C. Allen and J. L. Weisdorf, 'Was there an "Industrious Revolution" Before the Industrial Revolution? An Empirical Exercise for England, c. 1300–1830', *Economic History Review*, lxiv (2011), 722; Joyce Burnette, 'Child Day-Labourers in Agriculture: Evidence from Farm Accounts, 1740–1850', *Economic History Review*, lxv (2012), 1096; Jacob F. Field, 'Domestic Service, Gender, and Wages in Rural England, c. 1700–1860', *Economic History Review*, lxvi (2013), 260; Jane Humphries, 'Childhood and Child Labour in the British Industrial Revolution', *Economic History Review*, lxvi (2013), 400; Ian Gazeley and Sara Horrell, 'Nutrition in the English Agricultural Labourer's Household over the Course of the Long Nineteenth Century', *Economic History Review*, lxvi (2013), 781–2; Robert C. Allen, 'The High Wage Economy and the Industrial Revolution:

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His conclusions were unambiguously pessimistic: ‘For the majority of the working class the historical reality was that they had to endure almost a century of hard toil with little or no advance from a low base before they really began to share in any of the benefits of the economic transformation they had helped to create’.<sup>7</sup> Yet his estimates are not so stagnant as this gloomy assessment might imply. They have real wages in Britain rising by just under 40 per cent between 1780 and 1850.<sup>8</sup> Indeed, Feinstein’s series is just one of a number of recent real wage estimates, all of which report rising wages down to 1850. Gregory Clark has provided two sets of real-wage estimates, one for agricultural labourers and one for building craftsmen. The gains in his series are slightly greater — a 50 per cent rise in the real wages of agricultural labourers and a 70 per cent rise for building craftsmen between the 1800s and the 1850s — an improvement nearly double that reported by Feinstein and sufficient to lead Clark to conclude that the ‘Industrial Revolution was much more favorable to workers’ real earnings than other recent studies have implied’.<sup>9</sup> Given Clark’s more optimistic series and the fact that Feinstein’s pessimistic conclusions were only weakly supported by his own evidence, it is not self-evident why the picture of stagnant wages before 1850 has achieved almost canonical status within the field.

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A Restatement’, *Economic History Review*, lxxviii (2015); Sara Horrell, Jane Humphries and Ken Sneath, ‘Consumption Conundrums Unravelled’, *Economic History Review*, lxxviii (2015), 831, 842; Jane Humphries, ‘The Lure of Aggregates and the Pitfalls of the Patriarchal Perspective: A Critique of the High Wage Economy Interpretation of the British Industrial Revolution’, *Economic History Review*, lxvi (2013); Henry French, ‘An Irrevocable Shift: Detailing the Dynamics of Rural Poverty in Southern England, 1762–1834: A Case Study’, *Economic History Review*, lxxviii (2015).

<sup>7</sup> Feinstein, ‘Pessimism Perpetuated’, 652.

<sup>8</sup> *Ibid.*, 648 (table 5). I have not included his adjustments for unemployment as the assumptions underlying these are questionable.

<sup>9</sup> Gregory Clark, ‘Farm Wages and Living Standards in the Industrial Revolution: England, 1670–1869’, *Economic History Review*, liv (2001), 496 (table 9); Gregory Clark, ‘The Condition of the Working Class in England, 1209–2004’, *Journal of Political Economy*, cxiii, no. 6 (2005), 1308, and see also 1325 (table A2). See also Robert C. Allen’s attempt to adjudicate between the two: Robert C. Allen, ‘Pessimism Preserved: Real Wages in the British Industrial Revolution’, Oxford University Department of Economics working paper, 314 (2007), available at <<https://www.economics.ox.ac.uk/departement-of-economics-discussion-paper-series/pessimism-preserved-real-wages-in-the-british-industrial-revolution>>.

Where real wages once formed the bedrock of the standard of living debate, the past two decades have seen the emergence of a raft of new ways of trying to capture the changing size and structure of the British economy through national accounting techniques, such as measures of GDP per capita, and of calorie availability.<sup>10</sup> These measures have clear relevance for the standard of living debate, yet, as with the wage estimates, they do not result in definitive answers about the nature of the industrializing economy, nor do they provide unambiguous support for the pessimistic interpretation. In fact, the movement of GDP per capita, like real wages, was steadily upwards before, during and after the industrial revolution. Of course, it is possible to have both rising per capita GDP and stagnant living standards if most of the nation's increasing wealth was falling into the hands of the richest few, but we know next to nothing about the distribution of wealth and so have no grounds for discounting the possibility that rising living standards accompanied the rise in per capita GDP. The evidence concerning calorie availability is yet more unclear, as the most recent estimates have reached very different conclusions about both levels and trends.<sup>11</sup> Despite the obvious attractions of employing large-scale statistical series to shed light on working-class living standards, the calculations that we have at present do not speak with a unanimous voice, and still less do they argue for the pessimists' case.

Underpinning the divergences between these series is the fact that the things they seek to understand are complex and difficult to measure, and these difficulties impart a fragility to the final

<sup>10</sup> On GDP per capita, see Gregory Clark, 'The Macroeconomic Aggregates for England, 1209–2008', *Research in Economic History*, xxvii (2010); Stephen Broadberry *et al.*, *British Economic Growth, 1270–1870* (Cambridge, 2015). On calorie availability, see Craig Muldrew, *Food, Energy and the Creation of Industriousness: Work and Material Culture in Agrarian England, 1550–1780* (Cambridge, 2011); Roderick Floud *et al.*, *The Changing Body: Health, Nutrition, and Human Development in the Western World since 1700* (Cambridge, 2011); Morgan Kelly and Cormac Ó Gráda, 'Numerare est Errare: Agricultural Output and Food Supply in England Before and During the Industrial Revolution', *Journal of Economic History*, lxxiii (2013).

<sup>11</sup> In addition to the references for calorie availability given in the previous footnote, see the following attempts to interpret the divergent results: David Meredith and Deborah Oxley, 'Food and Fodder: Feeding England, 1700–1900', *Past and Present*, no. 222 (Feb. 2014); Bernard Harris, Roderick Floud and Sok Chul Hong, 'How Many Calories? Food Availability in England and Wales in the Eighteenth and Nineteenth Centuries', *Research in Economic History*, xxxi (2015), 114.

results. The measurement of real wages, GDP, and calorie availability requires vast amounts of historical data for such intricate things as the cost of renting a cottage, the output of the leather industry, and the size of the potato crop — data that was not, of course, collected in the eighteenth and nineteenth centuries. Such national accounting depends therefore on interpolation or ad hoc adjustments to cover years or sectors lacking reliable estimates, and these adjustments can have a large impact on the overall result. This is why there is always disagreement between the different estimates, and why so much effort is expended on revising the small components that make up quantitative series. While revisions of real wage series and national accounts lead us stepwise towards a better understanding of the size, structure and development of the British economy, they are fraught with internal problems of their own, and cannot simply be taken from the shelf to support this or that interpretation of historical living standards.

Real wages and per capita figures for GDP and calorie availability are by their nature aggregative measures. But is aggregation the right lens through which to study the evolution of living standards? When we look at the large number of studies seeking to elucidate particular aspects of the experience of industrialization, we repeatedly find evidence of large inequalities between regions and occupations and between the sexes. These differences are obscured when findings are aggregated into one national series. Recent studies of consumption, nutrition, heights, mortality, working hours and child labour have all concluded that life was getting worse for workers during the industrial revolution.<sup>12</sup> On closer inspection

<sup>12</sup> On consumption, see Joel Mokyr, 'Is There Still Life in the Pessimist Case? Consumption During the Industrial Revolution, 1790–1850', *Journal of Economic History*, xlviii (1988), 90. On nutrition, see Gazeley and Horrell, 'Nutrition in the English Agricultural Labourer's Household', 25. On heights, see Roderick Floud, Kenneth Wachter and Annabel Gregory, *Height, Health and History: Nutritional Status in the United Kingdom, 1750–1980* (Cambridge, 1990); Stephen Nicholas and Richard H. Steckel, 'Heights and Living Standards of English Workers During the Early Years of Industrialization, 1770–1815', *Journal of Economic History*, li (1991), 944; Paul Johnson and Stephen Nicholas, 'Male and Female Living Standards in England and Wales, 1812–1857: Evidence from Criminal Height Records', *Economic History Review*, xlviii (1995); Stephen Nicholas and Deborah Oxley, 'Living Standards of Women in England and Wales, 1785–1815: New Evidence from Newgate Prison Records', *Economic History Review*, xlix (1996); F. Cinnirella, 'Optimists or Pessimists? A Reconsideration of Nutritional Status in Britain, 1740–1865', *European Review of Economic History*, xii

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the evidence does not appear so clear-cut. Studies of working-hours and child labour show sharply increasing work intensity in London and the industrial heartlands, but say nothing about what happened to those working in agriculture.<sup>13</sup> By contrast, the work on nutrition indicates stagnation in rural areas, but provides no evidence about diets in the industrial heartlands.<sup>14</sup> Pessimistic studies of mortality were all studies of the urban environment, and our most recent demographic study indicates that mortality followed a different trend in rural areas.<sup>15</sup> Likewise, research into heights has consistently demonstrated differences between rural and urban trends.<sup>16</sup> Evidence of regional differences is embedded in almost every analysis of living standards — indeed, one early study of heights data concluded that the divergence between urban and rural areas should ‘focus future research on uncovering the complex pattern of regional living standards’.<sup>17</sup> Yet this has manifestly not happened: not only has subsequent research failed to focus on regional complexities, the evidence for regional diversity has been curiously effaced from our historical

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(2008); Floud *et al.*, *The Changing Body*. On mortality, see Paul Huck, ‘Infant Mortality and the Living Standards of English Workers during the Industrial Revolution’, *Journal of Economic History*, lv (1995); Simon Szreter and Graham Mooney, ‘Urbanization, Mortality, and the Standard of Living Debate: New Estimates of the Expectation of Life at Birth in Nineteenth-Century British Cities’, *Economic History Review*, li (1998), 104 (table 6). On working hours, see Hans-Joachim Voth, ‘The Longest Years: New Estimates of Labor Input in England, 1760–1830’, *Journal of Economic History*, lxi (2001). On child labour, see Jane Humphries, *Childhood and Child Labour in the British Industrial Revolution* (Cambridge, 2010).

<sup>13</sup> Voth, ‘Longest Years’, 1076 (table 7). His data included almost no agricultural workers; just sixty-nine of almost a thousand observations, or 7 per cent, were of farm-workers. The rest came from London and Lancashire. See also Humphries, *Childhood and Child Labour*, 182 (fig. 7.2).

<sup>14</sup> Gazeley and Horrell, ‘Nutrition in the English Agricultural Labourer’s Household’.

<sup>15</sup> Robert Woods, *The Demography of Victorian England and Wales* (Cambridge, 2000), 365 (table 9.3).

<sup>16</sup> Regional differences have been repeatedly noted in the literature. See, for example, Floud, Wachter and Gregory, *Height, Health and History*; Nicholas and Steckel, ‘Heights and Living Standards of English Workers’; Stephen Nicholas and Deborah Oxley, ‘The Living Standards of Women during the Industrial Revolution, 1795–1820’, *Economic History Review*, xlvi (1993); Nicholas and Oxley, ‘Living Standards of Women in England and Wales’; Cinnirella, ‘Optimists or Pessimists?’. Interestingly, however, they are not mentioned in Floud *et al.*’s recent summary of research into heights: *Changing Body*, 138.

<sup>17</sup> Nicholas and Oxley, ‘Living Standards of Women in England and Wales’, 599.

narrative as quantitative results are repeatedly framed by the concept of pessimism rather than difference.

Superimposed upon these regional variations are a series of further specificities, concerning gender and age, which have likewise failed to become part of our understanding of living standards. Real wage data is primarily a measure of money income paid into the hands of adult males; female wages are either slotted into the male wage series in problematic ways, or simply left out altogether.<sup>18</sup> Recent studies of working hours and child labour also omit all data for women and girls. We should know enough about the operation of gender inequalities, however, to realise that the evidence of men's rising male wages cannot be glibly equated with material gains for everybody else. Interpretations of the heights data also betray a misunderstanding of the significance of gender. Predictably enough, male heights were measured more frequently than female heights, and there has been a tendency to assume that the heights data is therefore indicative of male experiences, except in rare instances where data pertaining to women can be obtained.<sup>19</sup> Yet in reality all heights data embodies information about female experiences regardless of whose height was actually being measured. Consider for a moment what (beyond genetics) determines an individual's height: nutrition during the growth years — *in utero*, in early infancy, and during the growth spurt of adolescence — minus the demands made on that nutrition through work and disease. Several elements of this — growth *in utero*, infancy, and childhood — were driven primarily by the mother's access to resources. Foetal growth is influenced by maternal nutrition, not only during pregnancy but before conception as well. The diets of infants and young children were also heavily influenced by their mothers' access to money and food. Indeed, grasping the gendered nature of the information contained in heights data may help us to understand why real wages improved throughout the nineteenth century, while heights either

<sup>18</sup> Feinstein, 'Pessimism Perpetuated'; Clark, 'Farm Wages and Living Standards in the Industrial Revolution'; Clark, 'Condition of the Working Class'.

<sup>19</sup> This has meant working with female convict and prison populations, though this of course raises questions about the degree to which those caught up in the criminal justice system are typical of the female population as a whole. See Johnson and Nicholas, 'Male and Female Living Standards'; Nicholas and Oxley, 'Living Standards of Women during the Industrial Revolution'; Nicholas and Oxley, 'Living Standards of Women in England and Wales'.



stagnated or actually declined. The stock interpretation is that real wage gains were modest and more than cancelled out by deteriorating urban living conditions. An alternative reading is that men did indeed enjoy higher wages, but this did little to improve the diets of women and children. More generally, it must be seen that an understanding of the evolution of living standards is not to be found by aggregative techniques or generalizing statements about what happened to ‘the workers’ grounded in evidence for highly specific regions and social groups. It is precisely in grasping the limits and specificity of our evidence that our understanding can be advanced. In what follows, I examine the historical evidence pertaining to working-class diets and the experience of hunger, seeking to make sense of how factors such as region, gender, and age controlled an individual’s access to that most precious and vital of resources: food.

## II

In turning to the history of working-class diets, this article returns to a subject first mapped out by historians in the 1960s. And like so many historical questions at this time, it was addressed by both social and economic historians operating in dialogue with each other.<sup>20</sup> The recent literature looks very different. With the exception of James Vernon’s *Hunger: A Modern History*, all recent investigations into the history of diet are quantitative studies, and there is little traffic of ideas between Vernon’s cultural history of hunger and the economic historians’ attempts to measure how well the poor really ate.<sup>21</sup> Derek Oddy’s intemperate review of Vernon’s book on the IHR’s ‘Reviews in History’ forum, with its bizarre claim that scrutinizing the creation of nutritional knowledge in the

<sup>20</sup> Derek J. Oddy, ‘Working-Class Diets in Late Nineteenth-Century Britain’, *Economic History Review*, xxiii (1970); John Stevenson, ‘Food Riots in England, 1792–1818’, in Roland E. Quinault and John Stevenson (eds.), *Popular Protest and Public Order: Six Studies in British History, 1790–1920* (London, 1974); Dale Edward Williams, ‘Were “Hunger” Rioters Really Hungry? Some Demographic Evidence’, *Past and Present*, no. 71 (May 1976); Alan Booth, ‘Food Riots in the North-West of England, 1790–1801’, *Past and Present*, no. 77 (Nov. 1977).

<sup>21</sup> James Vernon, *Hunger: A Modern History* (Cambridge, Mass., 2007). For the pre-industrial revolution period, however, see Muldrew, *Food, Energy and the Creation of Industriousness*.

nineteenth century is ‘not what the historian should do’ reveals the gulf between the two approaches. Our task, according to Oddy, is simply to apply ‘modern nutritional knowledge . . . to data from the past’.<sup>22</sup>

And although economic historians have become increasingly pessimistic about the fate of working-class living standards during the industrial revolution, that pessimism does not extend to their ability to use modern techniques to quantify data from the past in the way that Oddy proposes. Research in this area has recently graduated to ever more ambitious estimates of calorific content and the availability of nutrients such as niacin and riboflavin — compounds that were not identified until the twentieth century and were certainly not measured before then.<sup>23</sup>

The foundation for this research agenda is a unique and highly valuable collection of sources created by gentlemen investigators from the late eighteenth century onwards. Starting with the surveys of David Davies and Frederick Eden in the 1790s, reformers and statisticians made sporadic attempts to collect data about the income and expenditure of working families. These surveys are well known to historians and form the basis of the discussion that follows.<sup>24</sup> The analysis is based upon 187 budgets from the Davies and Eden collections in the 1790s; 132 produced in fifteen separate Parliamentary reports between 1833 and 1843; and sixty-seven from thirteen smaller, individual studies between 1825 and 1852. This represents surveys conducted by around a hundred individuals. Their research followed the same basic formula: information about income, the composition of the household, and the sum of money spent weekly on rent and food was gathered and tabulated. Most, though not all, researchers also collected information about weekly income, and some tried to include items such as clothes and shoes which were bought on an intermittent rather than weekly basis.

The logic of converting the information these budgets contain into measures of calories and nutrients may seem straightforward

<sup>22</sup> Derek Oddy, ‘Hunger: A Modern History’, *Reviews in History*, available online at <<http://www.history.ac.uk/reviews/review/695>>.

<sup>23</sup> Gazeley and Horrell, ‘Nutrition in the English Agricultural Labourer’s Household’.

<sup>24</sup> In addition to the references in nn. 25–28, see Sara Horrell and Jane Humphries, ‘Old Questions, New Data and Alternative Perspectives: Families’ Living Standards in the Industrial Revolution’, *Journal of Economic History*, lii (1992).

enough, but in reality the project is only convincing if we believe there to be a simple equivalence between the data that the researchers collected and the diets that were actually eaten by the poor. This problem and its implications are clearly recognized by economic historians, as it is always discussed before presenting results from the budget data. Yet it is remarkable how quickly it is also dismissed. ‘There is no indication that the accounts were fiddled. On the contrary, they reveal a numerical scrupulousness which practically excludes the possibility of deception through ideological bias’, observes one.<sup>25</sup> They ‘generally went to considerable lengths to obtain good estimates of the food consumed’ confirms another.<sup>26</sup> Indeed, the more these claims of reliability are repeated the more the problem can be willed away: ‘Historians who have used the budget records have been convinced by their thoroughness’.<sup>27</sup> Unfortunately, though, saying something many times over does not make it true and a fundamental difficulty in using budget records to estimate calorie consumption at the population level remains.

All of the budget data was collected early in the history of statistics, and well before the concept of statistical sampling had been developed. Although the researchers may have gathered their data ‘scrupulously’ and ‘thoroughly’, they were nonetheless unsystematic in their selection of families to survey. The gentlemen’s motivation for interviewing their poorer neighbours, the information collected, and its presentation all varied considerably from one investigator to the next. Nor should we assume that the imbalance of power between impoverished householders and the social superiors who quizzed them on their spending habits did not feed into the information they chose to divulge. Further, although more than three hundred families were questioned, these families do not

<sup>25</sup> Thomas Sokoll, ‘Early Attempts at Accounting the Unaccountable: Davies’ and Eden’s Budgets of Agricultural Labouring Families in Late Eighteenth-Century England’, in Toni Pierenkemper (ed.), *Zur Ökonomik des privaten Haushalts: Haushaltsrechnungen als Quellen historischer Wirtschafts- und Sozialforschung* (Frankfurt, 1991), 37.

<sup>26</sup> Gazeley and Horrell, ‘Nutrition in the English Agricultural Labourer’s Household’, 759.

<sup>27</sup> Ian Gazeley and Nicola Verdon, ‘The First Poverty-Line? Davies’ and Eden’s Investigation of Rural Poverty in Late 18th-Century England’, *Explorations in Economic History*, li (2014), 98–9.

amount to a representative sample of a cross-section of the working poor. They are clustered into three main occupational groups considered to be important — farm-workers, miners and factory workers — and into a relatively small number of years — the late 1780s, 1790s, 1830s and 1840s. Considerable sections of the population workforce — skilled craftsmen, unskilled labourers, handloom weavers, and single-parent households to name a few — were never systematically interviewed. These problems do not render the budget data entirely unsuitable for historical analysis, but they should encourage us to scale down our expectations. These records do not provide a snapshot of the population at large, they provide information about the specific families who were questioned about their diet — in all no more than a few hundred — and the task of switching from this particular group to the wider population is far harder than the economic historians are willing to admit.

In this article, we shall interrogate these records with a much simpler series of questions. We shall ask simply: what proportion of income did these families spend on food? And what proportion of income did they spend on bread (or flour)? According to Engel's law, poor families spend the greater share of their income on the cheapest, most energy dense foods, and as income rises, the proportion of income spent on food starts to decline. Assessing expenditure by looking at the proportion of food spending and its allocation across food groups is a relatively simple procedure which provides a crude measure of the economic well-being of the family and permits us to compare the fortunes of different workers. Once we are able to establish what these gentlemen measured, we will return to the larger question of how their measurements might relate to the diets consumed by the population at large.<sup>28</sup>

### III

Although the proportion of the workforce engaged in agriculture declined steadily throughout the industrial revolution, it remained the single largest employer well into the second half

<sup>28</sup> For a similar methodological approach, see also Carole Shammas, 'Food Expenditures and Economic Well-Being in Early Modern England', *Journal of Economic History*, xliii (1983).

of the nineteenth century.<sup>29</sup> It is therefore little wonder that the early researchers consistently turned their attention to the fortunes of this segment of the population. The situation that they uncovered was grim. On average, the 187 families surveyed by Davies and Eden between 1787 and 1796 were spending 75 per cent of their income on food. Nearly two-thirds of food spending (62 per cent) was devoted to bread, meaning that over half of all income (52.5 per cent) was spent on bread alone. This bread was almost always made by hand and rarely bought as a pre-baked loaf.<sup>30</sup>

This picture changed little in the following half-century. The overall proportion of household income devoted to food and bread remained high in the budgets collected during the 1830s and 1840s; 75 per cent of family income was devoted to food and 71 per cent of that spending went on bread, with the result that 55.5 per cent of all income was spent on this one item alone.<sup>31</sup>

<sup>29</sup> E. A. Wrigley, *The Path to Sustained Growth: England's Transition from an Organic Economy to an Industrial Revolution* (Cambridge, 2016).

<sup>30</sup> David Davies, *The Case of the Labourers in Husbandry Stated and Considered* (London, 1795); Frederick Morton Eden, *The State of the Poor: A History of the Labouring Classes in England, with Parochial Reports*, ed. A. G. L. Rogers (London, 1928).

<sup>31</sup> *First Report from Select Committee on the Poor Law Amendment Act, with the Minutes of Evidence*, Parliamentary Papers (hereafter P.P.), 1837 (131), xvii, 1–136; *Third Report from Select Committee on the Poor Law Amendment Act, with the Minutes of Evidence*, P.P., 1837 (225), xvii, 1–154; *Twelfth Report from Select Committee on the Poor Law Amendment Act, with the Minutes of Evidence*, P.P., 1837 (350), xvii, 1–30; *Poor Law Amendment Act: Returns Showing the Weekly Diet of Several Independent Labourers in the Counties of Leicester, Lincoln and Cambridge*, P.P., 1837/8 (694), xxxviii, 1–5; *Report from the Commissioners on the Poor Law, Reports of Assistant Commissioners, Appendix A*, P.P., 1834 (44), xxviii, 1–469; *Report from the Select Committee of the House of Lords appointed to Examine into the Several Cases Alluded to in Certain Papers Respecting the Operation of the Poor Law Amendment Act. Part I*, P.P., 1838 (719), xi, 1–1353; *Children's Employment Commission (Mines), Appendix to the First Report of Commissioners*, P.P., 1842 (381–2), xvi–xvii; *Reports of Special Assistant of Poor Law Commissioners on the Employment of Women and Children in Agriculture*, P.P., 1843 (510), xii, 1–394; letter, Bedfordshire and Luton Archives Service, Bedford, R3/3574; W. H. Charlton, 'A Statistical Report from the Parish of Bellingham in the County of Northumberland', *Journal of the Statistical Society of London*, i, no. 7 (1838); William Charles Copperthwaite, 'Statistics of Old and New Malton', *Journal of the Statistical Society of London*, viii, no. 1 (1845); L. Hindmarsh, 'On the State of Agriculture and Condition of the Agricultural Labourers of the Northern Division of Northumberland', *Journal of the Statistical Society of London*, i, no. 7 (1838); Frederick Purdy, 'On the Earnings of Agricultural Labourers in England and Wales, 1860', *Journal of the Statistical Society of London*, xxiv, no. 3 (1861); James Caird, *English Agriculture in 1850–1* (London, 1852).

The overall picture, then, is clear: the diets of agricultural workers remained largely unchanged down to 1850.

Turning to the miners and industrial workers, matters look dramatically different. Whereas farm-workers in the 1840s were spending 75 per cent of their income on food, miners were spending 58 per cent of their income on food, and only 40 per cent of their food expenditure was on bread. The total proportion of their income devoted to this staple was about 25 per cent — less than half the proportion paid by agricultural labourers.<sup>32</sup> Among the factory workers, 60 per cent of income was spent on food, and of this 36 per cent was spent on bread. The overall proportion of family income that was spent on bread was 23 per cent.<sup>33</sup>

The family budgets demonstrate a clear difference between the diets of agricultural and industrial families. Before proceeding further, it is necessary to explore the possible reasons for this. Because food is a necessary good with a low price elasticity of demand, the proportion of income spent on food will decrease as income rises. However, the proportion of income spent on food is also determined by family size. Therefore we need to establish whether our findings capture differences in income or a simple difference in the number of mouths to feed.

In fact, average family size was broadly similar across the occupational groups, always oscillating around four children per household. By contrast, incomes did vary significantly. In

<sup>32</sup> *A Voice from the Coal Mines* (London, 1825); *Children's Employment Commission (Mines)*, 16–17; *First Report of the Midland Mining Commission*, P.P., 1843 (508), xiii, 1–301.

<sup>33</sup> Ellic Howe (ed.), *The London Compositor: Documents relating to Wages, Working Conditions and Customs of the London Printing Trade, 1785–1900* (London, 1947); Mrs Rundell, *A System of Practical Domestic Economy* (London, 1824); W. Neild, 'Comparative Statement of the Income and Expenditure of Certain Families of the Working Classes in Manchester and Dukinfield, in the Years 1836 and 1841', *Journal of the Statistical Society of London*, iv, no. 4 (1842); *Factories Inquiry Commission. First report of the Central Board of His Majesty's Commissioners Appointed to Collect Information in the Manufacturing Districts, as to the Employment of Children in Factories*, P.P., 1833 (450), xxi, 1–1127; H. Ashworth, 'Statistics of the Present Depression of Trade at Bolton; Showing the Mode in which it Affects the Different Classes of a Manufacturing Population', *Journal of the Statistical Society of London*, v, no. 1 (1842); Samuel Richard Bosanquet, *The Rights of the Poor and Christian Alms Giving Vindicated* (London, 1841); *Factories Inquiry Commission. Supplementary Report of the Central Board of His Majesty's Commissioners Appointed to Collect Information in the Manufacturing Districts. Part I. Budgets*, P.P., 1834 (167), xix–xx, 1–1436; *Children's Employment Commission (Mines)*; *Children's Employment Commission (Trades and Manufactures)*, *Appendix to the Second Report of Commissioners*, P.P., 1843 (431), xiv.

agricultural families in the 1830s and 1840s, the weekly household income was a meagre 11s. 6d. The average family income of a mining family was nearly three times this — 29s. In the manufacturing families, it was higher again — over 33s. Factoring for family size, this provided a weekly income of 5s. 6d. per person in both mining and manufacturing families; more than double the 2s. 3d. per person of the agricultural families.

Higher family incomes in the mining and manufacturing families had two components. In the first instance, male wages were higher. The mean male wage in agriculture was 10s. a week; in mining the male wage averaged 16s. a week and in the factories 18s. 6d.<sup>34</sup> There was also much greater variance in male wage rates in the industrial districts.<sup>35</sup> In agriculture, almost all men earned something close to 10s.; in the mining districts, although the average wage was 16s., a few adult males earned over 24s., while there were others whose earnings were much closer to those of the farm-workers at 10s. a week. The rest of the difference in family incomes was owing to the contribution made by child workers. In the industrial districts, children started work as young as six or seven, and stayed at home until they married: their earnings made up around 40 per cent of family earnings. In agriculture, children started working later and left home earlier, so their contribution to the family coffers was less: they contributed between 10 and 15 per cent of the total. As with male earnings, there was much greater variance in child earnings in the industrial sectors than in the agricultural. Where children were very young, they made no contribution to the family income, but large numbers of children of working age had the potential to push family earnings considerably higher than the breadwinner's wage — a situation that never obtained amongst the rural families. Variance in the earnings of both male breadwinners and their children in the industrial sector gave rise to a much more diverse range of experiences. Although the average manufacturing family earned 33s. a week, some earned nearly three times that amount: in each case there were seven or eight children living at home. These outlying large and high-earning

<sup>34</sup> Mean wage in agriculture, 10.1s.; median wage in agriculture, 10s. Mean wage in mining, 16s.; median wage in mining, 15s.

<sup>35</sup> The standard deviation for male wages was 2.47 in agriculture; in mining it was 18.

families inevitably serve to push up the average family income for the sector, though the median family income — 23s. for both mining and manufacturing families — was still double the median of the agricultural families.<sup>36</sup>

These income differentials determined food availability and choices within the families. In the 1830s and 1840s, agricultural families spent on average 18d. on food for each family member a week, about 12d. of which was spent on bread. This left just 6d. for everything else. Most families purchased some meat, though usually in very small quantities. On average, 15 per cent of the weekly food spend was on meat (usually bacon though occasionally butcher's meat) — less than 2d. per family member a week. It is likely that most of this meat was reserved for the male breadwinner, though the family budgets do not contain evidence about the distribution of food within families. The other striking feature of these budgets is the small range of items purchased. With 77 per cent of food spending going on bread, bacon and meat, there was little to spend on all other consumables. The 23 per cent remaining of food income was spread thinly across cheese, butter, milk, tea, sugar, salt and yeast. The total spend was small: the average family had just 4d. to spend on these items per family member per week.

The composition of farm-workers' shopping baskets scarcely changed at all between the 1790s and the 1840s. In the 1840s, bread continued to consume around two-thirds of food expenditure throughout the period, meat made up about 16 per cent of food spending, and there was very little money for other items — milk, butter, cheese, tea and sugar. Although tea and

<sup>36</sup> These observations also point to a serious error in the assumptions made by Feinstein concerning the inclusion of women and children in his real wage series. For the cotton industry Feinstein provided a weighted average wage rate for men, women (who earned about one third the male rate) and children (who earned about one fifth the male rate). The result of including the much lower female and child wages was of course to lower the 'average' wage in the sector, from the 24s. earned a week by men to 11.4s., a weekly wage that was much closer to an agricultural labourer's wage than that of a factory worker. As we have seen, female and child labour in the factory district did not reduce average wages in this way as their work was additional to that of the male breadwinner, so despite their lower wage levels, when added to the male wage they helped to produce much higher family incomes. By setting wages in the cotton industry at the same level as those in agriculture, Feinstein's series fails to capture this high-wage sector accurately. Charles H. Feinstein, 'Wage-earnings in Great Britain during the Industrial Revolution', in Iain Begg and S. G. B. Henry (eds.), *Applied Economics and Public Policy* (Cambridge, 1998), 190 (table 8.2); 194 (table 8.3).



sugar were universally consumed, albeit in small amounts, other imported goods such as coffee and rice made only very occasional appearances in the dietaries. Most families bought some dairy products, but it was rare to find families purchasing a range of different items. Most bought just one, or at most two, different kinds of dairy produce.

The contrast with the diets of families living in industrial areas is readily apparent. By the 1840s, the mining families had almost double and the manufacturing families had more than double the farm-workers' weekly food spend (35d. and 37d. per family member respectively). Significantly, however, these industrial families were spending almost exactly the same amount on bread as their rural counterparts — across all three sectors, families were spending 12d. a week on bread. Clearly, then, after the purchase of this staple, the industrial families had significantly more to spend on meat and other food items — between 23d. and 25d. for each family member, in contrast to the 6d. left over in agricultural families.

As a consequence, the industrial families were able to eat more animal protein and a more varied diet overall. The industrial families spent between 7d. and 8d. a week on meat per family member in contrast to the 2d. worth of meat purchased by agricultural families. They also spent considerably more on potatoes, cheese, butter, milk and imported items. These families spent about double the amount on tea and sugar as their rural counterparts, and coffee had become an item of regular expenditure — bought by about a third of mining families and more than three-quarters of families in the factory districts. In addition, a wider range of items to flavour food was purchased — salt, pepper, mustard, vinegar and malt. Rice, currants and raisins were bought in small quantities for puddings. Eggs were routinely purchased: they were bought by about a quarter of families in the factory districts, though in such small quantities it is likely that they were reserved for the enjoyment of just one family member. Clearly, though, higher incomes in the industrial districts enabled families to purchase a more substantial and varied basket of goods than that consumed by those living and working on the land.

It is also interesting to note that before 1850, the extra spending power in industrial households was used to purchase more raw foods for preparation within the home, rather than pre-prepared

foods. Bread was still usually consumed as flour for home-baking rather than as a pre-baked loaf and there is no evidence of families purchasing meals away from home. This forms a clear contrast to dietaries collected from urban families later in the nineteenth century, in which shop-bought meals and pre-cooked foods (for example, pies, biscuits and jam) were regular items of expenditure.<sup>37</sup> In the 1840s, urban households did not substitute more expensive pre-prepared goods for home-cooked meals. They increased the quantity and variety of raw food stuffs, and continued to prepare them within the home as the most economical way of deriving benefit from their higher income.

The broad outlines of the budget data are therefore clear. They show a disparity in the 1840s between agricultural workers, who were spending over half of their income on bread, on the one hand, and miners and manufacturing workers, spending around half that, on the other. The situation for farm-workers was unchanged from the previous half-century. Moreover, these differences can be explained by differences in per capita income, which was a function of differences in both the male wage and the earning opportunities for other family members. Before concluding that these patterns reflect a true divergence in workers' diets, however, there is one further possibility that we need to consider. We have assumed thus far that our nineteenth-century workers lived in a commercial economy and consumed only food that they purchased. If, however, agricultural communities had access to food outside the market — home-grown food from allotments and gardens, for example, or through the provision of meals at work — then the evidence from their budgets will understate the quality of their diets. Is it possible that agricultural workers were self-provisioning on such a scale as to bring their diets closer to the standards of those enjoyed by industrial workers and miners?

When the gentlemen investigators collected their budget data, they routinely questioned families about self-provisioning so we

<sup>37</sup> See, for instance, Charles Booth, *Life and Labour of the People*, i, East London (London, 1889); Miss E. Collet and Miss Robertson, *Family Budgets, Being the Incomes and Expenses of Twenty-Eight British Households*, for the Economic Club (London, 1896); D. Noel Paton, J. Craufurd Dunlop and Elsie Inglis, *A Study of the Diet of the Labouring Classes of the City of Edinburgh: Carried Out under the Auspices of the Town Council of the City of Edinburgh* (Edinburgh, 1901); B. Seebohm Rowntree, *Poverty: A Study of Town Life* (London, 1901).

can attempt some answers to this question. We can quickly rule out the likelihood that working families were improving their diets through the keeping of cows. Just three of more than two hundred budgets from rural areas indicated that the family kept a cow.<sup>38</sup> Even allowing for some under-reporting, it is clear that cow-keeping could not have substantially improved the diets of agricultural families. In the absence of cows and commons, however, pig-keeping and gardens would have gone some way to improve the quantity and variety of agricultural diets.<sup>39</sup> Around 20 per cent of labouring families reported keeping a pig and around a third mentioned a garden. How much would these pigs and gardens have added to the farm-workers' diets over a year? Across the entire rural population, the pigs (if they had been eaten rather than sold for income) would have provided less than an ounce of meat a week per person.<sup>40</sup> The quantity of food provided by gardens is rather more difficult to estimate, as there is little information about the size of gardens and allotments or about the use to which they were put. The most commonly planted vegetable was the potato, although several of the potato growers noted that their gardens were not large enough to keep the family in potatoes throughout the winter. Nonetheless, a store of potatoes, along with the carrots, turnips and onions that were also mentioned, would have added vitamins and variety to diets. Yet gardens were often small and they were far from universal so these benefits were limited. Clearly, the self-provisioning activity reported in the food budgets was not on a sufficient scale to close the food gap we have demonstrated between agricultural and industrial workers.

<sup>38</sup> See, also, Leigh Shaw-Taylor, 'Parliamentary Enclosure and the Emergence of an English Agricultural Proletariat', *Journal of Economic History*, lxi (2001), 658; Leigh Shaw-Taylor, 'Labourers, Cows, Common Rights and Parliamentary Enclosure: The Evidence of Contemporary Comment, c.1760–1810', *Past and Present*, no. 171 (May 2001), 114 (table 3).

<sup>39</sup> For allotments, see D. C. Barnett, 'Allotments and the Problem of Rural Poverty, 1780–1840', in E. L. Jones and G. E. Mingay (eds.), *Land, Labour and Population in the Industrial Revolution: Essays Presented to J. D. Chambers* (London, 1967); Boaz Moselle, 'Allotments, Enclosure, and Proletarianization in Early Nineteenth-Century Southern England', *Economic History Review*, xlvi (1995); John E. Archer, 'The Nineteenth-Century Allotment: Half an Acre and a Row', *Economic History Review*, l (1997); Jeremy Burchardt, *The Allotment Movement in England, 1793–1873* (Woodbridge, 2002).

<sup>40</sup> Assuming the families were raising 13-stone pigs, and that each pig yielded about one half of its live weight in meat, one pig would have provided its owner with the equivalent of 1.75lb of meat each week, or about 4 ounces of meat per person.

Furthermore, we should not assume that allotments and pig-keeping were the preserve of those living on the land. In fact, even the largest towns in industrializing England were still small, and physically close to agricultural land, so urban inhabitants could also tend allotments and raise poultry and pigs. The very detailed budgets collected in the 1850s by the French sociologist Frédéric Le Play for families in London, Sheffield and Derbyshire indicate that half worked a small-holding in addition to their usual employment.<sup>41</sup> In Sheffield, for example, a cutler was raising two pigs and about a dozen chickens, and growing cauliflowers, green beans, carrots, turnips, onions, lettuce and fruit.<sup>42</sup> This family consumed much of its garden produce, but also sold a surplus to the market. Most of the budgets collected for industrial families did not mention gardens or pig-keeping, but it is far from clear whether this reflected the assumptions of the survey-takers or an absence of self-provisioning amongst those surveyed. Significantly, one collection of budgets for thirty mine-workers did systematically report self-provisioning and it indicates that two-thirds were keeping a pig or a garden — a figure much higher than that obtained among the agricultural workers.<sup>43</sup> Nor should this surprise us. Purchasing and raising animals required money and with their higher family incomes, mining and manufacturing families were much better placed to find this money than agricultural families living on the breadline.

The information collected by our nineteenth-century researchers permits us to identify some clear and important differences between the industrial and rural regions. In agricultural areas, family incomes were low and provided for a very limited diet comprised mostly of bread, with occasional scraps of meat, butter and cheese, and very small quantities of tea and sugar. There was no discernible improvement between the 1790s and 1850, and no evidence that allotments or self-provisioning made good these deficiencies. Furthermore, male wages, children's earnings, and household income were all very tightly clustered around the mean, with the consequence that experiences among the rural poor were remarkably homogenous. Alongside this picture of life in the rural sector,

<sup>41</sup> Frédéric Le Play, *Les Ouvriers Européens*, iii (Paris, 1877), 420–1.

<sup>42</sup> *Ibid.*, 342–5.

<sup>43</sup> *Children's Employment Commission (Mines)*.

we can present new information about incomes and diets amongst workers in the industrial sector. In the 1830s and 1840s, families in mining and factory districts earned higher incomes than their rural counterparts, owing to a combination of higher male wages and higher children's earnings. Families invested much of that extra income in food and were therefore able to consume a significantly better diet. Experiences among this sector were also much more diverse, with a few families living on a per capita income that was on a par with the agricultural workers, a few earning four or five times as much, and the rest scattered widely between these two extremes.

The broad contours of regional difference are clear, but the problems with the budget data still remain. As already indicated, the budgets were collected by numerous individuals each with their own agenda, and there are gaps in their coverage. We have little budgetary evidence for industrial workers before the 1840s, so we do not know whether their relatively good diets had been established earlier in the century, or were a more recent phenomenon. We also lack robust records for skilled workers, handloom workers or fatherless households, all important social groups that need to be considered. Furthermore, we do not know why particular surveys were conducted when they were. If investigators interrogated farm-workers during the bad years and the industrial workers during the boom times, we would expect their evidence to show that the industrial workers ate the better diet. This would be a reflection of the original data-gathering exercise rather than a social reality — and this, of course, is why the creation of a representative sample forms a cornerstone of modern statistical techniques.<sup>44</sup> The surveys do not contain the solutions to these problems, so if we are to interpret these results correctly, it is necessary to turn to an alternative set of records.

#### IV

The budget data is well known to historians and has been widely used, but it is not the only material that sheds light on historical

<sup>44</sup> In fact, it is known that most of the budgets were taken in response to crises, both agricultural and industrial. See Shammas, 'Food Expenditures and Economic Well-Being', 92.

diets. In addition, there is a wealth of autobiographical material, and as Britain was still a poor society with high levels of hunger and want, the subject of food was one to which writers returned time and again. Working-class autobiography therefore contains a rich seam of evidence waiting to be tapped. For the analysis below, autobiographies spanning the period 1750–1850 were identified through an exhaustive survey of the bibliography compiled by John Burnett *et al.* in the 1980s.<sup>45</sup> A small number of the 364 autobiographies they listed for this timeframe either proved impossible to locate or unsuitable for this study, though others have come to light in the thirty years since the bibliography was compiled.<sup>46</sup> As a result, this exercise has produced a collection of 341 life-histories, which permits a near-comprehensive analysis of the available records.

Although there are more autobiographies than family budgets, not all contain usable information about food and hunger, leaving a slightly smaller dataset overall. This material does permit us, however, to broaden our analysis across time and space. Eighty of the writers were born between 1750 and 1790, and their works contain some recollections of life before 1800; the remaining 264 were born after 1791 and so refer to the following fifty years. These sources also capture a wider occupational spread than the family budgets. Agriculture, manufacturing and mining are all once again well represented: 109 of the autobiographers were living in agricultural families; a further seventy-seven were dependent upon income from factories or mines. In addition, we have evidence from the skilled trades and from cottage industry: 106 of the autobiographers worked in non-mechanized, mostly urban, trades — carpenters, builders, servants, bakers, and so forth; and fifty-two of the writers lived in families dependent upon earnings from domestic industry — usually, though not exclusively, handloom weaving. Cutting across all four groups, we also have single-parent households and young adults unable to command an adult wage. This material enables us to dig into corners of working-class experience that the family budgets cannot reach.

<sup>45</sup> John Burnett, David Vincent and David Mayall (eds.), *The Autobiography of the Working Class: An Annotated, Critical Bibliography*, i, 1790–1900 (Brighton, 1984).

<sup>46</sup> The bibliography has been extended through Humphries, *Childhood and Child Labour*, and Griffin, *Liberty's Dawn*.

Despite the demographic spread of the autobiographies, these are not, of course, wholly unproblematic sources. Their drawbacks have been frequently remarked.<sup>47</sup> Autobiography is memory, collected and composed for the purpose of writing, and it is therefore subject not only to lapses in memory but also to prevailing literary trends and cultural norms. The altered cultural context between autobiographers' early years and the moment when they composed their narratives means an autobiography involves the renegotiation, as much as the reporting, of lived experiences. This lack of simple transparency between what was experienced and what was later written has inevitably posed problems with which many scholars have sought to grapple in their attempts to use life-writing to probe such topics as the emotions, intra-familial relationships, and experiences of warfare.<sup>48</sup>

These difficulties are less acute when asking questions about diets and hunger. The approach followed here has been to read the autobiographies for references to hunger — not the occasional bout of hunger brought on, for example, by a long journey, but the kind of hunger described by John Younger, after two years of bad harvests left him 'pinched of all matters in the consistence of human food . . . producing a feeling none can thoroughly comprehend', dreaming of potatoes and chewing on wood bark in an effort to allay his pangs of hunger.<sup>49</sup> Although the social meaning of hunger can certainly change over time, hunger is also rooted in bodily sensations that are physical rather than historical in nature. Furthermore, hunger remained a risk throughout the period from the mid eighteenth century to the writing of the last

<sup>47</sup> Regenia Gagnier, *Subjectivities: A History of Self-Representation in Britain, 1832–1920* (Oxford, 1991); Carolyn Steedman, *Past Tenses: Essays on Writing, Autobiography and History* (London, 1992); Trev Lynn Broughton, *Men of Letters, Writing Lives: Masculinity and Literary Autobiography in the Late Victorian Period* (London, 1999); Tess Cosslett, Celia Lury and Penny Summerfield (eds.), *Feminism and Autobiography: Texts, Theories, Methods* (London, 2000); David Amigoni (ed.), *Life Writing and Victorian Culture* (Aldershot, 2006); Kelly J. Mays, 'Domestic Spaces, Readerly Acts: Reading, Gender, and Class in Working-Class Autobiography', *Nineteenth-Century Contexts*, xxx (2008).

<sup>48</sup> Emma Griffin, 'The Emotions of Motherhood: Love, Culture and Poverty in Victorian England', *American Historical Review*, cxlxiii, no. 1 (2018); Julie-Marie Strange, *Fatherhood and the British Working Class, 1865–1914* (Cambridge, 2015); Michael Roper, 'Re-Remembering the Soldier-Hero: The Psychic and Social Construction of Memory in Personal Narratives of the Great War', *History Workshop Journal*, no. 50 (2000).

<sup>49</sup> John Younger, *Autobiography of John Younger* (Kelso, 1881), 128–31.

autobiography in the early twentieth century, and attitudes towards hunger did not change significantly at any time during this period: hunger was always considered exceptional and unfortunate, an event that merited some discussion. This is not to suggest that there is a simple correspondence between descriptions of hunger and the lived experience of hunger. Rather hunger provides a relatively stable reference point to a specific human experience, permitting a comparison across a wide range of writers and an analysis of the particular times and contexts in which hunger was experienced.

In order to allow for comparisons between sources, only references to hunger that an author experienced either personally or at very close hand have been included, not more general references to scarcity. It is also important to distinguish between hunger and other more general forms of poverty, as privation can take many forms, not all of them leading to hunger. In what follows, all instances in which writers provided clear evidence that poverty was sufficient to cause them (or other close family members) to lack food have been extracted.

The most salient feature of these autobiographies is the sheer extent of hunger. In all, just over a third of writers — 115 in all — recalled going hungry before 1850. Owing to the nature of these sources, however, we cannot translate this figure into the proportion of working people who actually went hungry. The difficulty lies in determining whether the remaining two-thirds of writers were silent on the issue of hunger because they had never experienced hunger or simply because they opted not to write about it. A small minority of these writers clearly indicate that the former was the case. Thomas Wallis, for instance, helpfully observed that during his childhood, he and his family had not been ‘pinched in our plain and homely food’, despite living in severe poverty.<sup>50</sup> But for the most part, these authors did not write about diet, nutrition, shopping for food or self-provisioning, or provide any information about how, or if, their need to eat had been met. The most we can say therefore is that at least a third of the autobiographical writers experienced hunger. Others may have done so as well, but chose not to write about it.

<sup>50</sup> Thomas Wilkinson Wallis, *Autobiography of Thomas Wilkinson Wallis, Sculptor in Wood, and Extracts from his Sixty Years' Journal* (Louth, 1899), 10. See also Robert Collyer, *Some Memories* (Boston, 1908), 6.



The value of the autobiographical evidence lies not in attempting calculations of the extent of hunger in industrializing England, but rather in permitting an analysis of the distribution and causes of hunger across time and across different occupational groups. Turning first to the agricultural and industrial families, it is evident that the autobiographical evidence provides strong confirmation for the patterns delineated by the family budgets. Among the industrial and mining families, around 18 per cent of writers recollected having experienced hunger. In the agricultural families this figure was more than twice as large — 42 per cent. To this, we can now add information about individuals working in cottage industry and the non-mechanized trades. The experience of both groups was closer to that of the farm-workers than it was to the industrial families: among the former, 46 per cent experienced hunger; among the latter, 31 per cent did. Clearly, the autobiographical material confirms a core finding of the budget data: the risk of hunger was higher within some occupational contexts than others. Our next task it to consider why this might have been so.

As autobiographical writers tended to provide a detailed and vivid account of the precise circumstances that had contributed to their lack of food, these sources cast a new light on the mechanisms of hunger and permit us to untangle a host of factors that are not visible in the family budgets. Almost all of the family budgets depict a wage earner transferring his full income to his wife who then converted money income into edible food. In the family budgets, therefore, the quantity and kind of food consumed by any given family was determined by the amount of money that a family earned. The autobiographies, however, alert us to the fact that the transfer and transformation of wages into food was a far more complex cultural process, embodying a series of gender-specific norms for the provision and sharing of income and care. Inevitably, some families lacked a breadwinner or a housewife. Less obviously, however, in some families the male breadwinner (or, far more occasionally, the female housewife) failed to make their gender-appropriate contribution to the household. As we shall see, these failings had a significant impact on the diet received by dependent family members and played a large role in determining the overall distribution of hunger across the population.

The autobiographies, like the budget data, yield more information about agricultural workers than any other single occupational group. There is also considerable agreement between both sets of records regarding food availability for this group. The budgets indicated that around 80 per cent of income was spent on food in these families, and more than 40 per cent of the agricultural autobiographical writers had first-hand experience of hunger. In addition, the autobiographies reveal that the risk of hunger varied at different points in the life cycle, being highest during early childhood, persisting throughout adolescence, and declining — though not disappearing — with adulthood. Of the forty-nine instances in which hunger was recalled, thirty came from childhood; a further eleven from adolescence; and eight from adulthood.<sup>51</sup> Finally, in the autobiographies (as in the family budgets), insufficiency of income emerges as the primary cause of hunger.

Family incomes could be insufficient for a variety of reasons. Low wages and low levels of employment depressed male incomes and were a cause of chronic hunger, particularly during childhood. James Nye, for example, was one of a family of eleven children raised in rural Sussex in the 1820s and recalled how the ‘the young ones’ in his family went ‘very short of food’. Despite his mother’s best efforts, he rarely had more than ‘half a bellyful’ at mealtimes, and ate scarcely anything other than bread.<sup>52</sup> Although James’s father was in work, his low wages and large family meant there was simply never enough to go around. In addition to the children suffering from chronic hunger, others went hungry because of short-term spikes in the

<sup>51</sup> Hunger in childhood and adolescence is discussed below. Those who described hunger in adulthood were: James Bowd, ‘The Life of a Farm Worker’, *The Countryman*, li (1955); John Lincoln, ‘Memoirs of John Lincoln’, Norfolk Record Office, Norwich, MC 2669/29, 991X9; Joseph Mayett, *The Autobiography of Joseph Mayett of Quainton, 1783–1839*, ed. Ann Kussmaul (Buckinghamshire Record Society, xxiii, Aylesbury, 1986); George Mockford, *Wilderness Journeyings and Graciously Deliverances: The Autobiography of George Mockford* (Oxford, 1901); Elizabeth Oakley, ‘The Autobiography of Elizabeth Oakley, 1831–1900’, *Norfolk Record Society*, lvi (1993); John Harris, *My Autobiography* (London, 1882); Roger Langdon, *The Life of Roger Langdon, Told by Himself* (London, 1909); Mrs Burrows, ‘A Childhood in the Fens, about 1850–1860’ in Margaret Llewelyn Davis (ed.), *Life as We Have Known It, by Co-Operative Working Women* (1931). Langdon and Burrows described hunger in their mothers rather than themselves.

<sup>52</sup> James Nye, *A Small Account of My Travels Through the Wilderness*, ed. Vic Gammon (Brighton, [1982?]), 11.

cost of bread brought about by hard winters, poor harvests and war. Children were the first to feel the effects of rising bread prices, but during the worst crises adults began to suffer too. Following the harvest failures of 1816, for example, John Lincoln's entire family was forced to undergo severe privations. His two children succumbed to disease very easily — their quick deaths from measles were likely owing in part to prior malnourishment. And both John and his wife were also deprived of food before the winter's end: they had 'sold and pawned all our furniture and all Sunday Clothes — for bread — some times we went the whole day with about two or three potatoes twice in that time'.<sup>53</sup>

Together, low incomes and external economic shocks were the primary cause of hunger in the rural sector. Of the thirty children who recalled hunger, twenty-two traced their experience to these causes.<sup>54</sup> And this is hardly different from what we would expect. The family budgets indicate the restricted range of foods entering

<sup>53</sup> Lincoln, 'Memoirs of John Lincoln', 37.

<sup>54</sup> 'A Norfolk Labourer's Wife', *Eastern Counties Magazine*, i–ii (1901–2), repr. in E. A. Goodwyn and J. C. Baxter (eds.), *East Anglian Reminiscences* (Ipswich, 1976); Isaac Anderson, *The Life History of Isaac Anderson: A Member of the Peculiar People* (n.p., 1896); Joseph Arch, *Joseph Arch: The Story of his Life, Told by Himself*, ed. Frances Evelyn Greville (London, 1966); Eli Ashdown, *Gleanings by a Watchman on a Dark Corner of Zion's Walls: Being the Autobiography of Eli Ashdown* (London, 1904); John Bennett, 'Manuscript Autobiography of John Bennett of Bristol', Bristol Record Office, 36907; Robert Crane, 'An Old Man's Memories', Cambridge Record Office, 231/Z65; George Edwards, *From Crow-Scaring to Westminster: An Autobiography* (London, 1922; repr. Dereham, 2008); William Fairburn, *The Life of Sir William Fairburn* (London, 1877); [H. Bill], 'Autobiography of a Navy', *Macmillan's Magazine*, v (1861–2), extracts repr. in John Burnett (ed.), *Useful Toil: Autobiographies of Working People from the 1820s to the 1920s* (London, 1974); John Harris, *My Autobiography* (London, 1882); James Hogg, *Memoir of the Author's Life; and, Familiar Anecdotes of Sir Walter Scott*, ed. Douglas S. Mack (Edinburgh, 1972); William Johnston, *The Life and Times of William Johnston* (Peterhead, 1859); [W. Leask], *Struggles for Life: or, The Autobiography of a Dissenting Minister* (London, 1864); Robert Maybee, *Sixty-Eight Years' Experience on the Scilly Islands* (Penzance, 1884); Alexander Murison, 'Recollections', in *Memoirs of 88 Years (1847–1934): Being the Autobiography of Alexander Falconer Murison* (Aberdeen, 1935); Benjamin North, *Autobiography of Benjamin North* (Aylesbury, 1882); Nye, *Small Account of My Travels through the Wilderness*; Thomas Oliver, *Autobiography of a Cornish Miner* (Camborne, 1914); Robert Roberts, *The Life and Opinions of Robert Roberts, a Wandering Scholar as Told by Himself*, ed. J. H. Davies (Cardiff, 1923); Jesse Shervington, 'Autobiography of an Agricultural Labourer', Worcestershire Record Office, Worcester, BA 5518 Ref: 970.5: 645 Parcel 1; Stir(r)up, 'The Autobiography of a Journeyman Shoemaker', *The Commonwealth*, 22 Nov. 1856 and 29 Nov. 1856; Emma Thompson, 'The Good Old Times', *The Bedfordshire Farm Worker in the Nineteenth Century* (Bedfordshire History Record Society, lx, 1981).

rural households and high proportion of food spending on bread — both indicators of food scarcity — so it is not surprising to learn that many children perpetually went without. Further, with 80 per cent of all income being spent on food, it took only a small reduction in income or increase in expense to knock a family that was just scraping by into one that was going hungry. Although children were at the greatest risk of hunger, even the most privileged section of the rural workforce — adult males — had no real layer of protection against unanticipated adverse economic shocks.

In order to understand the hunger experienced by the remaining eight children we need to turn to those who were not routinely included in the nineteenth-century investigations: single-parent households. Part of the limitation of the budgets is that they only surveyed households with a male breadwinner, yet we know that this was an era of high mortality and fractured families. The autobiographers, by contrast, spent their childhoods in all manner of different family units, including those missing one (or both) parents. Of course, given the struggle of two-parent households to procure sufficient food, it is hardly surprising to discover that parental loss increased the risk of hunger: six of the rural children who suffered from hunger did so for this reason.<sup>55</sup> However, the autobiographies also reveal that there was more at stake here than the simple loss of family income. As we might predict, the death of a father removed the breadwinner and thereby reduced the wherewithal to buy bread. Joseph Bell, for instance, went hungry as a child because his father had died and his mother's and sisters' lacemaking earnings were insufficient to keep themselves and Joseph in food.<sup>56</sup> Less obviously, the loss of mothers removed a vital link in the transformation of wages into nutrition and was also a trigger for hunger in rural families. Lone fathers' attempts to

<sup>55</sup> This was rather higher than the rate of parental loss among the population at large, though precision here is difficult owing to uncertainty about the rate of parental loss. Different estimates have put the figure at somewhere between 20 and 30 per cent losing one or both parents before the age of sixteen. Among the autobiographers, 23 per cent of the children who experienced hunger had lost one or both parents, but almost all of these children had done so during infancy, which is considerably higher than the demographic average.

<sup>56</sup> Joseph Bell, *The Story of 12 Years in the Life of an Orphan, 1846–1858, Told by Himself: Chapters from the Autobiography of a Village Lad*, 2 vols., Bedfordshire and Luton Archives Service, Z1288/1/1–2.

provide both income and care frequently proved unsuccessful as the substitute housekeepers they found (elder daughters and paid nurses) usually failed to replicate the labour of mothers effectively.<sup>57</sup> Inevitably, orphaned children were doubly disadvantaged and had an elevated risk of going hungry.<sup>58</sup>

It is also important to note that when we add the six children who had lost a parent to the twenty-two that suffered hunger owing to insufficient household income, almost all of the thirty instances of hungry children are accounted for. Just two sat outside this pattern. In these two cases, it was not a failure of income per se that caused hunger, but rather a failure in the process of transforming income into food. William Milne's father had refused to marry his mother; and John Gibbs' father spent his earnings in the alehouse rather than at the market.<sup>59</sup> In both instances, the father's actions left his children short of food. Yet this accounts for no more than a very small proportion of the overall instances of hunger in rural society. As a result, the assumptions made by the Victorian investigators hold up extremely well in the rural context. These researchers assumed that diet was determined primarily by family income, and among the rural autobiographers it clearly was. In the great majority of the rural households described in the autobiographical sources money income was transformed seamlessly into food. The problem — as both sets of sources make plain — was that in many households, family income was simply too low to ensure that all family members ate well.

One final point to consider is self-provisioning. To recap, the budgets indicated that about 20 per cent of rural families kept a pig, and about 30 per cent had an allotment or garden. Among the autobiographers, 25 per cent mentioned some form of self-provisioning. Of course, the true figure may well be higher: not

<sup>57</sup> See Lincoln, 'Memoirs of John Lincoln'; John Buckley, *A Village Politician: The Life-Story of John Buckley*, ed. J. C. Buckmaster (London, 1897); Joseph Jewell, 'Autobiographical Memoir of Joseph Jewell, 1763–1846', ed. Arthur Walter Slater, *Camden Miscellany*, xxii (1964).

<sup>58</sup> John Shipp, *The Path of Glory: Being the Memoirs of the Extraordinary Military Career of John Shipp, Written by Himself*, ed. C. J. Stranks (London, 1969); John Stradley, 'Memoirs of John Stradley, 1757–1825', Greenwich Heritage Centre, Woolwich, London, 920 Strad.

<sup>59</sup> John Gibbs, *The Life and Experience of the Author and some Traces of the Lord's Gracious Dealings towards the Author* (Lewes, 1827); William J. Milne, *Reminiscences of an Old Boy: Being Autobiographic Sketches of Scottish Rural Life from 1832 to 1856* (Forfar, 1901).

writing about an allotment is not the same thing as not having one; indeed, it would be reasonable to assume that some pigs and allotments simply failed to get a mention in a narrative constructed with other things in mind. Yet the prevalence of hunger within the rural households suggests that no matter what the true rate of self-provisioning, it was not sufficient to prevent many dependent upon the land from going without. The autobiographers with access to sufficient land to make a material contribution to their diets came from the wealthier families, not the poorest and neediest. They used their garden to extend the range and variety of their diet, and, sometimes, to raise extra income, rather than to stave off hunger.<sup>60</sup> Poorer families, even when they did have access to land, did not have sufficient to prevent them going hungry. As the wife of one agricultural labourer explained, 'our garden was very small just enough to grow a few early potatoes and a few beans', and when they 'were done we could not get any vegetables except to ask the master to give us a turnip now and then'.<sup>61</sup> This household also did not keep a pig: pork only entered the house when the master gifted them some at Christmas.

The agreement between the two sets of sources — the investigations and the autobiographies — is comforting. And at first sight, the evidence from the industrial sector fits neatly too. Overall, the level of hunger was lower — 18 as against 42 per cent recalled going hungry, rather as one might expect given the higher incomes they had to spend on food. But if we look more closely at the causes of hunger within industrial families, this neat fit starts to unravel. First, the profile of hunger looks different. In rural households, hunger, though concentrated in childhood, nonetheless affected adult men as well. In the industrial districts just one male writer recalled going hungry as an adult and none during adolescence; in other words, hunger has been almost entirely relocated as a childhood experience.<sup>62</sup> Furthermore, whereas most of the hunger in agricultural families was owing to insufficient income or parental loss, neither factor appears significant in the industrial households. Two of the fifteen cases

<sup>60</sup> For example, Joseph Robinson, 'Joseph Robinson's Reminiscences (1820–1917)', West Sussex Record Office, Chichester, MP 2216.

<sup>61</sup> Oakley, 'Autobiography of Elizabeth Oakley', 145.

<sup>62</sup> This was 'Life of a Cotton Spinner, Written by Himself', *The Commonwealth*, 27 Dec. 1856.

of hunger here were consequent on low family incomes — both of these were prompted when a male breadwinner was temporarily unemployed — and just one on the death of a parent.<sup>63</sup> Neither low incomes, unemployment, nor bereavement played a role in any of the thirteen remaining cases.

It is worth emphasizing this finding. Industrial cities are often depicted as places of precarious employment, yet according to the autobiographies it was not sufficiently precarious to plunge families into the cycle of hunger and deprivation that was endemic in rural areas. Nor is this because our sample of industrial autobiographers somehow miraculously escaped unemployment, strikes, business failures, downturns in trade and harvest failures. Our autobiographers *did* confront these difficulties; however, these events rarely reduced their circumstances to the point of lacking food. Read in conjunction with the family budgets it is possible to explain this finding. The budgets, we have seen, revealed a relatively wide range of food stuffs entering the household besides bread. These families were not, in ordinary times, existing on a subsistence diet. During times of hardship, they simply pared back on all these items and reverted to the kind of bread-based diet that was predominant in rural areas. Thomas Burt's father was a miner in the North East of England, and although the family had its share of hard times, young Thomas noted that the consequence was a more limited diet, not hunger. As Burt explained, 'the butter sometimes ran short [and] . . . cheese, alas! was not more plentiful than butter'. Nonetheless, he 'was fortunate enough never to lack bread'.<sup>64</sup> Higher wages and the fact that households typically comprised several adolescent and child workers in addition to the male breadwinner also helped to carry families through the difficult times.

Still a puzzle remains. Given that insufficient income was not a significant cause of hunger among industrial workers, why did so much hunger persist? The answer is that a new cause had

<sup>63</sup> For low incomes through unemployment, see 'Life of a Cotton Spinner, Written by Himself'; Charles Shaw, *When I was a Child, by 'An Old Potter'* (London, 1903; facs. repr. Wakefield, 1969), 90–2. For parental loss, see George Marsh, 'A Sketch of the Life of George Marsh, a Yorkshire Collier, 1834–1921', Barnsley Archives and Local Studies, B920 MAR.

<sup>64</sup> Thomas Burt, *Thomas Burt, Pitman and Privy Councillor: An Autobiography* (London, 1924), 30.

emerged, and its origin lay not in the level of income reaching the family, but in its use and distribution within it. These individuals went hungry not because their fathers were unable to earn enough, but rather owing to a breakdown in the process of transforming male earnings into family meals. A colourful array of problems arises: two fathers had deserted their family, one was in prison for assault, another was failing to provide owing to a series of poor business decisions, and in the fifth case a mother and stepfather were simply failing to provide meals for the children.<sup>65</sup> The single greatest cause of hunger, however, was drunkenness: seven autobiographers reported that their own or their father's drinking had left them (or their families) without food to eat.<sup>66</sup> Had these twelve adults made regular provision for their families, the overall proportion of writers from the industrial districts experiencing hunger would drop to just 4 per cent — a vivid illustration both of the remarkable power of the new industrial sector to raise family incomes and lift families out of poverty, and of the hopeless inadequacy of the breadwinner model as a mechanism for achieving these aims.

More generally, the autobiographies alert us to processes that are simply not visible from the family budgets. These human documents depict the industrial revolution as both an economic and a cultural event. Wages formed the bedrock of well-being within families, but a complex series of social and cultural norms were needed in order to turn those wages into well-being.

<sup>65</sup> John Hemmingway, 'The Character or Worldly Experience of the Writer from 1791 to 1865', Norfolk Record Office, MC 766/1, 795X5; Edward Allen Rymer, 'The Martyrdom of the Mine', ed. Robert G. Neville, *History Workshop Journal*, no. 1 and no. 2 (1976); Thomas Whittaker, *Life's Battles in Temperance Armour* (London, 1884; repr. 2009); 'A. Miner' (pseud.), 'A Trade Union Solitary: Memoir of a Mid-Nineteenth-Century Miner', *History Workshop Journal*, no. 25 (1988); Joseph Hodgson, *Memoir of Joseph Hodgson, Glazier, a Native of Whitehaven, Cumberland* (Whitehaven, 1850).

<sup>66</sup> George Allen, *The Machine Breaker; Or, The Heart-Rending Confession of George Allen . . . Written by Himself* (London, [1831?]); Charles Bent, *Autobiography of Charles Bent, a Reclaimed Drunkard* (Sheffield, 1866); Edward G. Davis, *Some Passages from My Life* (Birmingham, 1898); James Dunn, *From Coal Mine Upwards, or Seventy Years of an Eventful Life* (London, [1910]); *An Exposition of the Nefarious System of Making and Passing Spurious Coin . . . Being the Confessions of a Coiner* (Preston, n.d.); David Love, *The Life, Adventures, and Experience, of David Love, Written by Himself*, 4th edn (Nottingham, 1824); George Mitchell, 'Autobiography and Reminiscences of George Mitchell: "One from the Plough"', in Stephen Price (ed.), *The Skeleton at the Plough, or the Poor Farm Labourers of the West: With the Autobiography and Reminiscences of George Mitchell* (London, [1875?]).



Industrialization raised male incomes, but at the same time it changed patterns of behaviour that had historically helped to ensure that children received the food they needed. Had the culture of a father's responsibility to provide for his children carried into the industrial districts, the much brighter employment opportunities would have made a very significant inroad into the elimination of hunger. In the event, however, high wages went hand in hand with the erosion of age-old social pressures upon men to provide for their families, resulting in the divergence between male wages and family living standards.

The evidence from the rural and industrial autobiographies forces us to rethink elements of the relationship between income and diets. How does the evidence from those working in proto-industry and skilled labour fit with these patterns? Let us look first at proto-industry. Although often conceived as a form of industry, the evidence from autobiographies suggests that proto-industrial workers in fact had far more in common with farm-workers than with their industrial counterparts. The overall level of hunger was high in both groups — 46 per cent of the proto-industrial writers had a recollection of hunger, just higher than the 41 per cent of agricultural workers. The profile of hunger was also broadly similar. In both, the risk of hunger was concentrated in childhood, but individuals remained at risk throughout the life cycle. Twenty-eight different instances of hunger were recorded within this group: thirteen among children; four among adolescents; and eleven among adults. Finally, the causes of hunger were also similar between the two groups, with all having their origin either in the loss of a breadwinner or in low family incomes.<sup>67</sup> Conformity to the expectation that adults would provide for their family was very

<sup>67</sup> Seven of those dependent upon earnings from domestic industry went hungry as a result of the loss of a breadwinner. These were: John Castle, 'The Diary of John Castle', Essex Record Office, Chelmsford, B/CAS; Thomas Cooper, *The Life of Thomas Cooper, Written by Himself* (London, 1872; facs. repr., Leicester, 1971); Joseph Gutteridge, 'Autobiography of Joseph Gutteridge', in *Master and Artisan in Victorian England; The Diary of William Andrews and the Autobiography of Joseph Gutteridge*, ed. Valerie E. Chancellor (London, 1969); William Heaton, 'A Sketch of the Author's Life', in *The Old Soldier; The Wandering Lover; and other Poems* (London, 1857); James Inches Hillocks, *Hard Battles for Life and Usefulness: An Autobiographic Record; also a Review of the Roots and Remedies of London Miseries* (London, 1884) — Hillocks describes two separate instances, in infancy and adolescence; Jonathan Saville, 'Autobiography', in Francis A. West, *Memoirs of Jonathan Saville, of Halifax: Including his Autobiography*, 3rd edn (London, 1848).

high. Indeed, there are no cases of parents in proto-industrial households squandering family resources to the detriment of their children.

In certain respects, of course, the causes of low incomes among the cottage workers were distinct, as this sector faced a unique set of external pressures: mechanization. As has frequently been observed, the mechanization of the weaving industry caused widespread distress amongst the handloom weavers and this shows up very clearly in the autobiographical literature. No fewer than eleven of the families in this sector struggling to ward off hunger did so as a result of mechanization, and this pressure helps to explain why this sector experienced the highest levels of hunger.<sup>68</sup>

Equally, however, the autobiographies reveal that a number of underlying structural problems in the proto-industrial sector had left its workers at risk of hunger even prior to the advent of new technology. The autobiographies indicate that eleven families were unable to earn sufficient to ward off hunger, either because of low earnings or a rise in bread prices caused by poor harvests, in addition to the eleven who placed the source of their difficulties on mechanization.<sup>69</sup> And these, of course, were just the same problems as affected the agricultural workers. So while

<sup>68</sup> Castle, 'Diary of John Castle'; George Cooper, *The Story of George Cooper, Stockport's Last Town Crier, 1824–1895: Presented by Anne Swift* [Stockport, 1974]; Abraham Deacon, *Memoir of Abraham Deacon, about Sixty Years Minister of the Gospel* (London, 1912); William Farish, *The Autobiography of William Farish: The Struggles of a Handloom Weaver, With Some of his Writings* (London, 1996); Joseph Greenwood, 'Reminiscences of Sixty Years Ago', *Co-Partnership*, new series, xv, no. 177 (1909); Gutteridge, 'Autobiography of Joseph Gutteridge'; William Hammond, *Recollections of William Hammond, a Glasgow Handloom Weaver*, (Glasgow, [1904]); Moses Heap, 'My Life and Times', Rawtenstall Library, TS, LG3 HEAP; Robert Spurr, 'The Autobiography of Robert Spurr', ed. Roger J. Owen, *Baptist Quarterly*, xxvi (1976); William Thom, *Rhymes and Recollections of a Hand-Loom Weaver* (London, 1844); Thomas Wood, 'Autobiography by Thomas Wood, 1822–1880', Bradford Central Library, 920 Woo.

<sup>69</sup> Joseph Barker, *Life of Joseph Barker, Written by Himself*, ed. John Thomas Barker (London, 1880); Joseph Burdett, 'Memoirs of Joseph Burdett, Stockinger and Sometime Apprentice to Mr Kirk of Lambley, Nottinghamshire, 1813–1917', Nottinghamshire Archives, Nottingham, DD1177/1; [Robert Butler], *Narrative of the Life and Travels of Sergeant B—*. *Written by Himself* (Edinburgh, 1823); Hemmingway, 'Character or Worldly Experience of the Writer'; *A Short Account of the Life and Hardships of a Glasgow Weaver . . . Written by Himself* (Glasgow, 1834); Gutteridge, 'Autobiography of Joseph Gutteridge'; John Harland, 'Diary, 1810–1815, 1831', Bradford Central Library, 920 Har; 'Jacques' (pseud.), 'Glimpses of a Chequered Life', *The Commonwealth*, 1 Nov. 1856, 18 Nov. 1856 and 15 Nov. 1856; Johan Sankoffsky, 'Diary', Cumbria Record Office, Carlisle, ex-DX 644/1–2;

(cont. on p. 35)

mechanization certainly increased the pressures on families engaged in proto-industrial work, this provides no more than a partial explanation for the poverty from which many suffered. Seen through the prism of diets, proto-industry looks very much like an extension of the agricultural sector. Families functioned along traditional lines, but proto-industry had always lacked the power to significantly uplift family incomes or insure individuals against the risk of hunger.

Finally there are those who depended upon the skilled and non-mechanized trades for their income to consider. The level of hunger here sat between that of the agricultural and industrial families; the overall proportion experiencing hunger was 31 per cent. Here, as in the industrial districts, adult men were relatively well protected from the risk of hunger — just one recalled going hungry as an adult, and that stemmed from his decision to give up his trade and travel as an actor.<sup>70</sup> Instead, hunger affected children (eighteen) and adolescents (eight). The causes of hunger combined elements of the rural and industrial experiences. Certainly, low incomes and the loss of either parent each played a role. Low wages, high grain prices or unemployment were given as a trigger for hunger in seven different instances.<sup>71</sup> Five of those children who experienced hunger did so when they lost one of their parents.<sup>72</sup>

(n. 69 cont.)

Obadiah Short, 'Recollections, 1861', Norwich Castle Museum, NWHCM: 1964.590.2.

<sup>70</sup> Christopher Thomson, *The Autobiography of an Artisan* (London, 1847).

<sup>71</sup> Josiah Basset, *Life of a Vagrant: Or, The Testimony of an Outcast to the Value and Truth of the Gospel* (London, 1850); Thomas Carter, *Memoirs of a Working Man* (London, 1845); James Hawker, 'The Life of a Poacher', in *A Victorian Poacher: James Hawker's Journal*, ed. Garth Christian (Oxford, 1978); Jacob Holkinson, 'The Life of Jacob Holkinson, Tailor and Poet, Written by Himself', *The Commonwealth*, 24 Jan. 1857 and 31 Jan. 1857; Eric Horne, *What the Butler Winked At: Being the Life and Adventures of Eric Horne* (London, 1923); Tommy Mitchell, 'Tommy's Book', Bristol Record Office, TS, B29411 — Pr.2 pb Biog. M–P; George Smith, *The Autobiography of George Smith, 1800–1868: An Autobiography of One of the People* (London, 1923).

<sup>72</sup> James Davis, *Passages in the Life of James Davis, Wandering Musician, Twenty Years on the Road* (Bristol, 1865); *The Life of a Chimney Boy, Written by Himself*, ed. J. Arthur Turner (London, 1901); John Munday, 'Early Victorian Recollections: John Munday's Memories', in Reginald Blunt (ed.), *Red Anchor Pieces* (London, 1928); John Shinn, 'A Sketch of My Life and Times', in *Destiny Obscure: Autobiographies of Childhood, Education and Family from the 1820s to the 1920s*, ed. John Burnett (London, 1982); Joseph Terry, 'Recollections of My Life', Brunel University Library, Uxbridge,

(cont. on p. 36)

But in contrast to the agricultural sector, children here were also vulnerable to failings in the process of transforming male wages into food. Indeed, this almost rivals low incomes as an explanatory force, accounting for six of the instances where children went without. Desertion and abandonment, drunkenness, and (in one case) a breadwinner who couldn't hold down a job, were all implicated as a cause of hunger.<sup>73</sup> In this regard, there is a clear similarity between the behaviour of industrial workers and of skilled non-industrial workers. In both instances, men were able to command a relatively good wage, one that placed them at some remove from the risk of going hungry. Yet these high wages were not translated into better childhood nutrition in a straightforward fashion. Men who could command high wages were also at greater risk of renegeing on their responsibility to provide with the consequence that children's living standards always lagged behind the male wage.

We have thus far considered the hunger experienced by children and by men, as these groups dominate the autobiographical sources. There are two other groups that we should also include in our analysis: adolescents and women. For many individuals, the experience of adolescence was distinct from that of childhood as they left the family home and were therefore no longer dependent on their parents for food. The autobiographies suggest, however, that leaving the family home was no guarantee of a better diet. Of the twenty-three writers who reported hunger during their adolescence, nineteen were boarding with non-family members.<sup>74</sup> Another was residing

(n. 72 cont.)

1:693. In the cases of Shinn and Terry it was ill health, rather than death, that deprived them for a period of their parent.

<sup>73</sup> For desertion, see Thomas Preston, *The Life and Opinions of Thomas Preston, Patriot and Shoemaker* (London, 1817); Henry Edward Price, 'My Diary', Finsbury Library, London, 1032 S/HE. For drunkenness, see John James Bezer, 'The Autobiography of One of the Chartist Rebels of 1848', in David Vincent (ed.), *Testaments of Radicalism: Memoirs of Working-Class Politicians, 1790–1885* (London, 1977); 'Colin' (pseud.), *The Wanderer Brought Home: The Life and Adventures of Colin, An Autobiography*, ed. B. Richings (London, 1864); J. H. Powell, *Life Incidents and Poetic Pictures* (London, 1865). For unreliable breadwinning see Henry Coward, *Reminiscences of Henry Coward* (London, 1919).

<sup>74</sup> Anderson, *Life History of Isaac Anderson*; Robert Anderson, 'Memoir of the Author, Written by Himself', in *The Poetical Works of Robert Anderson* (Carlisle, 1820); John Brown, *Sixty Years' Gleanings from Life's Harvest: A Genuine Autobiography* (Cambridge, 1858); Burdett, 'Memoirs of Joseph Burdett'; [Butler], *Narrative of the Life and Travels of Sergeant B—*; Archibald Campbell, *The Restless* (cont. on p. 37)

with a ‘terrible termagant for a stepmother’ who (he claimed) kept him and his brother in a ‘miserable condition’.<sup>75</sup> Just three were living with their biological family and in each of these instances the individuals were suffering as a part of a broader pattern of hardship endured by the whole family.<sup>76</sup> The experiences of adolescents illustrate the complex relationship between incomes and diets. Boarders, like children, depended upon others to provide their food and most of those who suffered at this stage of life believed their employers lacked the will rather than the resources to feed them properly. We are thus reminded, once again, of the complexity of the process by which earnings were transformed into edible food and the role played by culture in this process.

The final group that we need to consider is women.<sup>77</sup> Unfortunately, however, very few autobiographies were written by women — just seventeen in all — and they cannot sustain close analysis. A number of important questions remain unanswered. For example, while wage earners evidently had greater claims over food than did dependent children, it is not clear how adult women performing the unwaged work of the house fitted into this

(n. 74 cont.)

*Voyage, Being an Account by Archibald Campbell, Seaman, of his Wanderings in Five Oceans from 1806 to 1812, Written and Published in Edinburgh in 1816 and Supplemented and Re-Edited in 1948* (London, 1949); James Corben, *A Langton Quarryman’s Apprentice, 1826–1837: James Corben’s Autobiography*, ed. R. J. Saville (Langton Matravets Local History and Preservation Society, Langton, 1996); James Croll, ‘Autobiographical Sketch’, in James Campbell Iron, *Autobiographical Sketch of James Croll, with Memoir of his Life and Work* (London, 1896); Robert Crowe, ‘Reminiscences of Robert Crowe, the Octogenarian Tailor’, in *Chartist Biographies and Autobiographies*, ed. Dorothy Thompson (London, 1986); Gibbs, *Life and Experience of the Author*; Holkinson, ‘The Life of Jacob Holkinson’; Jewell, ‘Autobiographical Memoir of Joseph Jewell’; William Lawrence, *The Autobiography of Sergeant William Lawrence* (London, 1886; repr. Teddington, 2009); ‘Life of an Irish Tailor, Written by Himself’, *The Commonwealth*, 18 Apr. 1857; Milne, *Reminiscences of an Old Boy*; Mitchell, ‘Autobiography and Reminiscences of George Mitchell’; Hasslewood Taylor, untitled autobiography, East Riding Archives and Local Studies, Beverley, DDX1077/11; Wallis, *Autobiography of Thomas Wilkinson Wallis*; Charles Whetstone, *Truths, no. 1, or, The Memoirs of Charles Whetstone* (n.p., 1807).

<sup>75</sup> Gutteridge, ‘Autobiography of Joseph Gutteridge’, 103.

<sup>76</sup> William Lovett, *Life and Struggles of William Lovett, in his Pursuit of Bread, Knowledge and Freedom: With some Short Account of the Different Associations he Belonged to and of the Opinions he Entertained* (London, 1876; repr. London, 1967); Hillocks, *Hard Battles for Life and Usefulness*; Younger, *Autobiography of John Younger*.

<sup>77</sup> See also Sara Horrell and Deborah Oxley, ‘Bringing Home the Bacon? Regional Nutrition, Stature, and Gender in the Industrial Revolution’, *Economic History Review*, lxxv (2012).

hierarchy. Two writers had believed as children that their mothers stinted their own food so that their children might eat, but two adult female writers indicated that during hard times it was their children rather than themselves who suffered from a want of food.<sup>78</sup> In all, five of the seventeen female writers — nearly a third — recalled going hungry during adulthood, a higher proportion than men (the figure for men was 6 per cent).<sup>79</sup> Clearly, most women spent much of their adult life dependent on a male wage. Their role in buying, preparing and serving food offered them some agency in the distribution of resources within the family, but did not enable women to attain the level of food security that men in certain occupations were able to acquire. And, to repeat once more, as higher male wages also increased the risk of men failing to share their wage with their dependents at all, it is likely that some women experienced deteriorating nutrition that is not evident from the male wage.

## V

Since the writing of Engels in the 1840s, commentators and historians have sought an answer to the apparently simple question: what was the impact of the industrial revolution on ordinary men, women and children? But whereas this question once engaged scholars from across the historical discipline, the past twenty-five years have witnessed a closing down of both methodological perspectives and interpretations, and quantitative approaches have come to dominate the debate. Furthermore, despite the complex picture painted by what now amounts to an extensive literature, the overwhelming majority of recent quantitative studies have been slotted into a pessimistic interpretation that concludes as follows: working people saw little to no gains in their incomes and experienced losses in terms of their working patterns, health and welfare. The evidence from working-class diets disputes these claims and

<sup>78</sup> Burrows, 'Childhood in the Fens'; Langdon, *Life of Roger Langdon*; 'Norfolk Labourer's Wife'; Thompson, 'Good Old Times'.

<sup>79</sup> Mary Ann Ashford, *Life of a Licensed Victualler's Daughter* (London, 1844); Janet Bathgate, *Aunt Janet's Legacy to her Nieces: Recollections of Humble Life in Yarrow in the Beginning of the Century* (Selkirk, 1894); Oakley, 'Autobiography of Elizabeth Oakley'; Mary Smith, *The Autobiography of Mary Smith, Schoolmistress and Nonconformist* (Carlisle, 1892).

suggests that a new perspective on the industrial revolution and its impact on working people is necessary.

While there can be no denying that economic history has served to illuminate many different corners of the human experience of industrialization, it is yet worth taking stock of what it has missed. Two decades of quantitative research has identified the fundamental divergence that opened between rural and industrial districts, but it has never accorded this observation the significance it deserves. We have seen here that early industrial Britain was an economy of (at least) two halves: a dynamic urban/industrial sector set against a stagnant rural one. There can be no understanding living standards without understanding that it is a story with two parts. In towns and industrial districts, men enjoyed higher wages and steady employment. In addition to working longer hours themselves, they also enjoyed the more dubious privilege of being able to send large numbers of their household, including young children, to work as well. Industrial districts offered the prospect of higher family incomes, and as we have seen here, many families chose to invest their extra income in a better diet. In rural England, by contrast, wages and family incomes hardly moved in the first half of the century and agricultural workers and their families consumed a very plain diet, one that must have been insufficient for all the household's needs. But the agricultural sector of the economy remained large right down to 1850, so when urban and rural experiences are pooled the overall appearance is one of little change. Statistics certainly have the power to shed light on certain aspects of historical living standards, but if read out of context they can obscure as much as they reveal.

Quantification has not only served to underplay the dynamism of the industrial regions, it has also helped to preserve a dichotomous interpretation of living standards — optimism versus pessimism — that is long past its sell-by date. The lines on graphs go up or go down, so optimism and pessimism provide a natural framework for the interpretation of results. Yet no less important than the directions in which graph-lines move are a raft of questions about exactly who and what is really being measured by these seemingly objective graph-lines. The answers to these questions are invariably non-binary in nature. We have seen here that underlying average experiences were a

series of more complex stories. Rural society was largely unchanging and remarkably equal, but only because the great majority of workers had so miserably little in the first place. The incomes of industrial families were, on average, higher, but they were also much more divergent. Furthermore, when we look at the autobiographies we see another layer of complexity superimposed. As male incomes rose, their breadwinning became more unreliable, which created new forms of inequality within families as well as between them. Attempting to label these complex developments as good or bad is a futile exercise, and it is futile precisely because so many competing and conflicting forces were at play. The evidence is clear: industrialization ushered in a far more complex, and unequal, society than that which it replaced. It is time to abandon the optimist/pessimist framework and to develop suitably plural, historical approaches and perspectives.

Not only have quantitative approaches tended to flatten out the true complexity of change during the period of industrialization, they have also replicated the world view of those who compiled the records upon which their computations depend. The budgets collected by our gentlemen investigators in the nineteenth century provide a rich seam of evidence about working-class life, but we must never forget that these records are fragmentary and incomplete, and were compiled for purposes other than our own. The investigators may have been (as the statisticians who exploit them are so fond of pointing out) careful and conscientious. But they still brought a complex web of assumptions about how their world operated to bear on everything they did, and these assumptions were refracted in what they asked and what they found. Nineteenth-century data collectors assumed that individuals lived in two-parent families in which all available earned income and unpaid labour were pooled for the common good, and though this assumption worked well for the majority of families in the rural context, it was ceasing to capture the experience of those more closely bound up in the process of industrialization.

It is not immediately obvious how we should reconcile the economic historians' data-mining agenda with the observation that the historical documents they depend on are themselves an act of cultural production, but it is certain that the preference of economic, social and cultural historians to work in their own silos



does little to enhance our understanding of complex historical problems. Scholars outside the sphere of economic history can, and should, play a role in scrutinizing quantitative methods, assumptions and conclusions. Dialogue between different intellectual traditions and the sharing of insights across our self-imposed disciplinary boundaries can only sharpen our analyses.

But my claim is not simply that outside scrutiny can sharpen the analytical focus of quantitative approaches. It is rather that socially- and culturally-oriented approaches deserve a place at the centre rather than the periphery of our attempts to understand living standards. The reason for this is simple: it is because the industrial revolution *was* a social and cultural event, not all elements of which can be captured or interpreted in a statistical series. Industrialization did not just raise wages, lengthen working hours, depress heights, and so on. It wrought fundamental changes in patterns of family life, human existence, and social relations. So long as male wages had provided for no more than the meanest subsistence, all members of the family were tightly bound in a nexus of needs and responsibilities; but when men were able to earn something better than a subsistence wage they — and they alone — were freed from that nexus. And although changes within the family dynamic might at first blush appear a topic for social historians, these developments are also significant for those with an interest in hard economic questions. The boundary between economics and culture was porous and there is no proper understanding of the one without other. This, then, is why the industrial revolution needs its social historians: cultural change lay at the heart of Britain's industrial transition, and contains the key to understanding the social distribution of the nation's newfound wealth.

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**Abstract**

Throughout the twentieth century, historians debated what happened to the living standards of ordinary men, women, and children during the British industrial revolution. But where this historical question once attracted attention from across the methodological spectrum, the past two decades have seen cultural and qualitative approaches eclipsed by statistical accounts written by economic historians. In this article, I will argue that the marginalisation of social and cultural approaches to historical living standards has been to the detriment of our understanding. Through an analysis of two discrete sources of evidence – nineteenth-century budget data and working-class autobiography – this article sheds new light on the diets and living standards of the labouring poor. It rejects the optimism/pessimism dichotomy that continues to frame quantitative analyses and presents a more nuanced account that examines how experiences varied according to region, gender and age. The article concludes that it is not only that it is possible to incorporate cultural change into our analyses of living standards, but that it is necessary to do so in order to grasp this period in all its complexity.