

Glasgow and the Great War:
A Study of Health and Wealth in an Industrial City

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I confirm that the word count of this thesis is less than 80,000 words

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My research has been informed and motivated by the shadows of past generations – Bella and Jimmy who lost both sons but never thought it a pointless war, the MacDonalds who were Independent Labour Party and pacifists, Bob McKend who drove ammunition trucks on the front line for three years, John Dunlop who was a trench runner at 15 years of age and died within the year, grave unknown, Granny Varney who lived with the uncertainty of having three sons and a son-in law at the Front, and William Graham who enlisted after his brother died of wounds and only lasted a month in Ypres.

Perhaps in some small way this thesis honours the memory of those who lived in Glasgow during the First World War; a period with opportunities, privations and many uncertainties.

Summary

Glasgow experienced significant industrial expansion in the nineteenth and early twentieth centuries which brought wealth to the city but also structural social problems, such as poor housing, widespread poverty, and low life expectancy. During the First World War, Glasgow's industrial base was re-directed towards the manufacture of war materials. This led to a buoyant labour market with opportunities for regular and well-paid work in the war industries.

This study of Glasgow seeks to provide a new perspective on the impact of the war on the well-being of the civilian population of a regional industrial city. It will be argued that the war had, overall, a positive impact on social conditions. However, not all benefited from these positive changes.

The principal beneficiaries were unskilled and casual workers, both male and female, who found work in the war industries thus improving the social conditions for a third of the families in Glasgow. This was contingent on wives and older children, as well as main wage earners, being able to undertake war-work. A further third of families in Glasgow suffered increasing hardship during the war. These were families reliant on fixed incomes, such as soldiers' dependants, whose income was progressively eroded by price inflation. The remaining third of families, skilled workers on time rates and the middle classes, either maintained their standard of living or suffered some erosion with little change in their health.

It will be concluded that the overall improvement in health in Glasgow during the war resulted from the marked improvement in the standard of living, and health, among the poorest families who could secure work in the war industries. The war economy benefited the areas of greatest deprivation and lowest life expectancy and halved the health penalty of being poor.

Abbreviations

GCA	Glasgow City Archives
PRO	Public Record Office
TNA	The National Archives
TNT	Trinitrotoluene

Tables, Figures and Maps

The references for the Tables, Maps and Figures show the chapter number followed by the item sequence within the chapter.

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Declaration

I wish to submit the thesis detailed above in accordance with the University of Stirling research degree regulations. I declare that the thesis embodies the results of my own research and was composed by me. Where appropriate I have acknowledged the nature and extent of work carried out in collaboration with others included in the thesis.

Chapter One

Introduction

The concentration of the working population on the relatively highly paid war industries prevented any general suffering. Money was plentiful and employment was available for all.¹

I am a soldier's wife which is a pity seeing the miserable pittance we get to keep body and soul together. If my husband had stayed at home and gone to some of the shipyards or munitions works then we would be getting pounds more per week.²

The First World War changed the lives of civilians in Glasgow. Employment opportunities in the war industries lifted many out of poverty whilst the less fortunate on fixed incomes, such as soldiers' families, suffered hardship due to the inexorable rise in prices. The war created new divisions in a society already one of contrasts. The rapid industrialisation of Glasgow during the nineteenth century had created wealth for the few but this came at the social cost of urban squalor, poverty and poor health for many. The war added a new dimension of opportunities and threats to this established, but polarised, social fabric. This study will consider whether, on balance, the war had a positive or negative impact on the well-being of the civilian population of Glasgow and whether this was a lasting legacy.

For the purposes of this study, well-being is defined as a good or satisfactory condition of existence which reflects the social conditions of a populace; these conditions are determined by a number of factors such as housing, occupational earnings, standards of living, and diet. Well-being assumes a positive relationship between benign social conditions and good health and the converse if social conditions are less favourable. In this study, changes in civilian health will be regarded as a key indicator of social conditions in Glasgow during the war.

In order to explore these social changes, it is first necessary to set the context by exploring the economic and social development of Glasgow during the nineteenth

¹ W.R. Scott and J. Cunnison, *The Industries of the Clyde Valley during the War* (Oxford: Humphrey Milford, 1924), 170-171.

² *Daily Record*, 10 June 1918, extract from a letter from an un-named 'Soldier's Wife'.

and early twentieth centuries in more detail. Glasgow expanded rapidly during the nineteenth century to the extent that it was described as the ‘Second City of the Empire’.³ Shipbuilding, engineering, commerce and shipping brought wealth to the city that was evident in the substantial sandstone mansions, the leafy boulevards and many fine civic buildings. However, expansion had also created significant and intractable social problems: the city was overcrowded with some of the worst slum housing in Europe, a third of the population lived in poverty and mortality rates in the poorer districts were more than double the rates in the affluent suburbs.⁴ At the outbreak of war in 1914, Glasgow may have been a fine city for the few but not for the many who were under-paid, under-employed, with a low life expectancy and who had only known hardship and had little prospect of escaping from poverty.

However, the ensuing war did provide an escape from poverty. Glasgow became a major munitions centre working at maximum capacity to satisfy the insatiable demand for war materials which led to full employment and high earnings for not only skilled men but also for unskilled men, women and youths.⁵ Household incomes for those able to gain employment in the war industries were at levels that would have been inconceivable before the war. Yet, the end of the war was blighted by the influenza epidemic that claimed many lives in Glasgow. After the war, the hiatus of war work was replaced by high unemployment due to depressed trade with Glasgow’s staple industries falling into a long-term decline.⁶ Poverty returned to Glasgow with levels of hardship far greater than had been experienced in the immediate pre-war years.

This study will assess and evaluate the impact of the war on the well-being of the civilian population in Glasgow during the First World War. The transition from Victorian and Edwardian urban poverty to full and well-paid employment on war-related work followed by a severe correction with an extenuated post-war slump was typical of many northern industrial cities in Britain. The quantum of change was

³ C.A. Oakley, *The Second City* (Glasgow: Blackie, 1946), 66, 145.

⁴ Fraser and Maver, *Glasgow Volume 2*, 382; A.K. Chalmers, *The Health of Glasgow, 1818-1925*, (Glasgow: Corporation of Glasgow, 1930), 82; T.C. Smout, *A History of the Scottish People, 1830-1950* (London: Fontana, 1986), 40; M. Fry, *Glasgow: A History of the City* (London: Head of Zeus, 2017), 167-168.

⁵ Scott and Cunnison, *The Industries of the Clyde Valley*, 93-100, 155-159.

⁶ A. Slaven, *The Development of the West of Scotland: 1750-1960* (London: Routledge & Keegan Paul, 1975), 183-209; P.L. Payne, *Growth & Contraction: Scottish Industry, c. 1860-1990* (Economic and Social History Society of Scotland, 1992), 31-32.

perhaps accentuated in Glasgow given its role as one of the main munitions centres in the country and its over-dependence on exporting staple industries that proved to be particularly vulnerable after the war. Glasgow, therefore, provides a useful regional study on the social impact of the war in an industrial city with a history of urban poverty. The study will consider issues such as poverty, housing, household income and expenditure, diet, and health in order to conclude whether the war had a positive or negative impact on the civilian population. The influenza epidemic in the aftermath of the war will also be discussed since it was the most fatal event for civilians in this period. Although the focus is on the war years, the immediate pre-war years will be included to provide context for social changes during the war years and the post-war period up to 1925 will also be considered to confirm whether any changes during the war survived into peace-time.

Industrial unrest was a feature of the period from 1910 to 1925. Cyclical downturns in trade and the erosion in real wages led to industrial action in the immediate pre-war years.⁷ During the war, industrial action was primarily by the craft unions seeking to retain their exclusivity, such as in their opposition to dilution.⁸ After the war, the trade depression and the associated high levels of unemployment led to a significant increase in working-class protest that had a wider base within the manual trades.⁹ The political and economic agenda of this protest led to it being described as the rise of 'Red Clydeside'.¹⁰ It is not intended to study this in depth since much has been written on the rise of the labour movement on Clydeside but less so on the underlying social conditions, which is the focus of this study.¹¹ However, instances of industrial unrest that were related to social conditions will be noted in this study and used as a useful source of primary material.

The research will follow a similar pattern to that of Jay Winter in *The Great War and the British People* in which he concludes that the war had a positive outcome

⁷ See pages 15-17.

⁸ I. McLean, *The Legend of Red Clydeside* (Edinburgh: John Donald, 1983), 28, 96-97.

⁹ See pages 112-115.

¹⁰ K. MacAskill, *Glasgow 1919: The Rise of Red Clydeside* (London: Biteback, 2019), 253-271; McLean, *The Legend of Red Clydeside*, 239-241.

¹¹ Examples of these studies include: W. Kenefick and A. McIvor, eds., *Roots of Red Clydeside, 1910-1914? Labour Unrest and Industrial Relations in West Scotland* (Edinburgh: John Donald, 1996); W. Kenefick, *Red Scotland!: The Rise and Fall of the Radical Left, c. 1872 to 1932* (Edinburgh: University Press, 2007); K. MacAskill, *Glasgow 1919: The Rise of Red Clydeside* (London: Biteback, 2019); I. McLean, *The Legend of Red Clydeside* (Edinburgh: John Donald, 1983); J.J. Smyth, *Labour in Glasgow, 1896-1936: Socialism, Suffrage, Sectarianism* (East Linton: Tuckwell Press, 2000).

for civilians, particularly the poorest, with higher living standards resulting in improved health.¹² This was challenged by Linda Bryder in ‘The First World War: Healthy or Hungry’ citing the increase in pulmonary tuberculosis, a disease more prevalent among the poor, as evidence of malnutrition during the war.¹³ Bernard Harris also challenges Winter based on his study of changes in the heights of school children which he suggests is an indicator of overall public health. Children’s heights did not show a material improvement during the war; consequently, Harris takes the view that changes in public health were simply a continuation of pre-war trends.¹⁴ Other historians have subsequently added to this debate; however, the exchange between Winter and Bryder encapsulates the debate as to whether the war was good for civilians, or otherwise.

Winter and Bryder accept that much of their work was based on national statistics (namely England and Wales) and that the debate would be enhanced by some local studies.¹⁵ This study of Glasgow provides a regional perspective which will complement the existing historiography and inform the debate on wartime welfare. As part of the introduction to this study, more detailed contextual information will be provided on the economic growth of Glasgow in the period leading up to the outbreak of war and the consequential social problems of urban expansion. Following this, the debate between Winter and Bryder will be placed within the evolving historiography on the war from the early inter-war years to the present day.¹⁶ Finally, the structure of this study will be explained with reference to the content of each chapter and the primary sources which have been used during the research process.

¹² J.M. Winter, *The Great War and the British People*, (London: Macmillan, 1985), 213. This is the first of two editions: the second edition was published in 2003. All references to *Great War and the British People* throughout this thesis relate to the first edition published in 1985 unless stated otherwise.

¹³ L. Bryder, “The First World War: Healthy or Hungry?,” *History Workshop Journal*, 24 (1987): 148-150.

¹⁴ B. Harris, “The Demographic Impact of the First World War: An Anthropometric Perspective,” *Social History of Medicine*, 6 (1991): 361; B. Harris, *The Health of the Schoolchild: A History of the School Medical Service in England and Wales* (Buckingham: Open University Press, 1995), 82-87.

¹⁵ On this point see the introduction to the second edition of Winter, *The Great War and the British People*, (London: Macmillan, 2003), 3; and Bryder, “Healthy or Hungry,” 155.

¹⁶ See pages 22-33 of this chapter for a more detailed discussion of the historiography.

Glasgow's Economic Growth

The economic growth of Glasgow was closely tied to the wider region of the West of Scotland and the industrial activity on the River Clyde since industry and trade were intertwined, whether physically located in the city, or otherwise. In the early part of the nineteenth century, a thriving textile industry, principally steam-powered cotton mills, provided the first stage of industrialisation combined with improved transport links by road and steamship. A number of ironworks had been established but output was low due to high costs and inferior quality. The population had grown substantially by 1830 but was still relatively low at 200,000 persons.¹⁷ Between 1830 and 1870, the population increased again to 477,000 persons as iron production and coal mining created further economic growth.¹⁸ The introduction of hot blast furnaces made iron production in the west of Scotland more efficient with an increase in output from 29,000 tons in 1829 to 1 million tons in 1870. Coal production also increased from 650,000-700,000 tons in 1800 to 5 million tons in 1870. The availability of iron and a competence in the use of steam power led to the emergence of a shipbuilding industry which by 1850 had established a strong market position in the building of steam-powered ships built with iron. Although textiles still employed more in 1870 than iron, coal and shipbuilding, the basis of an economy built on heavy industries had been established.¹⁹

The period from 1870 to 1914 is particularly relevant to this study. During this period, the population increased from 477,000 persons to more than 1 million, boosted by 250,000 persons from the incorporation of Govan, Partick and other burghs into Glasgow.²⁰ Steel replaced iron as the preferred material for shipbuilding in this period. This, together with advances in marine engineering, such as the introduction of high-pressure boilers and diesel engines, and the import of higher quality ore supported the further growth of shipbuilding on the Clyde. In the five years preceding 1914, the Clyde accounted for 36 per cent of the tonnage launched in Britain and 21 per cent of the world's output. Coal production in the west of Scotland increased from 11 million tons in 1870 to 23.5 million tons in 1913, albeit that the

¹⁷ Slaven, *Development of the West of Scotland*, 7-8.

¹⁸ J. Cunnison, and J.B.S. Gilfillan, eds., *The Third Statistical Account of Scotland: Glasgow* (Glasgow: Collins, 1958), Table 10, 799.

¹⁹ Slaven, *Development of the West of Scotland*, 8-10; G. Gordon, *Perspectives of the Scottish City* (Aberdeen: Aberdeen University Press, 1985), 10.

²⁰ Cunnison, and Gilfillan, *Third Statistical Account: Glasgow*, 789, 799.

eastern coalfields in Scotland expanded at a faster rate.²¹ North British Locomotive became the largest locomotive manufacturer outside the United States employing 8,000 persons in its Glasgow works.²² The Glasgow economy was now firmly tied to the heavy industries: iron, steel, shipbuilding, and engineering that exported capital goods to developing nations. The newer industries such as chemicals, synthetics and electrical equipment were not pursued since the heavy industries were still in the ascendency.

The dependence on staple heavy industries was a key feature of the pre-war economy in the west of Scotland. This was replicated in Scotland as a whole with mining and heavy industry accounting for 15 per cent of employment in 1907 and shipbuilding 27 per cent.²³ Devine calculates that heavy industry accounted for 30 per cent of Scotland's output in 1901 compared to 21 per cent for Britain as a whole.²⁴ These staple industries were vulnerable to any disruption to international trade; furthermore, these industries relied on relatively low wage costs to remain competitive – any inflation in wage costs would erode their competitiveness in international markets.²⁵ Payne describes the state of the pre-war Scottish economy as one of 'precarious prosperity' due to the maturity of its staple industries, namely coal, iron and steel, engineering and shipbuilding. He further suggests that these industries had inherent weaknesses such as the cyclical nature and low margins in merchant shipbuilding, the depletion of iron ore reserves, the exhaustion of the more accessible coal seams in Lanarkshire and the lack of integration within the iron and steel industry.²⁶ The close trading links between the staple industries and the reliance on exports made the west of Scotland economy vulnerable should the international market for one industry, such as shipbuilding, fail.²⁷

The vulnerability of the west of Scotland economy may be evident to historians from a perspective informed by the post-war slump in the staple industries. However, the west of Scotland economy was not in crisis at the outbreak of war;

²¹ Slaven, *Development of the West of Scotland*, 9-10.

²² I. Maver, *Glasgow*, (Edinburgh: Edinburgh University Press, 2000), 122.

²³ R.H. Campbell, *The Rise and Fall of Scottish Industry, 1707-1939* (Edinburgh: John Donald, 1980), Table 5, 198.

²⁴ T.M. Devine, "Industrialisation," in *The Transformation of Scotland: The Economy since 1700*, eds. T.M. Devine, C.H. Lee & G.C. Peden (Edinburgh: Edinburgh University Press, 2005), 68; Campbell, *Rise and Fall of Scottish Industry*, Table 4, 197.

²⁵ R. Finlay, *Modern Scotland: 1914-2000* (London: Profile Books, 2004), 9.

²⁶ Payne, *Growth & Contraction*, 9-24.

²⁷ Devine, "Industrialisation," 68.

indeed, the evidence suggests that it was an expanding economy that included a number of industries or businesses with significant market positions. An indication of the strength of the west of Scotland economy was the growth in exports from the Clyde which increased from 2.0 million tons, in 1896, to 3.9 million tons, in 1911. Glasgow's shipping lines, such as Allan Line and Anchor Line, prospered becoming providers of freight and passenger services to North America and the Far East. There was diversity in Glasgow's export markets. In 1911, 1.4 million tons were exported to Africa and the Far East, 1.1 million tons to North America, 0.9 million tons to Europe and 0.5 million tons to South America.²⁸ The economy of the west of Scotland may have become over-dependent on staple industries but this had brought growth and prosperity in the years leading up to 1914.

This growth had not been consistent and had been subject to the vicissitudes of the trade cycle which led to poverty and industrial unrest in periods of trade depression. Shipbuilding on the Clyde suffered a downturn in 1884 with only 262,000 tons launched compared to 404,000 tons in the previous year with the market being depressed for four years.²⁹ There was a further slump in 1903 with 16 per cent of the shipbuilding work force unemployed and a more severe down turn in 1908 with up to 24 per cent unemployed.³⁰ However, by 1913, shipyards were again busy with 765,000 tons being launched and unemployment reduced to a residual 1 per cent of the work force.³¹ The fluctuations in output led to insecurity in employment which fostered industrial unrest as workers sought to protect skilled trades and to maximise earnings in the busy periods.

The period between 1910 and 1914 was one of major labour disputes, both locally and nationally. In Britain, disputes were four times as frequent as in the previous decade and six times as frequent in Scotland. In the west of Scotland, the pattern was similar with increased strike activity in mining, shipbuilding, engineering and textiles. There were several reasons for this. Living standards had eroded due to rising prices with prices of basic foods having risen by up to 25 per cent between the late 1890s and 1912 whilst wages had remained static. Unemployment added to the

²⁸ Fraser and Maver, *Glasgow*, Table 2.4, 67.

²⁹ Maver, *Glasgow*, 116-117.

³⁰ Glasgow Labour History Workshop, "The Labour Unrest in West Scotland, 1910-14," in *Roots of Red Clydeside, 1910-1914? Labour Unrest and Industrial Relations in West Scotland*, eds. W. Kenefick and A. McIvor (Edinburgh: John Donald, 1996), Table 1.5, 27.

³¹ Maver, *Glasgow*, 135; Glasgow Labour History Workshop, "Labour Unrest in West Scotland," Table 1.5, 27.

discontent; for example, in the ten years preceding 1913 there had been six years of high unemployment in shipbuilding on the Clyde and only three years of full employment. Employers were also trying to improve productivity and reduce costs in the immediate pre-war years which led to conflict on increased work loads, reduced bonuses, longer hours and the use of cheaper female labour.³²

Factories and shipyards may have been busy in 1914 but there were signs of discontent among many of the working class on the rewards they received for their work. The discontent led to trade union membership increasing in Britain from 2.5 million in 1909 to 4.1 million in 1914 and in Scotland from 120,000 in 1902 to 225,000 in 1914. It also led to the re-emergence of the Labour Party in Glasgow's municipal politics. Industrial disputes were not the preserve of skilled workers in the heavy industries. In 1913 and 1914, unskilled workers, male and female, were involved in disputes, some of which were for union recognition.³³ Public sector workers were also involved in disputes such as the Cleansing Department strike in 1902 for higher wages and the Tramways strike in 1911 for a working week of 51 hours and seven days' holiday. Discontent over job security and the proliferation of short-term contracts added to the municipal workers' discontent.³⁴ Similar disputes took place at Glasgow Harbour between 1911 and 1912 involving 6,400 dockers to gain recognition for the National Union of Dock Labourers and associated demands to ensure greater union control of the system of hiring casual dock labour.³⁵

Political motives may have played a part in this period of industrial unrest but the easing of the job market between 1910 and 1914 allowed long standing grievances on eroding living standards and job insecurity to come to the fore. The unrest did not dissipate with full employment in 1913 but continued up to the outbreak of war in 1914.³⁶ It is evident that the trade fluctuations with associated job insecurity together

³² Glasgow Labour History Workshop, "Labour Unrest in West Scotland," 22-27.

³³ J.J. Smyth, *Labour in Glasgow, 1896-1936: Socialism, Suffrage, Sectarianism* (East Linton: Tuckwell Press, 2000), 73-74; W. Kenefick, *Red Scotland!: The Rise and Fall of the Radical Left, c. 1872 to 1932* (Edinburgh: Edinburgh University Press, 2007), 11.

³⁴ I. Maver, "Glasgow's Municipal Workers and Industrial Strife," in *Roots of Red Clydeside, 1910-1914? Labour Unrest and Industrial Relations in West Scotland*, eds. W. Kenefick and A. McIvor, (Edinburgh: John Donald, 1996), 219, 233-234.

³⁵ W. Kenefick, "A Struggle for Control: The Importance of the Great Unrest at Glasgow Harbour, 1911 to 1912," in *Roots of Red Clydeside, 1910-1914? Labour Unrest and Industrial Relations in West Scotland*, eds. W. Kenefick and A. McIvor (Edinburgh: John Donald, 1996), 137-140.

³⁶ Kenefick, *Red Scotland!*, 85, 128-129.

with the erosion in living standards created uncertainty and discontent among a wide range of skilled and unskilled occupations.

Glasgow's Social Issues

Glasgow may have been notable for its successful industries in the pre-war period but it was also notable for urban poverty and squalor. The pursuit of profit led to the expansion of Glasgow without regard to the consequential health problems created by the rapid industrialisation.³⁷ Low incomes and poor housing combined to consign families to live in poverty and poor health. It is likely that 30 per cent of the population of Glasgow lived in primary poverty with earnings too low and erratic to rescue the family from real need.³⁸ Charity could only have a minor impact on these conditions and the provision of government welfare payments was limited. Parish poor relief and the poorhouse hospitals provided limited alleviation of hardship being constrained by the need to minimise the burden on rate-payers. The most significant challenges facing the poor were overcrowded slum housing, low and inconsistent earnings, an inadequate diet and poor health. These issues will be considered in more depth.

Poor housing had been a significant social concern in Glasgow for many years. Overcrowding in damp, insanitary, one or two room houses in densely populated areas of slum housing was the norm for the poorer working class. The high density of 62 persons per acre in 1911 had existed since 1851 despite the increase in municipal acreage from 5,063 acres to 12,975 acres in the same period. In 1911, 20 per cent of families were living in one-roomed houses and 46 per cent were living in two-roomed houses. In total, some 470,000 of the population were living in overcrowded houses, of whom 75,000 were living in ticketed and 'farmed' houses in particularly poor conditions.³⁹

Attempts had been made to demolish the worst slums by the City Improvement Trust. A programme of demolition had started in 1870 but there was no alternative accommodation for the slum dwellers and the Trust considered that private

³⁷ S. Checkland, "British Urban Health in General and in a Single City," in *Health Care as Social History: The Glasgow Case*, eds. O. Checkland and M. Lamb (Aberdeen: Aberdeen University Press, 1982), 173.

³⁸ Fraser and Maver, *Glasgow Volume 2*, 382.

³⁹ J. Butt, "Working-class Housing in Glasgow, 1851-1914," in *The History of Working-Class Housing*, ed. S.D. Chapman (Newton Abbot: David & Charles, 1971), Table 2.1. See 60, 81 and 86.

enterprise should fill this need. The Trust did build some family tenements as a 'model' design of accommodation but the rents were too high for the poorest tenants. Those evicted from demolished slums simply moved to adjoining districts with cheap accommodation thus exacerbating the overcrowding in these areas. The railway companies purchased land from the Trust for rail access to the city centre that displaced a further 30,000 into adjoining districts. The Trust built thirty-four tenements in the 1890s but opposition from private property interests brought this modest building programme to a halt in 1902.⁴⁰ Slum clearance initiatives had failed to improve housing in the worst areas.

In some respects, supply was not the issue since 11 per cent of the housing stock in 1911 was unoccupied but many families chose to live in cheaper housing due to the risk of irregular work. In 1911, 98 per cent of houses were rented from private landlords with municipal housing only accommodating 10,000 people. After 1904, higher building costs and relatively static rents made house building a less attractive investment and private builders began to withdraw from the working class housing market.⁴¹ Consequently, no new houses were being made available and the housing stock began to deteriorate.

Wages had been increasing modestly but steadily in Britain between 1880 and 1914 with an increase of 1 per cent per annum. In contrast, the cost of living had been decreasing between 1880 and 1900 with marginal increases between 1900 and 1914 although the cost of living in 1914 was still lower than in 1880.⁴² This suggests a long period of relative stability in Britain before the war with improving living standards. However, the industrial unrest on Clydeside in the pre-war years was partly due to the fact that earnings were not keeping pace with price increases which suggests a degradation in living standards. A more significant cause of poverty in Glasgow was low and inconsistent earnings. Charles Booth's studies in London, published in 1889 and 1903, and Seebohm Rowntree's studies in York, published in 1901, had led to a change in perception that poverty was due to irregular or low wages rather than personal failings.⁴³ An unskilled worker in the Clyde shipyards in 1902 earned less than 20 shillings a week which was insufficient to support a family. This presumes a

⁴⁰ Maver, *Glasgow*, 174-176.

⁴¹ Butt, "Working-class Housing in Glasgow," 63, 74, 85.

⁴² A.L. Bowley, *Wages and Income in the United Kingdom since 1860* (Cambridge: Cambridge University Press, 1937), Table VII, 30.

⁴³ I. Gazeley, *Poverty in Britain, 1900-1965* (Basingstoke: Palgrave Macmillan, 2003), 22-23.

week of full employment; whereas, many unskilled workers were employed on a casual or seasonal basis with one in four of men in employment being subject to irregular work.⁴⁴ Casual labour was the norm for many unskilled men such as dockers, carters and general labourers who had little prospect of full or guaranteed employment. Seasonality of employment also led to under-employment; for example, adverse winter weather affected the building industry and the docks with labour not being hired in these quieter months. The clothing industry, which employed many casual women workers, was also seasonal with a quarter of the total female labour force in Glasgow being affected by seasonal demand and irregular work.⁴⁵

Inadequate earnings contributed to an inadequate diet. The traditional diet of the poor of porridge, broth and potatoes was being replaced in the early twentieth century with wheaten bread, tea and potatoes that was less nutritious with an excess of starchy foods and insufficient fat and proteins.⁴⁶ Dorothy Lindsay's survey in 1911/12 showed that families in Glasgow with an income below 20 shillings per week, or where income was irregular, had a diet that was 'quite inadequate for the proper development and growth of the body or for the maintenance of a capacity for active work' with 70 per cent of the families surveyed having an inadequate diet.⁴⁷ Some 30 per cent of children examined by the Glasgow School Board were malnourished and showed signs of rickets, a deficiency disease, with children in the poorer areas being markedly shorter and lighter than in more affluent districts.⁴⁸ The poor were particularly vulnerable to loss of income or increases in prices. A small reduction in income below the 20 shillings threshold resulted in a marked deterioration in diet. Food and rent absorbed between 83 and 92 per cent of the income of poorer families with little or no surplus for other expenses such as heat or clothing.⁴⁹

Low earnings, overcrowded housing conditions and an inadequate diet resulted in poor health and high mortality rates. There had been an improvement in

⁴⁴ Rodger, R., "Employment, Wages and Poverty in the Scottish Cities, 1841-1914," in *Perspectives of the Scottish City*, ed. G. Gordon (Aberdeen: Aberdeen University Press, 1985), 47.

⁴⁵ J.H. Treble, *Urban Poverty in Britain 1830-1914* (London: Batsford Academic, 1979), 16, 22, 60-79; J.H. Treble, "The Seasonal Demand for Adult Labour in Glasgow, 1890-1914," *Social History*, 3 (1978): Appendix 1, 60.

⁴⁶ Fraser and Maver, *Glasgow Volume 2*, 362; I. Levitt, *Poverty and Welfare in Scotland, 1890-1948* (Edinburgh: Edinburgh University Press, 1988), 37.

⁴⁷ D.E. Lindsay, *Report upon a Study of the Diet of the Labouring Classes in the City of Glasgow carried out during 1911-12* (Glasgow: Corporation of Glasgow, 1913), 6, 17-19.

⁴⁸ Fraser and Maver, *Glasgow Volume 2*, 361 and 362; Levitt, *Poverty and Welfare in Scotland*, 91.

⁴⁹ Lindsay, *Study of the Diet of the Labouring Classes*, 32-33.

public health in Glasgow between 1850 and 1914 that was mainly due to fewer deaths from tuberculosis, cholera, typhus, typhoid and scarlet fever as a result of municipal initiatives to supply clean water and provide fever hospitals to isolate and treat the infected.⁵⁰ The death rate had fallen from 27 per thousand between 1875 and 1884 to 18 per thousand between 1906 and 1910 but male life expectancy at birth was still low at 35 years at the end of the nineteenth century. There was a wide divergence in mortality between poor and affluent districts. In the late 1880s, the mortality rate in affluent Blythswood was 16 per thousand but in poorer Bridgegate and Wynd it was 38 per thousand.⁵¹

In the early twentieth century, more died of respiratory diseases, such as bronchitis, pneumonia and pulmonary tuberculosis, than any other categories of disease. Municipal initiatives had failed to improve the quality of air and a pall of smoke from factory emissions and domestic fires lay over the city which contributed to the high incidence of respiratory diseases. Pulmonary tuberculosis had been the most serious of respiratory diseases but mortality rates had reduced between 1870s and 1914.⁵² This may have been due to an improvement in diet or public health initiatives, such as better sanitation and a cleaner water supply. However, the disease was still particularly prevalent in the badly ventilated, and overcrowded, living and working spaces in the poorest districts.⁵³

Deaths from pneumonia increased between 1870 and the early twentieth century with more dying from this disease than heart disease and cancer. As with all respiratory diseases, a combination of pollution and cold, damp weather led to a sharp increase in respiratory deaths.⁵⁴ These respiratory diseases may have been the product of poverty but they also created poverty by the victim becoming a long-term invalid, unable to work or care for the family.⁵⁵ Acute cases from the poorer districts were admitted to the poor law hospitals which provided a basic level of treatment: the

⁵⁰ R.J. Morris, "Urbanisation and Scotland," in *People and Society in Scotland, 1830-1914*, eds. W.H. Fraser and R.J. Morris (Edinburgh: John Donald, 1990), 94; Fraser and Maver, *Glasgow Volume 2*, 353.

⁵¹ Chalmers, *The Health of Glasgow*, 59, 63 and 82.

⁵² Fraser and Maver, *Glasgow Volume 2*, 357.

⁵³ T. McKeown, R.G. Record & R.D. Turner, "An Interpretation of the Decline of Mortality in England and Wales during the Twentieth Century," *Population Studies*, 29 (1975): 97, 411; S. Szreter, "The Importance of Social Intervention in Britain's Mortality Decline c.1850-1914: a Re-Interpretation of the Role of Public Health," *Social History of Medicine*, 1 (1988): 14.

⁵⁴ C. Pennington, "Tuberculosis," in *Health Care as Social History: The Glasgow Case*, eds. O. Checkland and M. Lamb (Aberdeen: Aberdeen University Press, 1982), 94.

⁵⁵ Fraser and Maver, *Glasgow Volume 2*, 358.

voluntary hospitals and the city hospitals were reserved for surgical treatment and the treatment of infectious diseases. By 1914, attitudes had changed towards municipal provision of treatment but facilities were still limited. The invalid had to depend on the Poor Law for both treatment and support of dependants and often they often delayed admission until the disease was beyond treatment.⁵⁶ Respiratory diseases were not only the most fatal group of diseases in Glasgow but they were also most prevalent among the poor who were least able to afford medical treatment.

Infant mortality rates for Glasgow had been 30 per cent higher than the average rate for Scotland for much of the second half of the 19th century although rates had declined from 168 deaths per thousand births, between 1871 and 1875, to 152 deaths per thousand births between 1896 and 1900. This reduction of 10 per cent was significantly lower than the 30 per cent reduction in the overall mortality rate for the same period which underlines the continued vulnerability of infants. The highest mortality rates were in the poorest districts, such as Gorbals and Cowcaddens, with one infant death in every five born in 1898; whereas, there was only one infant death in every thirteen born in more affluent Hillhead and Pollockshields.⁵⁷ There was little improvement in infant mortality rates in the poorer districts in the lead up to the outbreak of the war.⁵⁸

Population density was not the sole cause of high infant mortality since Glasgow had a lower rate of infant mortality than Dundee and Birmingham which had a lower population density per acre than Glasgow but higher infant mortality rates. The number of occupants per room, rather than population density per acre, may have been the main determinant in the incidence of infant mortality. In 1911, 62 per cent of Glasgow's population were living in one or two room houses with occupancy of 3.2 persons per room for single room houses and 2.4 persons for a two room house. The infant mortality rate from infectious and diarrhoeal diseases in the one and two room houses was more than double that of the population living in larger houses with 1.9 persons per room.⁵⁹ Poor maternal health in the poorer districts may have been

⁵⁶ Pennington, "Tuberculosis", 47, 88, 97.

⁵⁷ Chalmers, *The Health of Glasgow*, 190-193.

⁵⁸ Fraser and Maver, *Glasgow Volume 2*, 353, 358-360.

⁵⁹ R.A. Cage, "Infant Mortality Rates and Housing: Twentieth Century Glasgow," *Scottish Economic & Social History*, 14 (1994): 77, 84-85, 91-92.

another factor in the high rates of infant deaths together with difficulty in providing, or affording, a safe substitute for breast milk.⁶⁰

In summary, Glasgow had enjoyed a sustained period of economic growth before the outbreak of war based on a range of export-orientated heavy industries with complementary shipping and commercial interests. The growth had not been uniform and there had been periods of high unemployment that engendered insecurity in the labour market which, together with some erosion in real wages, led to industrial unrest. However, in the immediate pre-war years, the staple industries were enjoying high levels of activity with relatively high levels of employment. The social problems that stemmed from this industrial expansion were significant with almost a third of the population living in poverty. The penalty of being poor in Glasgow was considerable: living from week to week on inadequate and irregular earnings, living in overcrowded accommodation with the spectre of eviction if rent was not paid, a diet which was high on starch but low on nutrients, bearing infants who were more likely to die than the more fortunate and, if they survived, their children would have a diminished stature and a susceptibility to rickets. In adulthood, they would have a much lower life expectancy than in the middle class suburbs with pulmonary tuberculosis, pneumonia, and bronchitis conspiring towards an early death. At the outbreak of war, there was no prospect of an escape from poverty or these adverse social conditions being alleviated.

Evolving Historiography

The economic growth and social issues in Glasgow in the years leading up to the outbreak of war have provided some context to an analysis of the changes in social conditions during the war. Similarly, the evolving historiography of the impact of the war provides context to the debate on the social impact of the war as articulated in the exchange between Winter and Bryder which was referred to at the beginning of this introduction. There are broadly four periods in the historiography which has a national perspective: the interwar years which focused on the economic consequences of the war; the 1960s which was notable for Marwick's argument that the war was a catalyst for social change; the 1980s when Winter focussed on social conditions and suggested that civilian health improved during the war; and the final period from the

⁶⁰ Chalmers, *The Health of Glasgow*, 197-199.

2000s onwards when historians reflected on myths, memories and commemorations of the war. There is also supplementary historiography which does not specifically address the impact of the war but provides a more local perspective relevant to Glasgow and the west of Scotland.

In 1920, John Maynard Keynes set the tone for the historiography of the inter-war years by referring to the bankruptcy and decay of Europe which would lead to ‘a long, silent process of semi-starvation and of a gradual, steady lowering of standards of life and comfort’. Keynes thought England had been impoverished by the war and that the destructive nature of the war was evident in the economic dislocation of the post-war era.⁶¹ This view of the war as a destroyer of economic resources pervaded the historiography of the inter-war years. A series of volumes was published after the war by the Carnegie Endowment for International Peace which set out to ‘measure the economic cost of the war and the displacement which it was causing in the processes of civilisation’.⁶² The twenty-eight volume series had a strong economic bias with scant reference to social issues.

The Carnegie publication by Irene Andrews on the economic impact of the war on women and children provides important information on the war-time employment of women and youths with regard to higher earnings, health hazards and disruption to home life together with a commentary on the return of women to their pre-war roles after the Armistice. In 1921, Andrews was cautiously optimistic that the economic and social advantages enjoyed by women during the war would become more permanent.⁶³ Arthur Bowley’s work on prices and wages between 1914 and 1920 provides invaluable statistical information on wage and price inflation which had a major influence on changes in the standard of living. Bowley shows that retail prices doubled during the war and rose faster than wage increases with parity only being reached towards the end of the war. Of particular note is Bowley’s conclusion that the wage rates for unskilled workers advanced at a greater rate during the war than for skilled workers thus narrowing the differentials between skilled and

⁶¹ J.M. Keynes, *The Economic Consequences of the Peace* (London: Macmillan, 1920), 237, 277; R. Skidelsky, *John Maynard Keynes: Volume One, Hopes Betrayed, 1883-1920* (London: Macmillan, 1983), 384.

⁶² A.L. Bowley, *Prices and Wages in the United Kingdom, 1914-1920*, (Oxford: Humphrey Milford, 1921), v.

⁶³ I.O. Andrews and M.A. Hobbs, *The Economic Effects of the World War upon Women and Children in Great Britain* (New York: Oxford University Press, 1921), 227.

unskilled.⁶⁴ William Beveridge, who worked in the Ministry of Food during the war, published a volume on wartime food control which suggests that the civilian population continued to be relatively well fed despite a sustained campaign of German submarine warfare. In particular, the 'Breadstuffs Policy' to maintain a supply of bread to the working classes at an affordable price was important to the poor who were more dependent on staple foods.⁶⁵

A local perspective was provided by William Scott and James Cunnison's Carnegie volume on the industries of the Clyde Valley during the war, published in 1924, which recorded the extent to which the heavy industries of the area were re-directed towards manufacturing war materials such as shells, artillery, tanks and warships. The insatiable demand for materials required the war industries to work at maximum capacity which led to full employment and provided incentivised earnings to enhance output. Frenetic war-time activity was replaced with slump in 1920-21 due to the fall in world demand for the Clyde's traditional staple products, such as passenger and cargo ships. The slump was severe with almost one in four of the shipbuilding work force in 1921 claiming unemployment benefit. Scott and Cunnison, writing in 1924, could only speculate how long the depressed conditions would continue.⁶⁶

The final volume in the Carnegie series by Francis Hirst, published in 1934, summarised the political, social and economic consequences of the war and set out the destructive consequences of the war on the economy by the erosion of capital, productive wealth and purchasing power. Hirst regarded the depression in the 1920s and early 1930s as a direct result of the war and of the high level of public indebtedness incurred to pay for the war effort.⁶⁷ Of particular relevance to the exporting industries on the Clyde, is Hirst's account of the dislocation to international trade after the war. During the war, the United States and Japan encroached on British export markets in the Far East and South America. Other countries, such as Canada and Australia, developed their manufacturing sector during the war and imported less from Britain after the war. The loss of market share and the introduction of quotas and tariffs by many countries led to exports from Britain being more than halved between

⁶⁴ Bowley, *Prices and Wages in the United Kingdom*, xviii, 106-107.

⁶⁵ W.H. Beveridge, *British Food Control* (London: Oxford University Press, 1928), 81-112.

⁶⁶ Scott and Cunnison, *Industries of the Clyde Valley*, 183-184.

⁶⁷ A.S. Milward, *The Economic Effects of Two World Wars on Britain* (London: Macmillan, 1970), 12-13.

1919 and 1932.⁶⁸ Whereas Hirst gave scant reference to any beneficial social consequences of the war, Bowley introduces a positive note and rare reference to social conditions by citing the improvement in the economic position of women and their more complete enfranchisement, the greater sentiment of democracy among the classes and the acceptance that hardship should be ameliorated through insurance schemes and more socialistic legislation.⁶⁹ The historiography of the interwar years was primarily focused on the destructive impact of the war on the economy – a perspective no doubt influenced by the unemployment and depression of the inter-war years.

During the Second World War, the value of government controls and the benefit of continuing these controls in peace-time led to Richard Tawney making comparisons with the previous war and to the hasty and, in his opinion, unwise abolition of war-time ‘social intervention’ government controls after 1918. Tawney suggests that war conditions did not cease in 1918 and that controls should have been retained during the post-war period of re-adjustment. This view had been articulated by Edward Lloyd in 1924 who noted the benefits of the government’s regulating influence during the war and the co-operation between businesses at a national level and suggested that some of these controls should be retained since they contained the germs of a better order of society and would eliminate the wastes of the competitive system which prevailed prior to 1914.⁷⁰

The growth in the study of social sciences after the war led to a new perspective on the war with a focus on the social, rather than economic, consequences of the war. A key issue was whether the war had brought about social change. Stanislaw Andrzejewski argues that there was a correlation between the extent to which the population was involved in a war and the consequent social change. Richard Titmuss continued this theme based on the experiences of the Second World War.⁷¹ However, Philip Abrams refuted the suggestion that involvement provided leverage stating that only those groups with political power could benefit from

⁶⁸ Hirst, *The Consequences of the War to Great Britain* (London: Oxford University Press, 1934), 266, 278.

⁶⁹ A.L. Bowley, *Some Economic Consequences of the Great War* (London: Thornton Butterworth, 1930), 22, 24, 31, 40.

⁷⁰ E.M.H. Lloyd, *Experiments in State Control at the War Office and the Ministry of Food*, (Oxford: Clarendon Press, 1924), preface.

⁷¹ S. Andrzejewski and R.M. Titmuss quoted in Milward, *Economic Effects of Two World Wars on Britain*, 21-22

involvement in war and cites the demise of the Ministry of Reconstruction programmes due to the lack of political influence of those likely to benefit from these programmes. Conversely, middle-aged propertied women were able to secure the vote since they had political influence through their work as military and civil war workers and temporary civil servants.⁷²

The second period of the evolving historiography of the war, which started in the late 1960s, was defined by Arthur Marwick who introduced the concept of war as a catalyst for social change. Marwick suggested that wars during the twentieth century had brought about social change on a major scale by introducing discontinuity into a hitherto relatively stable social environment.⁷³ Marwick accepts that the First World War was destructive in nature but adds that it also transformed social and political institutions and affirmed and rewarded the role of the working classes and was a stimulus to the arts and political thought.⁷⁴ In 1965, Marwick set out his thesis in his influential work, *The Deluge*, describing the ‘unguided social changes’ from the discontinuity of war that led to an acceleration in social change. The war, Marwick argues, had a dissolving effect on the class structure, led to the growth of the professional middle class, improved working class living standards, reduced primary poverty, and stimulated the growth in mass communications and the aviation and car industries.⁷⁵ Marwick is criticised for failing to differentiate between the social changes which were attributable to the war and those which would have taken place without war, an issue which Bowley had previously accepted as difficult to assess.⁷⁶ Marwick’s thesis of war as an agent for social change has been challenged, particularly with regard to the emancipation, or otherwise, of women.

Marwick states in *The Deluge* that the unique circumstances of the war allowed women to achieve much more than would otherwise have been possible.

⁷² P. Abrams, “The Failure of Social Reform, 1918-1920,” *Past & Present*, 24 (1963): 56-58, 61.

⁷³ A. Marwick, *Britain in the Century of Total War: War, Peace and Social Change, 1900-1967* (London: Bodley Head, 1968), 459-460.

⁷⁴ A. Marwick, “The Impact of the First World War on British Society,” *Journal of Contemporary History*, 3 (1968): 60-63.

⁷⁵ A. Marwick, *The Deluge: British Society and the First World War* (Harmondsworth: Penguin, 1965), 323-333.

⁷⁶ J. M. Winter, review of A. Marwick, *Women at War, 1914-1918* (London: HarperCollins Distributional Service, 1977), in *Economic History Review*, 31 (1978): 154; S.J. Hurwitz, review of A. Marwick, *Britain in the Century of Total War: War, Peace and Social Change, 1900-1967* (London: Bodley Head, 1968), in *American Historical Review* 74 (1969): 1632; Bowley, *Some Economic Consequences of the Great War*, 21.

Society regarded women as important to the war effort which gave them confidence and self-esteem. Some 700,000 women entered the munitions factories between 1914 and 1918 with many other women working in transport, office work and in education. Marwick notes that women from the middle classes achieved economic independence through professional employment that freed them from the economic and social strictures of 'respectable' family conventions. Lower-class women escaped ill-paid life-diminishing drudgery by undertaking well-paid war work which also gave them economic and social independence.⁷⁷ In a later work in 1977, *Women at War*, Marwick suggests that these freedoms had a lasting benefit by providing wider vocational opportunities for women after the war; furthermore, women had a new confidence, a new consciousness, demanding more opportunities and better work conditions. In summary, Marwick states that the possibilities of a happier and more fulfilled life for women were greater after the 'unique circumstances' of the war.⁷⁸

Marwick's views on the emancipation of women have been challenged on a number of counts. Maggie Andrews and Janis Lomas consider that Marwick's evidential base is weak and that he had failed to address the varied experiences of women in this period.⁷⁹ Jay Winter considers that Marwick presents insufficient evidence to substantiate changes in women's rights and social status as a result of the war, other than the post-war extension of the franchise.⁸⁰ Gail Braybon suggests that the experience of better work and new horizons during the war made women resentful when they had to return to traditional female jobs and that the post-war labour market was even more resentful of women in male occupations than before the war. Despite their contribution to the war effort, women were valued after the war for their cheapness, dexterity, tolerance of boredom and low ambition. Braybon notes that there was no material change in the proportion of women and girls over ten years of age employed after the war: the percentage employed in 1921 was 31 per cent compared to 32 per cent in 1914.⁸¹ Gail Braybon and Penny Summerfield in *Out of the Cage* argue that any changes were temporary and that women reverted to their

⁷⁷ Marwick, *Deluge*, 91-94.

⁷⁸ Marwick, *Women at War*, 163.

⁷⁹ M. Andrews and J. Lomas, eds., *The Home Front in Britain: Images, Myths and Forgotten Experiences since 1914* (Basingstoke: Palgrave Macmillan, 2014), 1-2.

⁸⁰ Winter, review of A. Marwick, *Women at War*, 154.

⁸¹ G. Braybon, *Women Workers in the First World War: the British Experience* (London: Croom Helm, 1981), 208, 210, 226, 229.

roles as wives and mothers after the war and were not emancipated as suggested by Marwick.⁸² Deborah Thom observes that women's war work was so circumscribed that the change in employment did not endure and that a substantive cultural change towards women only came much later during the next world war.⁸³ Angela Woollacott concludes in her study of women in the munitions industries that expectations raised during the war gave young women a new index to measure their own subordination in the work place and family after the war which created a bitter awareness of their situation after the war rather than a new confidence and self-esteem as suggested by Marwick.⁸⁴ Marwick's thesis for war as a catalyst for social change for women can be substantiated during the war years only.

The third period of the historiography of the war was defined by Jay Winter in the 1980s and is of particular relevance to this study of civilian health in Glasgow during the war. Whereas Marwick focused on social engineering, Winter was more concerned with social conditions and suggested that civilian health improved during the war, as a result of higher living standards, and that the poorest in society benefited the most. Winter portrays this as a paradox of improved civilian life expectancy during a period of much suffering among the military. Winter's comments suggest a permanence in these improvements; that the worst of Edwardian poverty had been eliminated, the survival chances of working class men improved and that class differentials narrowed and infant mortality rates were significantly reduced.⁸⁵ Linda Bryder challenged these conclusions citing the increase in pulmonary tuberculosis among women during the war. The incidence of this disease, which Bryder has particular knowledge of, tends to be most prevalent where there is poverty and malnutrition. Hence, Bryder argues that the increase in the disease suggests that there was a deterioration in social conditions and not an improvement as suggested by Winter. In addition, Bryder criticised Winter for relying on national statistics (England and Wales) which failed to identify regional differences.⁸⁶ Bernard Harris also takes issue with Winter based on the heights of school children, which he regards

⁸² G. Braybon and P. Summerfield, *Out of the Cage: Women's Experiences in Two World Wars* (London: Pandora, 1987), 131, 281.

⁸³ D. Thom, *Nice Girls and Rude Girls: Women Workers in World War I* (London: Tauris, 1998), 207.

⁸⁴ A. Woollacott, *On Her Their Lives Depend, Munitions Workers in the Great War* (London: University of California Press, 1994), 214-216.

⁸⁵ Winter, *Great War and the British People*, 2, 140, 153.

⁸⁶ Bryder, "Healthy or Hungry," 147-150.

as a sound measure of public health. There was not a consistent and substantive increase in heights during the war; therefore, Harris concludes that the war was a period of continuity of pre-war trends rather than a step-improvement in civilian health as suggested by Winter.⁸⁷

Winter responded to Bryder defending his assertions; however, in later works Winter was more circumspect in his statements on improved civilian health during the war. In his article 'Public Health and the Political Economy' and later in the second edition of *The Great War and the British People*, Winter accepted that there was some force in Bryder's argument albeit that Bryder had based her argument on the increase in pulmonary tuberculosis but had ignored the reduction in other diseases.⁸⁸ Winter set out to corroborate his thesis by complementing his use of national statistics with that for individual cities: Paris, London and Berlin. This research was published in *Capital Cities at War* with the more limited conclusion that civilian mortality in the Allied capitals was no better and no worse than it had been on the eve of the war; furthermore, the pre-war pattern of declining mortality in London had levelled off although recovery was rapid in the immediate post-war years.⁸⁹ This research led Winter to be more cautious in his statements that civilian health improved during the war.

Other historians identified war-time improvements in civilian health. In 1987, Deborah Dwork suggested that 'war was good for babies and young children' since the high loss of life on the Western Front led to maternal and child welfare schemes to preserve infant lives thus redressing the loss of human capital.⁹⁰ Whilst the principle is well argued by Dwork, the evidence for improvements during the war is scant. War may have been good for babies but the benefits accrued after the war. Richard Wall supported Winter's view of improved living standards by showing that free school meals to necessitous children in London reduced significantly during the war. Peter Dewey also concurred with Winter by stating that the great causes of poverty before the war, namely low wages and unemployment, had been laid aside during the war

⁸⁷ Harris, "Demographic Impact of the First World War," 361-366; Harris, *Health of the Schoolchild*, 82-87.

⁸⁸ J.M. Winter, *The Great War and the British People* (London: Macmillan, Second Edition 2003, 3: J.M. Winter, "Public Health and the Political Economy of War, 1914-18," *History Workshop Journal*, 26 (1988): 168-169.

⁸⁹ J. M. Winter and J-L. Robert, *Capital Cities at War: London, Paris, Berlin, 1914-1919* (Cambridge: Cambridge University Press, 1997), 488.

⁹⁰ D. Dwork, *War is Good for Babies & Other Young Children: A History of the Infant and Child Welfare Movement in England, 1898-1918* (London; Tavistock Publications, 1987), 208.

and that the real living standards of the poorest sections of the community rose during the war. Dewey added that not all sections of the community shared equally in this partly due to a progressive income tax policy that reduced net incomes of the more highly paid.⁹¹ The outcome of the third period of historiography is somewhat confused and inconclusive; Winter led the debate on improvements in social conditions but became more hesitant after being challenged by Bryder and the outcome of his own research into civilian health in war-time London.

The fourth, and final, period of the historiography from the 2000s to the present day is more reflective on how the war was remembered and commemorated after the war. This more distant perspective is articulated by Winter as a process of separation from the dead, of forgetting as much as remembering.⁹² The myths or meaning attached to the war were recycled with the passage of time to fit the contemporary cultural, political and emotional context of the period.⁹³ David Reynolds suggests that the war cast a long shadow over the twentieth century during which the conflict was persistently reinterpreted through its own preoccupations.⁹⁴ Adrian Gregory follows this theme by noting that over time, and particularly after the Second World War, the Great War was increasingly renounced as tragic and pointless and cites Niall Ferguson's conclusion in *The Pity of War* that the war was the 'greatest error of modern history'. After 1945, Winter suggests that that older forms of the language of the sacred faded and so had the optimism in the faith in human nature on which it rested: the search for meaning after Auschwitz and Hiroshima became infinitely more difficult.⁹⁵ The developing myth of the 'futile war' contrasts with contemporary opinion during the war which regarded military intervention as necessary to curb German aggression and Gregory considers that this view still held true at the end of the war, despite the large loss of life.⁹⁶ Gary Sheffield argues that it was not a futile war but a forgotten victory although the prevailing view, from a twentieth century perspective, is that the war resolved far less than it set in train and

⁹¹ P. Dewey, *War and Progress; Britain, 1914-1945* (London: Longman, 1997), 31-32.

⁹² J. Winter, *Sites of Memory, Sites of Mourning: The Great War in European Cultural History* (Cambridge: Cambridge University Press, 2014), 224.

⁹³ D. Todman, *The Great War: Myth and Memory* (London: Hambledon, 2005), 221-224.

⁹⁴ D. Reynolds, *The Long Shadow: The Great War and the Twentieth Century* (London: Simon & Shuster, 2013), 420.

⁹⁵ Winter, *Sites of Memory, Sites of Mourning*, 228.

⁹⁶ A. Gregory, *The Last Great War, British Society and the First World War* (Cambridge: Cambridge University Press, 2008), 2-4, 294-296; N. Ferguson, *The Pity of War* (London: Allen Lane, 1998), 462.

that the gulf between expectation of those involved in the conflict and the outcome created the ambiguity in the legacy of the war; the cost in terms of death, mourning and suffering was the unyielding measure by which the outcome was to be judged.⁹⁷ The final period of historiography is a reflective view on the conflict from a twentieth century perspective rather than a study of the impact of the war on those who lived through more than four years of war.

The four periods of historiography are somewhat disparate, but important themes emerge. The impact of the war on the economy was significant and particularly so on Clydeside which became a major munitions centre during the war and benefited from full employment and high earnings but suffered a serious decline afterwards with high levels of unemployment in the 1920s. During the conflict, government controls were greatly extended and pervaded many aspects of industrial activity and social life. The impact of the war on families would depend to a large extent on whether they benefited from war work and the government controls. The theme of war as a social catalyst requires careful investigation; for example, it is evident that women in munitions work enjoyed economic emancipation but whether this survived into peace-time is questionable. The impact of the war on the lives of women is a key issue in the debate on war as a social catalyst. The thesis that war was good for civilian health as a result of higher living standards is central to this study of civilian well-being in Glasgow during the war. The Winter/Bryder debate took place almost twenty years ago and was not concluded. As indicated, the thrust of historiography in the fourth and final period has moved away from the specifics of social conditions to more general and reflective studies; hence, this reinforces the need for a regional study to inform the debate.

There are a number of secondary publications which do not specifically address the social impact of the First World War but provide information relevant to Glasgow. There are numerous histories of Glasgow but only a few of academic interest. An early history by C.A. Oakley provides a somewhat sanitised account of the growth of Glasgow which is portrayed as the ‘Second City of the Empire’ with social problems, such as housing, mentioned in passing but with no greater

⁹⁷ G. Sheffield, *Forgotten Victory: The First World War: Myths and Realities* (London: Headline, 2001), 234; J. Horne, “The Great War at its Centenary,” in *The Cambridge History of the First World War: Volume III Civil Society*, ed. J. Winter (Cambridge: Cambridge University Press, 2016), 635-636.

prominence than say, football.⁹⁸ The period from 1830 to 1912 is covered comprehensively by Hamish Fraser and Irene Maver and clearly outlines the urban expansion and consequential social problems of the period and the extent to which poverty and ill-health had proven to be intractable problems.⁹⁹ Maver's subsequent landscape history of Glasgow highlights some of the war-time issues in Glasgow such as the 1915 rent strike, opposition to the introduction of dilutees and new methods to boost munitions output and the opportunities for women in munitions works. In addition, a succinct and useful account is given on the decline of Glasgow's staple industries in the 1920s and the industrial and social unrest of the period citing the fall in global demand and the emergence of new competitors, such as Japan and America, as contributory factors in this decline.¹⁰⁰ Michael Fry's more recent publication portrays war as progress in that women were drawn into war-work but is silent on the return of women to the home and sweated labour after the war. The theme of external intervention runs through his narrative. For example, war-time militancy, in a workforce previously 'reliable and disciplined', is attributed to interference from London politicians to maximise the output of war materials and that the fate of the post-war Clydeside economy was largely determined by the government in London and international influences. Fry compares the skilful and responsible Clyde workforce with the London work force that was the 'real hotbed of industrial unrest'.¹⁰¹

A number of publications on the social history of Scotland provide useful context and comment on conditions in Glasgow. In *Scotland's Health*, Jacqueline Jenkinson sets out the development of public health services after the war which shows the greater commitment to providing basic health care to a wider section of the population than was the case before the war.¹⁰² Jim Smyth's work on the rise of the Labour Party shows that political action was underpinned by a desire for better social conditions with the Irish-Catholic community being among the poorest and most

⁹⁸ Oakley, *Second City*, 249.

⁹⁹ Fraser and Maver, *Glasgow Volume 2*, 352-387.

¹⁰⁰ Maver, *Glasgow*, 136-139, 192-194, 203-204.

¹⁰¹ M. Fry, *Glasgow: A History of the City* (London: Head of Zeus, 2017), 64, 137-139.

¹⁰² J. Jenkinson, *Scotland's Health: 1919-1948*, (Oxford: Peter Lang, 2002). For example, on changes in maternity and child welfare, see 169-169; on proposed changes to health care provision in Scotland, see 79-81.

disadvantaged sections of the community.¹⁰³ Widespread industrial unrest after the war led to the region being known as ‘Red Clydeside’ although some historians suggest that this was myth promoted by contemporary radical activists.¹⁰⁴ The correlation between industrial unrest and social conditions between 1910 and 1914 has already been noted.¹⁰⁵ William Keneflick suggests that the war was a period of uneasy industrial peace but that experiences during the war aggravated and added to the sense of grievance that had developed before the war.¹⁰⁶ There are more general social histories such as Smout’s *History of the Scottish People* and the two *People and Society in Scotland* volumes that cover many subjects such as population, occupations, schooling, poverty, health and women and work over an extended period before and after the war with limited coverage of the war years.¹⁰⁷

The extensive historiography on the influenza epidemic includes works by virologists and biologists as well as historians and most take a global perspective. Niall Johnson provides a Scottish perspective as does Anthony Butler but there is a dearth of works on the epidemic in Scotland.¹⁰⁸ There is much debate in the historiography as to whether the conditions created by the war led to the emergence of the virus. Jeffrey Taubenberger’s research into the structure of the virus and Michael Worobey’s work on the evolution of the virus are important in determining whether this was the case.¹⁰⁹ John Oxford leads the argument that the virus arose in the crowded conditions on the Western Front.¹¹⁰ If proven, the epidemic deaths in Glasgow would be regarded as war-related and set against any health gains from improved living standards.

¹⁰³ Smyth, *Labour in Glasgow*, 21.

¹⁰⁴ T.C. Smout, *A History of the Scottish People, 1830-1950* (London: Fontana, 1986), 264-267; I. McLean, *The Legend of Red Clydeside* (Edinburgh: John Donald, 1983), 239-241.

¹⁰⁵ Glasgow Labour History Workshop, “Labour Unrest in West Scotland,” 25.

¹⁰⁶ Keneflick, *Red Scotland!*, 85, 129.

¹⁰⁷ W.H. Fraser and R.J. Morris, eds., *People and Society in Scotland, 1830-1914* (Edinburgh: John Donald, 1990); A. Dickson and J.H. Treble, eds., *People and Society in Scotland, 1914-1990* (Edinburgh: John Donald, 1992).

¹⁰⁸ N.P.A.S. Johnson, “Scottish Flu – The Scottish Experience of Spanish Flu,” *The Scottish Historical Review*, 2 (2004): 216-226; A.R. Butler and J.L. Hogg, “Exploring Scotland’s Influenza Pandemic of 1918-19: Lest we forget,” *Journal of the Royal College of Physicians of Edinburgh*, 37 (2007): 362-366.

¹⁰⁹ J.K. Taubenberger, “The Origin and Virulence of the 1918 ‘Spanish’ Influenza Virus,” *Proceedings of the American Philosophical Society*, 150 (2006): 86-112; M. Worobey, G-Z. Han, A Rambaut, “Genesis and Pathogenesis of the 1918 Pandemic H1N1 Influenza A Virus,” *Proceedings of the National Academy of Sciences United States of America*, 111 (2014): 8107-8112.

¹¹⁰ J.S. Oxford, et al, “A Hypothesis: The Conjunction of Soldiers, Gas, Pigs, Ducks, Geese and Horses in Northern France during the Great War provided the conditions for the emergence of the ‘Spanish’ Influenza Pandemic of 1918-1919,” *Vaccine*, 23 (2005): 940-945.

Sources

Most primary resources for this study are located in the Glasgow City Archives held in the Mitchell Library, Glasgow. These archives have useful materials on health, education and poor relief. The principal source for civilian health is the Medical Officer of Health's reports that were published annually, with the exception of the war with one report covering the period from 1914 to 1919.¹¹¹ These reports provide detailed information on births, deaths, population and the causes of deaths together with a narrative on the key health issues in the period. The Medical Officer of Health, Dr A.K. Chalmers, for the years of this study also published a number of papers on health-related issues, such as the relationship between poor housing and ill health.¹¹² Chalmers published a summary of his reports and articles in *The Health of Glasgow* which covers a wide spectrum and is a useful source.¹¹³ The health reports provide limited information on morbidity and it is difficult to find alternative sources. Fraser and Maver commented in their study that much chronic illness, particularly in the poorer areas, would have gone unrecorded due to the cost of medical treatment and that few of the cases were hospitalised.¹¹⁴ There are several accounts by general practitioners who practised in Govan and Gorbals during, and after, the war that confirm the extent of poor health within the poorest districts and support the view that much ill health went unrecorded.¹¹⁵

The School Board of Glasgow and the Govan Parish School published annual reports on pupil numbers, scholastic attainment, attendance and staff numbers together with commentaries on progress and relevant issues for the period.¹¹⁶ An accompanying report from the School Medical Service provided details of medical

¹¹¹ Glasgow City Archives, D-TC 7/11/3/14.22, Report of the Medical Officer of Health, 1908-1925.

¹¹² A.K. Chalmers, "The House as a Contributory Factor in the Death-rate," *Proceedings of the Royal Society of Medicine*, 6 (1913): 155-190; A.K. Chalmers, *The Distribution of Tuberculosis Diseases in Glasgow, with observations on the relation of Phthisis to Room-density* (Glasgow; Corporation of Glasgow, 1897); A.K. Chalmers, *Census 1911, Report on Glasgow and its Municipal Wards* (Glasgow: Corporation of Glasgow, 1912).

¹¹³ Chalmers, *Health of Glasgow*.

¹¹⁴ Fraser and Maver, *Glasgow Volume 2*, 353.

¹¹⁵ G.R. Robertson, *Gorbals Doctor* (London: Jarrolds, 1970); A. Glen, *In the Front Line: A Doctor in War and Peace* (Edinburgh: Birlinn, 2013).

¹¹⁶ Glasgow City Archives, D-ED 9/1/33, School Board of Glasgow, *Annual Reports*, 1914-18 and *Annual Reports: Medical Inspection of Children*, years ending 1914-18; Education Authority of Glasgow (Previous School Board of Glasgow area), years ending 31 July 1919, 1921 and 1925; D-ED 9/1/33, Govan Parish School Board, *Annual Reports*, 1914-18; Education Authority of Glasgow (Previous Govan Board area), year ending 30 June 1919.

inspections and pupil heights and weights.¹¹⁷ The school log books provide an insight into the daily life of schools. Much of the content is mundane but they provide glimpses of the impact of the war on school children, the loss of male staff, visits from teachers on leave, and the consequence of inclement weather and poor health.¹¹⁸ The provision of school meals and clothing to poorer children provides another benchmark on the incidence of poverty. This information is included in the school board reports and the in the minutes of the Committee on Poor and Necessitous Children, a municipal authority committee.¹¹⁹

There is extensive material on poor relief applications. These are particularly useful for a number of reasons. When an application for relief was investigated, a comprehensive report was submitted by the assistant inspector with details of the family and the reasons for the application. The numbers, age, occupation and earnings of each family member were provided together with the size of house and rent paid. The inspector ensured that the information in the report was accurate. The applications provide information on the incidence and causes of poverty and verified details of occupations, earnings and rents which can be used in the studying changes in living standards. The applications to Govan Parish have been used extensively in this study since the the parish covered a spectrum of poor and affluent areas and the applications were fully documented.¹²⁰ The records of benevolent societies and charities, such Quarriers Home, the Dorcas Society and the Gorbals Benevolent Society, are useful to corroborate changes in levels of poverty and distress. Quarriers records provide detailed information on orphans and destitute children and the impact of the war on family life.¹²¹

¹¹⁷ Glasgow City Archives, D-ED 9/1/33, School Board of Glasgow, *Annual Reports: Medical Inspection of Children*, years ending 1914-18; Education Authority of Glasgow (Previous School Board of Glasgow area), years ending 31 July 1919, 1921 and 1925; D-ED 1/4/18, Govan Parish School Board, *Annual Reports: Medical Inspection of Children*, 1914-18.

¹¹⁸ These log books are held in Glasgow City Archives in D-ED 7; for example, D-ED 7.139.3.1, Maryhill Public School, Log Book, 1884-1918.

¹¹⁹ Glasgow City Archives, D-ED 1/1/1/18-22, School Board of Glasgow, *Minutes of Meetings of the Committee on Poor and Necessitous Children*, 1914-18; Glasgow City Archives, D-ED 1/4/4/6, Govan Parish School Board, *Fourteenth Report of the Proceedings of the Board for the Three Years ended March 1914* and *Fifteenth Report of the Proceedings of the Board for the Five Years ended 15 May 1919*.

¹²⁰ Glasgow City Archives, D-HEW 17/732-733, Parish of Govan Combination, Applications for Relief, 1 September 1913 to 30 September 1913; D-HEW 17/753-816, 1 September 1914 to 30 September 1918. The number of applications between 1918 and 1925 were counted but not read in detail.

¹²¹ Archives of Quarriers Home, Bridge of Weir, Renfrewshire, *A Narrative of Facts relative to the Work Done for Christ in connection with the Orphan Homes of Scotland, Consumption Sanatoria of*

There are a number of official publications that comment on social conditions before, and during, the war. The Commission on Physical Training in 1903 and the Committee on Physical Deterioration in 1904 reported on the poor physique in the pre-war period of many in the working classes.¹²² The Report of the Commission into Industrial Unrest in 1917 includes evidence taken in Scotland which gives an indication of the erosion in living standards due to price inflation and the industrial tensions of the period.¹²³ The Report of the Working Classes Cost of Living Committee in 1918 gives detailed evidence on the impact of price and wage inflation on working-class households.¹²⁴ The conclusions may have been coloured by political expediency. The annual reports of the Registrar-General for Scotland and England and Wales provide some useful information but especially so in the special reports on the influenza epidemic.¹²⁵

The primary sources are incomplete in several regards. The lack of information on morbidity has already been identified. There is also a general lack of oral histories or narratives of social conditions other than official or municipal reports. There are numerous private accounts of military service but few of life on the Home Front. The diaries of Tommy Livingstone are a rare exception and will be used in this thesis.¹²⁶ Newspapers, principally the *Glasgow Herald* and the *Daily Record*, provide some commentary on social conditions in Glasgow although the patriotic identification with the war effort precluded any criticism of authority and there was

Scotland and Colony of Mercy for Epileptics, Bridge of Weir, Glasgow and Brockville, Ontario, founded by William Quarrier, Years ending 31 October 1914 – 1919; History Books, HB 36, 40 and 39, 1914-1919; Glasgow City Archives, TD 603/2, Reports of the Dorcas Society in connection with The Victoria Infirmary, 1914-1919; Glasgow City Archives, TD 1136/1/3, Barony of Gorbals Benevolent Society, List of subscribers and Legacies, 1 November 1911 to 1 November 1938.

¹²² Report of the Royal Commission on Physical Training (Scotland), Volume 1: Report and Appendix (HMSO, 1903), Cd. 1507 and Volume II: Minutes of Evidence and Index (HMSO, 1903), Cd.1508; Report of the Inter-Departmental Committee on Physical Deterioration, Volume 1: Report and Appendix (HMSO, 1904), Cd. 2175, Volume II: List of Witnesses and Minutes of Evidence (HMSO, 1904), Cd. 2210 and Volume III: Appendix and General Index (HMSO, 1904), Cd. 2186.

¹²³ Commission of Enquiry into Industrial Unrest, "Summary of Reports," *Parliamentary Papers*, (HMSO, 1917), Cd. 8696: Commission of Enquiry into Industrial Unrest, "Report of the Commissioners for Scotland", *Parliamentary Papers*, (HMSO, 1917), Cd. 8669.

¹²⁴ Report of the Working Classes Cost of Living Committee, *Parliamentary Papers*, (HMSO, 1918), Cd. 8980.

¹²⁵ Registrar-General for Scotland, *Report on the Mortality from Influenza in Scotland during the Epidemic of 1918-19*, Cmd. 282 (HMSO, 1919); Registrar-General for England and Wales, *Report on the Mortality from Influenza in England and Wales during the Epidemic of 1918-19*, (HMSO, 1920), Cmd. 700.

¹²⁶ T.C. Livingstone and R. Scott, ed., *Tommy's War: A First World War Diary, 1913-18*, (London: Harper Press, 2008); T.C. Livingstone and R. Scott, ed., *Tommy's Peace: A Family Diary, 1919-33* (Edinburgh: Mainstream Publishing Company, 2010).

clearly a reluctance to publish reports which might have eroded public morale. This was evident throughout the war and during the 1918/19 influenza epidemic. Despite these limitations, there is a substantial body of primary evidence to determine whether the war had a positive, or negative, impact on the well-being of the civilian population of Glasgow.

Structure

The study has a thematic structure which loosely follows the structure of Winter's *Great War and the British People* and will address the issues of poverty, living standards, adult health, the health and welfare of children, and the influenza epidemic of 1918/19 with a chapter dedicated to each subject. In addition to the study of these areas of interest during the war, the immediate pre-war years and the post-war period to 1925 will be included to provide context for the period of the conflict and to assess whether changes during the war were permanent or transitory.

Chapter 2 examines the incidence and causes of poverty and is closely linked to the third chapter on living standards. The concerns on urban poverty and the poor physique of so many in Britain's cities had surfaced before the war. Low wages, irregular work, indolence and 'being given to drink' were postulated as contributory factors. The chapter uses the poor relief applications to Govan Parish in September 1914 to identify the main causes of poverty at the beginning of the war. This provides a fresh perspective on the causes of urban poverty. Following this, the poor relief applications during the war will be analysed to assess changes in the causes and incidence of poverty. This information is set against Winter's bold statement that the war conditions eliminated the worst of Edwardian poverty. The study sets out to identify whether poverty varied by time and cause but also whether particular sections of the community suffered more than others in this period. Some may have endured poverty without recourse to poor relief. Other sources, such as charitable society records and the provision of meals and clothing in schools, will be used to provide an alternative perspective. Finally, the chapter will conclude by extending the study of poor relief applications for the post-war years up to 1925 to determine whether any reduction in poverty during the war continued into peace-time. It will also look at whether attitudes towards welfare payments for the needy, particularly the able-bodied unemployed, had changed compared to that pertaining before the war.

Chapter 3 sets out to consider changes in living standards across the social spectrum. The research will examine a number of the factors that determine an individual's standard of living: namely, housing, price and wage inflation, food prices and supply and diet. Given the opportunities in Glasgow for war-related work, the chapter will evaluate the changes in occupational earnings in the war industries for skilled and unskilled workers with particular reference to the opportunities for higher earnings for women and juveniles. Winter suggests that the poorest benefited the most during the war. The study will make a detailed study of household income and expenditure to confirm whether changes in living standards were social-class specific. It will be apparent that there were wide differences in the changes in living standards and estimates will be formulated as to the proportion of families who benefited as against those disadvantaged. The chapter will conclude by noting the changes after the war to determine whether war-time changes were permanent, or otherwise, and whether living standards in Glasgow differed from those in other parts of Britain in the immediate post-war years. The combination of Chapters 2 and 3 is intended to provide a useful insight into the changes in social conditions in Glasgow and to identify which sections of the community suffered hardship. It will therefore evaluate whether, on balance, the war had a positive or negative impact on living standards.

Chapter 4 focuses on the key area of the changes in adult health during the war; key in that health is reflective of the well-being of a community. Winter presents this as a paradox suggesting that civilian health improved despite the social privations of the war with the caveat that the improvement was most evident among the poorest. Health could be considered as the most reliable guide on whether civilian well-being improved during the war. The research for this chapter focuses on mortality rather than morbidity since death was recorded but morbidity was not, particularly in the poorer areas. There had been some improvements in public health before 1914 but mortality rates were still high with wide differentials between poor and affluent districts. The chapter looks first at the changes in overall mortality rates during the war then changes in the causes of death. The incidence of infectious diseases and respiratory diseases is volatile dependent on cycles of infection and inclement weather. The assessment of health trends will be based on a calculation of mortality which excludes these more volatile diseases and will provide a sounder measure of underlying changes in health. The incidence of tuberculosis and respiratory diseases will be considered in some depth since both were more prevalent in poorer districts.

Changes in the mortality rates between social classes during the war will be quantified by comparing the mortality rates for groups of municipal districts with each group broadly representing a social class. This will show whether the health penalty of being poor changed during the war. The chapter concludes by assessing whether war-time changes in health survived the transition to peace-time.

The following chapter continues the theme of health with a study of the health of children; however, Chapter 5 takes a wider view to consider the changes in attitudes towards children, and their welfare, during the war. There are several reasons why this chapter is appropriate. Children accounted for almost a third of the population of Glasgow and were most numerous in poorer areas, where infant mortality rates had proved to be intractably high. The chapter will determine whether infant mortality reduced during the war at a greater rate than hitherto and if the attrition of war on the Western Front led to an improvement in child and maternal welfare on the Home Front, as suggested by Dwork.¹²⁷ The health of school-age children will be assessed by examining trends in the heights and weights of school children which were cited by Harris as evidence of continuity of long-term trends rather than a step-change improvement.¹²⁸ The chapter then moves on to wider issues of children's lives during the war. Home life and the consequences of absent fathers and working mothers will be considered with regard to juvenile misbehaviour and increased referrals to orphans' homes. Schooling and whether standards were maintained during a challenging and disruptive period will also be examined. Finally, the change in attitudes from paternalistic protection, at the beginning of the war, to absorbing children into the war effort towards the end of the war is also explored. Of particular note, is the use of children as a conduit to raise large sums for war materials through the purchase of war bonds. The chapter concludes by considering whether post-war reconstruction made a substantive difference to maternal and infant welfare and the education of school children. Was war a catalyst for change?

Chapter 6 will research the influenza epidemic of 1918/19 for two reasons. Firstly, it was most fatal event for civilians in Glasgow in the period of this study and the assessment of underlying health requires a sound estimate of the death toll of the epidemic, which was quite exceptional in many regards, and it will be argued that these deaths should be excluded from this assessment. The nature of the disease led to

¹²⁷ Dwork, *War is Good for Babies*, 208.

¹²⁸ Harris, *Health of the Schoolchild*, 8.

many deaths in Glasgow not being attributed to influenza which requires a re-assessment of mortality as a result of the epidemic. Secondly, it could be argued that the virus originated as a result of the war and that war-time social conditions added to the death toll. If proven, the epidemic deaths should be set against any health gains identified in previous chapters and could materially alter the conclusions of the study into the impact of war on the well-being of the civilian population in Glasgow. In conclusion, the question will be posed as to whether the high death toll during the epidemic led to a change in attitudes towards a more comprehensive system of public health care after the war which was available across the social spectrum.

The conclusion will make an informed judgement on whether the war had a positive, or negative, impact on the well-being of the civilian population of Glasgow. However, it seeks to do more than simply side with Winter or Bryder. The historiography treats the war years as a homogeneous period but social conditions may have varied during the war for a number of reasons such as the disconnect between price and wage inflation, the increase in munitions work mid-way through the war and shortages of food towards the end of the war. The study will consider whether there were distinct periods of hardship and relative affluence during these four years. Glasgow had endemic social problems on the outbreak of the war with many causes mooted for the poverty and squalor, including indolence, alcohol and low morals. This study is an opportunity to determine the effect of full employment on poverty to establish whether low and irregular earnings were the root cause rather than personal failings. The historiography makes many comments on social classes as if they were homogeneous groups; this study will seek to understand the wide differences in outcomes for families within the same social class due to personal circumstances; for example whether the main wage earner had enlisted or was a 'stay at home' working in the war industries. A recurring theme in all chapters is the extent to which the war was a catalyst for social change. In some respects, the 1920s were as important as the war years in determining whether the war had been a catalyst for change. This area will be considered in each chapter and the findings summarised in the concluding chapter. The period up to 1925 is used for this assessment; after this, the period becomes subsumed by the issues of the inter-war years, which would be a useful further study, but outwith the scope of this work. In summary, the study sets out to establish whether the war had a positive, or negative, impact on the well-being of the civilian population of Glasgow.

Poverty Eliminated or Alleviated?

The Great War created the conditions which helped eliminate some of the worst features of urban poverty which lay behind the appallingly high death rates of late-Victorian and Edwardian Britain.¹²⁹

This study of the impact of the war on the well-being of Glasgow's civilian population continues with two linked chapters. This chapter will identify the changes in the incidence and causes of poverty before, during, and after the War through to the mid-1920s with particular reference to Jay Winter's statement, cited above, that conditions during the war eliminated much of the poverty evident in the pre-war period. The next chapter will consider in more detail the changes in living standards during the war including housing, household income, retail prices, food supply and diet. Together, both chapters should provide an understanding of the conditions that had a material impact on the welfare of Glasgow's civilian population during the War.

Poverty can be an elusive condition to define and measure. The early social researchers, Charles Booth and Joseph Rowntree, defined poverty as a state of want of basic necessities, such as an adequate diet, which were essential for physical development. Booth and Rowntree quantified the minimum requirements for the maintenance of physical development and classified those living below this level as being in poverty.¹³⁰ Recently, this definition of poverty has been replaced by the concept of relative poverty. For example, the Joseph Rowntree Foundation's *2018 Report on Poverty in the United Kingdom* uses a measure that assesses the extent to which families do not participate in the wealth enjoyed by the wider population.¹³¹ It is a measure of exclusion from society due to low means rather than of a state of want of basic needs, as defined by the early social researchers. This study adopts the definition of poverty as a state of want of basic necessities which compromised

¹²⁹ J.M. Winter, *The Great War and the British People* (London: Macmillan, 1985), 140.

¹³⁰ C. Booth, *Life and Labour of the People of London*, (London: Macmillan, 1902), 308-309; B.S. Rowntree, *Poverty: A Study of Town Life* (London: Macmillan, 1908), 86-87.

¹³¹ Joseph Rowntree Foundation, *UK Poverty 2018: A Comprehensive Analysis of Poverty Trends and Figure*, 11. Accessed from www.jrf.org.uk on 1 February 2019. The poverty measure used is where a family has an income of less than 60 per cent of median income for their family type, after housing costs. Since the measure is tied to the median, as the population as a whole becomes more or less affluent, the measure of poverty also changes. It is, therefore, a measure of relative inequality.

physical development since the focus of this study is health and well-being. It was also the contemporary definition of poverty during the war years and the basis for the assessment of poor relief applications in this period.

As noted in the previous chapter, the expansion of Glasgow in the nineteenth century had resulted in significant social problems where ‘poverty, dirt, misery, drunkenness, disease and crime culminate in a pitch unparalleled in Great Britain’.¹³² Before the War, some 30 per cent of the population lived in poverty dependent on low wages and intermittent work which was similar to other urban communities in this period.¹³³ However, Glasgow was distinctive in that the transition from Edwardian social deprivation to war-time full employment then post-war slump was perhaps more accentuated than in many other cities. During the War, Glasgow became a major munitions centre with the whole Clyde area being transformed into a vast machine for ministering to the insatiable demands of the forces’.¹³⁴ The war effort led to a period of full employment that strained the local economy and its labour force. After the war, the staple industries contracted and went into a period of depressed trade with high levels of unemployment; for example, by 1922, one-third of the shipbuilding work force was unemployed.¹³⁵ In 1925, Bowley found that poverty in Northampton, Warrington and Bolton was less than half that of 1913 levels; whereas, in Glasgow it was fifty per cent higher than the pre-war level.¹³⁶ The high levels of employment in war-related work in Glasgow and the consequent effect on poverty should show whether Winter was correct to state that conditions during the War helped to eliminate some of the worst features of urban poverty. Furthermore, the levels of hardship after the Armistice through to the mid-1920s will show whether any such improvement was permanent or transitory.

Winter’s thesis has been challenged principally by Linda Bryder and Bernard Harris who do not consider that social conditions improved during the War to the

¹³² The description of social conditions was included in the evidence given by G.C. Symonds, Barrister, to the Royal Commission on Hand-Loom Weavers in 1839 quoted in *Glasgow, Volume 2: 1830-1914*, eds. W.H. Fraser and I. Maver (Manchester: Manchester University Press, 1996), 378. See Chapter 1, pages 16-21 for fuller information on social conditions in Glasgow.

¹³³ Fraser and Maver, *Glasgow Volume 2*, 379-382.

¹³⁴ W.R. Scott and J. Cunnison, *The Industries of the Clyde Valley during the War* (Oxford: Humphrey Millford, 1924), 181.

¹³⁵ A. Slaven, *The Development of the West of Scotland: 1750-1960* (London: Routledge, 1975), 183-184.

¹³⁶ A.L. Bowley, *Has Poverty Diminished?: A Sequel to ‘Livelihood and Poverty’* (London: P.S. King & Son, 1925), Table E, 18.

extent suggested by Winter. Neither provide alternative evidence on the levels of poverty but Bryder uses information relating to infectious disease and Harris utilises the average height of school children to conclude that there had not been a material improvement in social conditions during the war.¹³⁷ This study will show that Winter was correct in that conditions during the war led to a significant reduction in poverty in Glasgow but that not all benefited from this reduction. In addition, it will be argued that Winter's thesis is only valid for the period of the war and that the improved social conditions did not survive the transition to peace-time.

Winter and the Elimination of Poverty

In his initial study on civilian health in Britain during the Great War, J.M. Winter states that the war had not been won at the expense of civilian health.¹³⁸

Subsequently, Winter went further and suggested that civilian health in Britain had improved during the war albeit that this improvement was not uniform or universal. For example, mortality rates among the elderly in England and Wales had increased during the war as had deaths from tuberculosis. Also, the more highly paid male occupational groups had only experienced a minimal improvement in health and the relatively good health record of some occupational groups, such as miners and textile workers, had been eroded during the war.¹³⁹

However, Winter concludes from his studies that there had been an absolute, and relative, improvement in the survival chances of manual male workers compared to other occupational groups and that this was most evident among the lowest-paid groups.¹⁴⁰ This was based on data for five million workers in England and Wales who had been insured with the Prudential Assurance Company. Winter adds that the improvement in health was not limited to manual male workers since women's health also improved during the war with fewer deaths from infectious diseases which he attributes to improved nutrition. Furthermore, Winter argues that the marked

¹³⁷ L. Bryder, "The First World War: Healthy or Hungry?," *History Workshop Journal*, 24 (1987): 142-149; B. Harris, "The Demographic Impact of the First World War: An Anthropometric Perspective," *Social History of Medicine*, 6/3 (1991): 353, 358; B. Harris, *The Health of the Schoolchild: A History of the School Medical Service in England and Wales* (Buckingham: Open University Press, 1995), 85, 87.

¹³⁸ J.M. Winter, "The Impact of the First World War on Civilian Health in Britain," *Economic History Review*, 30 (1977): 503.

¹³⁹ Winter, "Impact of the First World War on Civilian Health", 502; Winter, *The Great War and the British People*, 115-116, 153.

¹⁴⁰ Winter, *Great War and the British People*, 116.

reduction in infant mortality, that had been most evident in the poorer urban communities, resulted from improved nutrition for mothers and weaned infants. Winter draws a strong correlation between these lower mortality rates and a reduction in the levels of poverty concluding that conditions during the war helped to eliminate some of the worst features of urban poverty which had caused the high death rates of late-Victorian and Edwardian Britain.¹⁴¹

The Challenge to Winter

Bryder discounts the use of the Prudential data since it takes no account of regional differences and is incomplete in that only the more well-paid occupations could afford insurance premiums. Bryder challenges Winter's position by citing female mortality figures which show that there had been a twenty-five per cent increase in tuberculosis deaths in England and Wales between 1913 and 1918 with women between twenty and twenty-five years of age having suffered a higher increase of thirty-five per cent in this period. Bryder suggests that this may have been due to a deterioration in diet since the disease is often prevalent where there is malnutrition.¹⁴² Furthermore, Bryder argues that lower infant mortality was due to a reduction in the consumption of milk rather than improved nutrition, as suggested by Winter. Milk, which was often contaminated and the cause of infantile gastro-enteritis, had become too expensive for poorer families.¹⁴³

Bryder is not persuaded by Winter's suggestion that poverty had reduced during the war arguing that war-related work may have provided improved incomes for some but rising prices would have led to a deterioration in living standards for those not employed on war related work and those on fixed incomes. Bryder, therefore, finds no evidence to support Winter's thesis that the levels of poverty reduced during the war or that Britain became a healthier place to live.¹⁴⁴

Bernard Harris considers that Winter has exaggerated the beneficial effects of the war on civilian health. In particular, Harris does not accept that infant mortality declined during the war and suggests infant mortality declined between 1900 and 1930 without a notable acceleration in decline in the war years. Furthermore, Harris

¹⁴¹ Winter, *Great War and the British People*, 140, 151-152.

¹⁴² Bryder, "Healthy or Hungry?," 142-149.

¹⁴³ Bryder, "Healthy or Hungry," 150; P.J. Atkins, "White Poison? The Social Consequences of Milk Consumption, 1850-1930," *Social History of Medicine*, 5/2 (1992): 226-227.

¹⁴⁴ Bryder, "Healthy or Hungry," 153-155.

finds no evidence to support Winter's statement that there was a greater fall in mortality rates in the poorer areas.¹⁴⁵ Harris promotes the use of children's heights as a useful indicator of a population's health and well-being. The modest and inconsistent increase in children's heights across a spectrum of communities during the war was smaller than the increase in heights between 1918 and 1939 which suggests to Harris that the war had relatively little effect on children's health. However, Harris accepts that children born during the war tended to be taller than those born before the war but Harris is hesitant to attribute this to war-time conditions. The absence of a substantive and consistent increase in children's heights leads Harris to conclude that public health did not improve during the war.¹⁴⁶ Whilst not referring directly to poverty, Harris rejects Winter's thesis of an improvement in social conditions during the War.

Winter's Response

Winter did not respond to Harris but did to Bryder. Winter rightly suggests that Bryder's dismissal of the Prudential data was unreasonable given that it represented half of the industrial labour force of England and Wales, although he accepts that some lower-paid workers were excluded. With regards to increased female mortality from tuberculosis, Winter ascribes this to more women having entered the work place and being in crowded conditions which facilitated the spread of infection, rather than women being malnourished. Furthermore, Winter notes that the disease only accounted for six per cent of total mortality in England and Wales and that the gains in other categories of disease were greater than the increase in deaths from tuberculosis. The reduction in infant mortality was due to a reduced incidence of a range of diseases not just gastro-enteritis, as indicated by Bryder. Consequently, Winter continues to hold the view that infant mortality fell due to working-class families being better fed rather than due to a reduced consumption of contaminated milk.¹⁴⁷ However, the challenge to his views did lead Winter to modify his position on the beneficial consequences of the war for civilians. His subsequent study of London showed a wide variation in the impact of the war on civilian health with

¹⁴⁵ Harris, "Demographic Impact of the First World War," 353, 358.

¹⁴⁶ Harris, *Health of the Schoolchild*, 85, 87; Harris, "Demographic Impact of the First World War," 366.

¹⁴⁷ J.M. Winter, "Public Health and the Political Economy of War, 1914-18," *History Workshop Journal*, 26 (1988): 139, 164 and 168.

regards to age and gender. Given these contradictory findings, Winter suggests that some of the optimistic findings in his earlier studies need to be qualified in relation to London.¹⁴⁸ In the second edition of the *Great War and the British People*, in 2003, Winter acknowledges the criticisms of the first edition and with the evidence gathered in the study of London makes the more measured statement that during the War ‘standards of living and standards of health were relatively well defended’.¹⁴⁹

Subsequent historiography has repeated the exchanges between Winter and Bryder/Harris without adding to the debate. Peter Dewey refers to the differing views and sides with Winter without presenting new evidence but adds that the two great causes of poverty – low wages and unemployment – were set aside during the War.¹⁵⁰ Ian Gazeley agrees that there was some improvement in working-class living standards but emphasises the improvements in real wages and earnings after the War.¹⁵¹ Alan Simmonds repeats Dewey’s comment that, during the war, the causes of pre-war poverty were temporarily held in abeyance.¹⁵² Others have ignored the issue; for example, Glennerster, *et al*, ignore the war years in their 100 year survey of poverty for the Rowntree Foundation as does Noel Whiteside in her survey of twentieth-century unemployment; however, Whiteside had previously noted that the demand for labour had reduced the number of ‘unemployables’ during the war years to insignificant proportions.¹⁵³ The historiographical debate on the impact of the war on living standards, and poverty in particular, has not materially changed since the 1980s with Harris having provided the only contribution in the last thirty years. This study on poverty in Glasgow will broadly support Winter although the beneficial change in social circumstances was short lived in that the immediate post-war years brought great hardship to Glasgow.

Bryder criticises Winter’s use of national statistics (although she used national statistics for deaths from tuberculosis) and calls for more detailed local studies to establish the correlation between poverty and health and the extent to which this

¹⁴⁸ J. M. Winter and J-L. Robert, *Capital Cities at War: London, Paris, Berlin, 1914-1919* (Cambridge: Cambridge University Press, 1997), 519.

¹⁴⁹ J.M. Winter, *The Great War and the British People* (London: Macmillan, Second edition 2003), 3.

¹⁵⁰ P. Dewey, *War and Progress; Britain, 1914-1945* (London: Longman, 1997), 32, 36.

¹⁵¹ I. Gazeley, *Poverty in Britain, 1900-1965* (Basingstoke: Palgrave Macmillan, 2003), 61, 64.

¹⁵² A.G.V. Simmonds, *Britain and World War One* (Abingdon: Routledge, 2012), 171, 175.

¹⁵³ H. Glennester et al., *One Hundred Years of Poverty* (York: Joseph Rowntree Foundation, 2004), 67-79; N. Whiteside, *Bad Times, Unemployment in British Social and Political History* (London, Faber & Faber, 1991), 48-69; N. Whiteside, “Unemployment and Health: A Historical Perspective,” *Journal of Social Policy*, 17 (1988): 192.

changed during the war.¹⁵⁴ It is perhaps significant that Winter's views changed after he carried out a local study on London.¹⁵⁵ It is intended to inform this debate by researching the impact of the war on poverty in this chapter and living standards in the following chapter in relation to Glasgow.

This study will be in four parts. Firstly, the incidence and causes of urban poverty in Britain in the years preceding 1914 will be considered together with an assessment of the causes of the poverty that prevailed in Glasgow at the start of the war based on the applications to Govan Parish for poor relief in September 1914. Govan Parish was part of Glasgow and had a mix of affluent and poorer areas and kept detailed records of poor relief applications. Secondly, changes in the incidence and causes of poverty in Glasgow during the war years will be assessed using the Govan poor relief applications and compared to the contemporary views on the causes of poverty before the war. Thirdly, since some families may have endured poverty without resorting to parish relief, other evidence such as school medical records, the provision of meals and clothing in schools for needy children, and the records of benevolent societies, will be used to support, or otherwise, the conclusions derived from the poor relief applications. Fourthly, the incidence of poverty in the years following the end of the war through to 1925 will be considered to establish whether the changes in the levels of poverty continued through to peace-time.

Poverty in Britain before 1914

The first part study considers the incidence and the study of poverty in the period leading up to the outbreak of war. Charles Booth and Seebohm Rowntree published social research in the early 1900s which showed that some three out of ten in an urban population in Britain lived in poverty with one in ten being 'very poor'. Booth's study in London showed that twenty-six per cent of the population in Central London lived in poverty with fifteen per cent being described as being very poor.¹⁵⁶ Rowntree's study in York also showed that some twenty-eight per cent of the population lived in poverty with ten per cent living in primary poverty. Rowntree classified poverty as being either primary, where income was insufficient to maintain the family in a condition of physical efficiency, or secondary, where income was sufficient to support

¹⁵⁴ Bryder, "Healthy or Hungry," 155.

¹⁵⁵ Winter and Robert, *Capital Cities at War*, 519.

¹⁵⁶ C. Booth, *Life and Labour of the People of London*, (London: Macmillan, 1902), 308-309.

the basic minimum but imprudent use of income placed the family in poverty.¹⁵⁷ In 1913, Arthur Bowley and Alexander Burnett-Hurst found that between six and seventeen cent of the population in Northampton, Warrington and Reading lived in primary poverty.¹⁵⁸ Whilst there had not been equivalent studies in Glasgow, it is likely that poverty in Glasgow in this period was similar with some thirty per cent of the population living in poverty.¹⁵⁹

A range of contributory factors was mooted as the causes of poverty in Britain before the war which included low pay, irregular work, adverse family circumstances, personal failings or that poverty was age-related. Contemporary opinion was divided on whether poverty was the result of idleness or the inability to obtain a decent wage. This difference of opinion was reflected in the report of the Royal Commission on the Poor Laws and Relief of Distress in 1909 which could not agree on whether poor relief should be based on deterrence, to discourage idleness, or assistance to pre-empt poverty.¹⁶⁰ Rowntree and Booth had differing views on the principal causes but they generally favoured inadequate income as the main cause of poverty in Britain. Using poor law data from the district of Govan, then part of Glasgow, it will be argued that adverse family circumstances, rather than inadequate incomes, were the predominant cause of poverty in Govan at the outbreak of war.

Rowntree suggested that low wages was the principal cause of poverty with low wages having accounted for half of those in primary poverty in York.¹⁶¹ Bowley and Burnett-Hurst also identified that two-thirds of the primary poverty in Warrington, Reading and Northampton was due to low wages.¹⁶² Most adult males in Britain on low pay in this period were unskilled labourers earning between 19s. and 24s. per week which Rowntree and Bowley considered to be too low to support a family of more than three children. Maud Pember Reeves highlighted the difficulty of

¹⁵⁷ B.S. Rowntree, *Poverty: A Study of Town Life* (London: Macmillan, 1908), 86-87, 117.

¹⁵⁸ A.L. Bowley and A.R. Burnett-Hurst, *Livelihood and Poverty: A Study in the Economic Conditions of Working-Class Households in Northampton, Warrington, Stanley and Reading* (London: Bell and Sons, 1915), 39.

¹⁵⁹ Fraser and Maver, *Glasgow Volume 2*, 382.

¹⁶⁰ J. Seabrook, *Pauperland: Poverty and Poor in Britain* (London: Hurst, 2013), 132-133; C. Renwick, *Bread for All: The Origins of the Welfare State* (London: Allen Lane, 2017), 53-57.

¹⁶¹ Rowntree, *Poverty*, 120.

¹⁶² Bowley and Burnett-Hurst, *Livelihood and Poverty*, Table IX, 40.

living in Lambeth, London, on 20s a week which did not provide for essential needs.¹⁶³

Conversely, Charles Booth identified irregular work as the cause of forty to fifty per cent of all cases of poverty which was supported by Richard Tawney, a contemporary observer in Glasgow, and later by James Treble.¹⁶⁴ Treble notes that these factors had been more prevalent in East London during Booth's survey than during Rowntree's study of York where the labour market provided more stable employment. Treble cites examples of irregular work on Clydeside. The cyclical downturn in shipbuilding and heavy engineering on the Clyde between 1907 and 1910 with extended periods of unemployment left many families destitute. Seasonal unemployment in the building trades in Glasgow was high between November and February due to adverse weather.¹⁶⁵ In 1907, the *Glasgow Herald* reported that casual work 'maintains a large number of families in a condition which will prevent them ever leading an independent and civilised existence'.¹⁶⁶ The 1910 Royal Commission on the Poor Laws recorded that casual workers would be the poorest and least capable section of the labour force being underfed, frequently unshod and suffering from a variety of ailments which limited their future prospects.¹⁶⁷

Adverse family circumstances, such the death or illness of the main wage earner, only accounted for twenty-seven per cent of poverty in Booth's study and twenty per cent of households in Rowntree's study.¹⁶⁸ As Rowntree observed, even a week of illness of the main wage-earner would lead to a sharp decline in an already low standard of living with 'short rations, or running into debt, or more often both of these'.¹⁶⁹ Other circumstances could lead to poverty such as the husband deserting his family. In 1905-6, one in five of the applications by women to Glasgow Parish were due to desertion. Death of the husband also placed the family in a perilous condition with the widow having to seek work in poorly paid occupations, such as charring,

¹⁶³ M. Pember Reeves, *Round About A Pound A Week*, (London: Bell and Sons, 1913), xi.

¹⁶⁴ Treble, *Urban Poverty in Britain*, 86; Royal Commission on the Poor Laws and Relief of Distress, Appendix Volume IX, Minutes of Evidence, *Parliamentary Papers*, (HMSO, 1910) Cd 5068, 329.

¹⁶⁵ Treble, *Urban Poverty in Britain*, 54, 73, 90.

¹⁶⁶ *Glasgow Herald*, 28 February 1907.

¹⁶⁷ Royal Commission on the Poor Laws, 1910, Minutes of Evidence, 331.

¹⁶⁸ Booth, *Life and Labour of the People of London*, 147; Rowntree, *Poverty*, 120.

¹⁶⁹ Rowntree, *Poverty*, 54.

washing or casual sewing work, supplemented by renting rooms or taking in lodgers.¹⁷⁰ Many widows had to apply for parish relief to relieve their hardship.

Rowntree suggested that poverty was linked to the life-cycle and was more prevalent during childhood, early middle age and old age.¹⁷¹ Large families with insufficient income accounted for a quarter of those in primary poverty in York and one in five of those over sixty-five years of age were in poverty.¹⁷² Old age pensions were introduced in 1909 for persons aged 70 years and over but were insufficient to support the individual. Based on the British census records for men reaching 70 years of age in the late 1920s, Paul Johnson and Asghar Zaidi calculate that two-thirds of men between 65 and 69 years of age, and forty per cent of 70 year olds, were still in employment despite qualifying for a state pension.¹⁷³

In 1908, different perspectives on the causes of poverty emerged in the evidence given to the Royal Commission on the Poor Laws and Relief of Distress in relation to Glasgow. William Anderson, Deputy Chairman of the Distress Committee, considered that many of those out of work were physically weak and that there had been a progressive deterioration in physique noting that the heads of individuals applying for relief were smaller than twenty-five years before.¹⁷⁴ Anderson's testimony reflected the national debate on physical deterioration that had prompted the 1903 Royal Commissions on Physical Training and Physical Deterioration.¹⁷⁵

In contrast, James Ferguson, Indoor Inspector of the Poor for Glasgow Parish Council, suggested that immorality, improvidence and indolence were at the heart of the problem and presented information for 1906 which showed that half of pauperism had been for these reasons. Ferguson cited well-paid workers, earning say 30s to 40s per week, who did not save during periods of full employment and relied on parish relief during times of hardship. Widows were also castigated for profligacy on funerals when insurance monies should be saved to support the deceased's

¹⁷⁰ Treble, *Urban Poverty in Britain*, 96, 98.

¹⁷¹ Rowntree, *Poverty*, 178; Pilgrim Trust, *Men Without Work* (Cambridge, Cambridge University Press, 1938) as quoted in Gazeley, *Poverty in Britain*, 36.

¹⁷² Rowntree, *Poverty*, 382.

¹⁷³ P. Johnson and A. Zaidi, "Work over the Life Course," in *Work and Pay in 20th Century Britain*, eds. N. Crafts, I. Gazeley and A. Newell (Oxford: Oxford University Press, 2007), 102.

¹⁷⁴ Royal Commission on the Poor Laws, 1910, Minutes of Evidence, 41.

¹⁷⁵ Report of the Royal Commission on Physical Training (Scotland), Volume 1: Report and Appendix (HMSO, 1903), Cd. 1507 and Volume II: Minutes of Evidence and Index (HMSO, 1903), Cd.1508; Report of the Inter-Departmental Committee on Physical Deterioration, Volume 1: Report and Appendix (HMSO, 1904), Cd. 2175, Volume II: List of Witnesses and Minutes of Evidence (HMSO, 1904), Cd. 2210 and Volume III: Appendix and General Index (HMSO, 1904), Cd. 2186.

dependants. He deplored that the upkeep of ‘these people’ should fall on the respectable and industrious ratepayer.¹⁷⁶

Richard Tawney provided more measured evidence. He was assistant to Professor William Smart, Glasgow University, who had sat on the Royal Commission. Tawney was in the military during the war and afterwards became a renowned economic historian. He stated that poverty was due to a structural problem in the labour market with a permanent over-supply of low-skilled labour that led to a large mass of chronically unemployed or half employed low-skilled labourers who were continually on the verge of distress. He noted that two-thirds of the applicants for parish relief in Glasgow between 1904 and 1906 were labourers, most being between 20 and 45 years of age. Tawney disagreed with the view that ‘any man can get work if he wants it’ and stated that low-skilled workers were the victims of a system over which they had no control.¹⁷⁷

Rowntree regarded low pay as the main cause of poverty in Britain before 1914 with adverse family circumstances and irregular work being subsidiary factors. However, Tawney and Treble show that irregular earnings in Glasgow before 1914 created more poverty than low wages. This study will show that adverse family circumstances, compounded by irregular work, were the principal reasons for poverty at the beginning of the war.

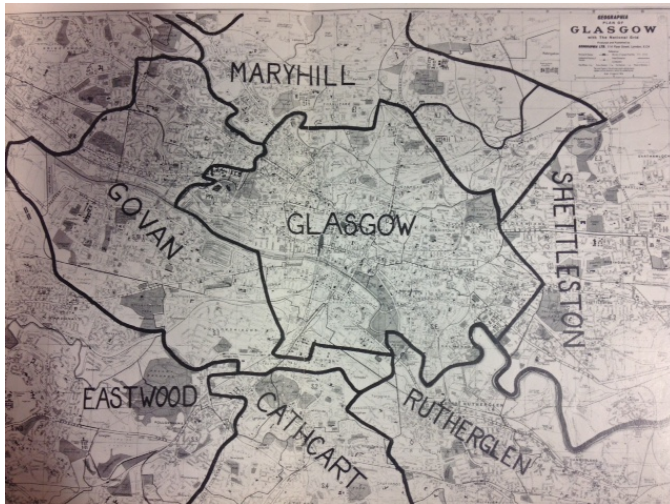
Poverty in Glasgow in September 1914

The second part of this study will use a sample of the applications to Govan Parish for poor relief to assess the causes of poverty at the beginning of the war. Govan had been a separate parish until 1912 after which it had been absorbed into Greater Glasgow. It had areas of heavy industry to the north and south of the river with a spectrum of affluent and poorer communities thus providing a useful indication of poverty within the city, as a whole. The parish boundaries for Govan and the adjoining parishes are shown in Map 2.1.

Map 2.1. Parish boundaries.

¹⁷⁶ Royal Commission on the Poor Laws, 1910, Minutes of Evidence, 49-50.

¹⁷⁷ Royal Commission on the Poor Laws, 1910, Minutes of Evidence, 329-330, 335.

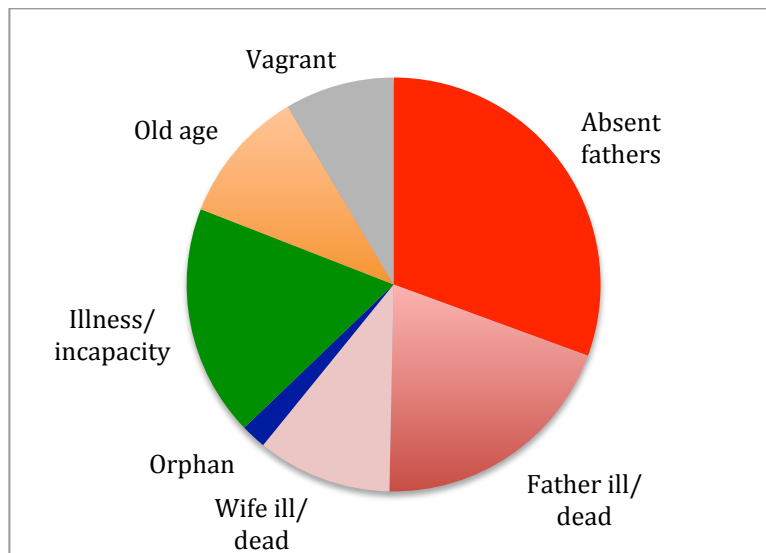


Source: Education Department, Corporation of Glasgow, *100 Years of Education in the City of Glasgow, 1872-1972* (Glasgow: Corporation of Glasgow, 1972), 7

In September 1914, Govan Parish received 782 applications for poor relief and the Assistant Inspectors of the Poor investigated and reported on 304 of these applications.¹⁷⁸ The discrepancy between claims submitted and reports submitted was not unusual. The claims investigated in September 1914 were fifty per cent higher than in the previous year which suggests greater hardship than in 1913. Rowntree and Bowley considered low pay to be the principal cause of poverty yet this is not evident from the Govan sample but irregular work, as suggested by Booth and Treble, was an underlying factor in a number of these applications. The reports submitted for September 1914 have been analysed and the reasons for the requests for poor relief are shown in Figure 2.1.

Figure 2.1. Poor Relief Applications to Govan Parish, September 1914.

¹⁷⁸ Glasgow City Archives, Parish of Govan Combination, Applications for Relief, D-HEW 17/732 and 733, 1/9/1913-29/9/1913, and D-HEW17/753, 754 and 755, 1/9/1914-30/9/1914.



Source: Glasgow City Archives, Parish of Govan Combination, Applications for Relief, D-HEW 17/753, 754 and 755, 1/9/1914 - 30/9/1914.

Almost two-thirds of the claims were due to the departure, death or incapacity of a parent with the remaining one-third arising from illness of family members, old age or vagrancy. There had been 93 applications due to the main wage-earner leaving home compared to 32 applications in the previous year. A third had left home to enlist in the army, a further third were in prison and the remaining third had deserted their family. Patriotic fervour was not the only reason for men enlisting. In Britain, underemployment, unemployment and separation allowances for their dependents made enlistment an attractive option for working class men. David Silbey suggests that economic factors underpinned many working class decisions to enlist.¹⁷⁹ This was also evident in Glasgow. The war had brought hardship to many families in Glasgow due to short time working and unemployment and most men in the Govan sample who enlisted had been idle for between two and five weeks following the declaration of war. Samuel McPherson applied for parish relief for his wife and three young children before he enlisted. He had been a labourer in Barclay Curle shipyard but had been idle for 5 weeks.¹⁸⁰ This was before payment of government dependants' allowances and Govan Parish only made small poor relief payments of five shillings per week which was considerably less than the twenty to twenty four shillings per week earnings of an unskilled labourer. The families of men who enlisted were

¹⁷⁹ D. Silbey, *The British Working Class and Enthusiasm for War, 1914-1916* (Abingdon: Frank Cass, 2012), 82-85, 103.

¹⁸⁰ Govan Parish, Applications for Relief, D-HEW 17/754, 164719, 19 September 1914.

consequently placed in considerable hardship. A further third of wage earners were absent due to receiving a custodial sentence, with domestic violence being common; for example, Robert O'Neill, a quay labourer, was given 30 days for wife assault and his wife had to apply for relief for herself and twelve children.¹⁸¹ The remaining third of men had deserted their families. There was a significant increase in desertions in September 1914 compared to the previous year. Many men had left to find work and could not, or chose not to, remit funds back to their family. Alexander Greer, a blacksmith, wrote regularly to his family but found it difficult to send funds from North America due to the lack of work.¹⁸² Some fathers in the September 1914 sample were forcibly removed from their families; for example, Charles Kaufmann, a German waiter, was apprehended as an enemy alien and his wife and five children were given 14/- per week poor relief.¹⁸³

There were 60 applications for relief due to the death or incapacity of the main wage-earner. The death of the head of the household could result in severe hardship with widows being dependent on letting rooms, taking lodgers or doing some sewing work perhaps supplemented by the earnings of older children. If insured, widows would receive a lump sum that covered funeral costs with something to spare. When this was exhausted, many widows had to fall back on parish relief. Maria McMillan received £26. 13/-d from mutual societies after the death of her husband, a quay labourer, in August 1914. Funeral costs absorbed £12. 5/-d of this sum. By mid September 1914, she had applied for relief for herself and four children under 9 years of age and was granted 15/- per week and winter clothing.¹⁸⁴ War conditions made it more difficult for widows to support their family. Margaret Kelly had been widowed in 1913 and had supported herself and her two children by working as a carriage cleaner at Queen Street station earning 12/- per week. She had to ask for relief when her employment was terminated due to the war.¹⁸⁵ Some widows were able to mitigate their poverty by taking in lodgers or doing occasional work. Jessie Vickers was widowed in 1913 and lived in a two-apartment house with three children. She let a room for 4/- per week and did some sewing for 3/- per week. This, together with

¹⁸¹ Govan Parish, Applications for Relief, D-HEW 17/753, 164302, 4 September 1914.

¹⁸² Govan Parish, Applications for Relief, D-HEW 17/753, 164462, 10 September 1914.

¹⁸³ Govan Parish, Applications for Relief, D-HEW 17/754, 164715, 19 September 1914.

¹⁸⁴ Govan Parish, Applications for Relief, D-HEW 17/753, 164488, 11 September 1914.

¹⁸⁵ Govan Parish, Applications for Relief, D-HEW 17/753, 164357, 7 September 1914.

14/- per week earnings from two teenage daughters, and some parish out relief, allowed her to support her family.¹⁸⁶

The incapacity of the main wage-earner through illness or injury caused temporary hardship even for families of skilled workers. James McKim, a riveter in Elder's yard in Govan had been off work since April 1914 following an industrial injury and received 10/- per week illness benefit.¹⁸⁷ He applied for poor relief in September 1914 and was only granted 8/-d per week. There were also 32 applications due to the illness or incapacity of the mother. Working fathers could not care for young families and children would have to go into care if not taken in by the extended family. The cost of medical care could also be an unsupportable burden on low-income families. Annie Jamieson, a mother of three children under 5 years of age, was confined to bed with consumption. Her husband, a painter, and three children slept in the kitchen so that Annie could have the bed in the main room. The cost of medicines and 'stimulants' was 8/- to 9/- a week out of the family income of 20/- to 24/- per week. Her mother and a neighbour helped but eventually the children had to go into the Poorhouse.¹⁸⁸ Short time working made it more difficult to cope with a wife's illness. The earnings of Robert Muir, a carter aged 30 years of age, had reduced since the start of the war from 26/5d per week to 8/2d per week. His wife had to be admitted to the Poorhouse Hospital with debility after confinement leaving two young children without home supervision.¹⁸⁹

Desertion by women was less common than by male heads of household. Mary and Ann Gillingham, aged 9 years and 3 years respectively, were abandoned by their mother who was described by the Poor Inspector as a 'drunken character'. The father had died in 1912 and the children had to be given grants for clothing and maintenance whilst living with an aunt.¹⁹⁰

Whilst two-thirds of all applications were due to the desertion, death or incapacity of a parent, a further third was due to the illness or incapacity of family members other than parents. There were 55 applications in respect of children and 32 applications for elderly relatives. Since these applications were usually for medical care, it does not follow that the application was due to the poverty of the family but

¹⁸⁶ Govan Parish, Applications for Relief, D-HEW 17/754, 164729, 21 September 1914.

¹⁸⁷ Govan Parish, Applications for Relief, D-HEW 17/754, 164811, 23 September 1914.

¹⁸⁸ Govan Parish, Applications for Relief, D-HEW 17/754, 164596, 15 September 1914.

¹⁸⁹ Govan Parish, Applications for Relief, D-HEW 17/754, 164658, 17 September 1914.

¹⁹⁰ Govan Parish, Applications for Relief, D-HEW 17/753, 164220, 1 September 1914.

difficult home circumstances underpinned many applications. Relief was sought for James McNally, aged 19 years, and classed as a 'mental defective'. His father, a labourer in the Singers sewing machine factory in Clydebank, had been on short time working owing to the war and had only earned 10/- in the week prior to the application.¹⁹¹ A second category of incapacity was single women being sent to the Poorhouse for their period of confinement. Margaret Paton, aged 19 years of age and in advanced pregnancy, was sent to the Poorhouse. The father had enlisted in the Scottish Rifles.¹⁹²

Elderly relatives were usually admitted to the Poorhouse Hospital with advanced illnesses and the family sometimes contributed towards their care. They had often lived with relatives and may have been working until taking ill. James Walker, aged 73 years of age, continued to work as a watchman at Copeland & Lyle, earning 24/- per week, up to 4 days before his admission, at his son's request, to the Poorhouse Hospital with paralysis.¹⁹³ Most died shortly after admission. Robert Scott, an engineman aged 65 years of age, was admitted on 23 September 1914 with bronchitis and heart disease and died the following day.¹⁹⁴ There is little evidence of the elderly having to live their remaining years in the Poorhouse as a result of poverty. Working and being supported by family until they were incapacitated was the norm.

Rowntree's contention that poverty varied during the life-cycle is not supported by the Govan sample.¹⁹⁵ More children were taken into care during times of economic hardship and a child's poverty was generally determined by their parents' circumstances. There is little evidence to support Rowntree's view that large families with children below working-age were in poverty. Also, older persons worked or were supported by their family and were only admitted into the Poorhouse when terminally ill. M. Dupree's study of the Lancashire Potteries in the mid-nineteenth century also shows that older persons co-resided with family rather than being admitted to the Poor House and that much of the hardship associated with life-stage cycle issues, such as old age and widowhood, was alleviated by support from the

¹⁹¹ Govan Parish, Applications for Relief, D-HEW 17/753, 164433, 9 September 1914.

¹⁹² Govan Parish, Applications for Relief, D-HEW 17/754, 164844, 24 September 1914.

¹⁹³ Govan Parish, Applications for Relief, D-HEW 17/754, 164681, 18 September 1914.

¹⁹⁴ Govan Parish, Applications for Relief, D-HEW 17/754, 164826, 22 September 1914.

¹⁹⁵ P. Alcock, *Understanding Poverty* (Basingstoke: Palgrave Macmillan, 2006), 104.

family rather than poor relief.¹⁹⁶ In contrast, Fiegehen, *et al*, report that old-age was the principal cause of poverty in 1971 accounting for forty-six per cent of all poor persons.¹⁹⁷ Alcock draws the distinction between Rowntree's life-cycle poverty, which presumes that all are affected in the same way at the same point in the life-cycle, and life-course changes where individuals are affected differently at various points in their life dependent on their individual circumstances.¹⁹⁸ This more nuanced approach might have merit; however, there is not substantive evidence of life-cycle related poverty in Govan in September 1914.

The Govan applications suggest that events that de-stabilised the family, such as the loss of the main wage-earner's income or the incapacity of the housewife, were the principal factors having caused two-thirds of the Govan applications. This contrasts with Booth and Rowntree who regarded adverse family circumstances as a subsidiary factor which only affected a quarter of households.¹⁹⁹ It is also evident from the Govan data that a difficult economic environment made it more difficult for families to cope with adverse circumstances. At this stage, it should be acknowledged that there may have been a difference between paupers who sought poor relief as a result of an event, such as the loss of the main family income, and poverty which was a condition, such as low wages, which was endured without recourse to the parish. Other sources will be used later in this study to clarify whether this is an important distinction which might explain the differences between the Govan findings and the arguments put forward by Booth and Rowntree.

Poverty in Glasgow during the War

The third part of this study assesses the changes in poverty in Glasgow during the war. The Govan poor relief applications will be analysed to show how the incidence and causes of poverty changed between 1914 and 1918. The applications made in January and June in each year of the war, some 2,200 applications, have been summated and shown in Figure 2.2. These months have been selected to show any seasonal difference. The average of the poor relief applications for the five years

¹⁹⁶ M.W. Dupree, *Family Structure in the Staffordshire Potteries, 1840-1880* (Oxford: Clavedon Press, 1995), 328-330.

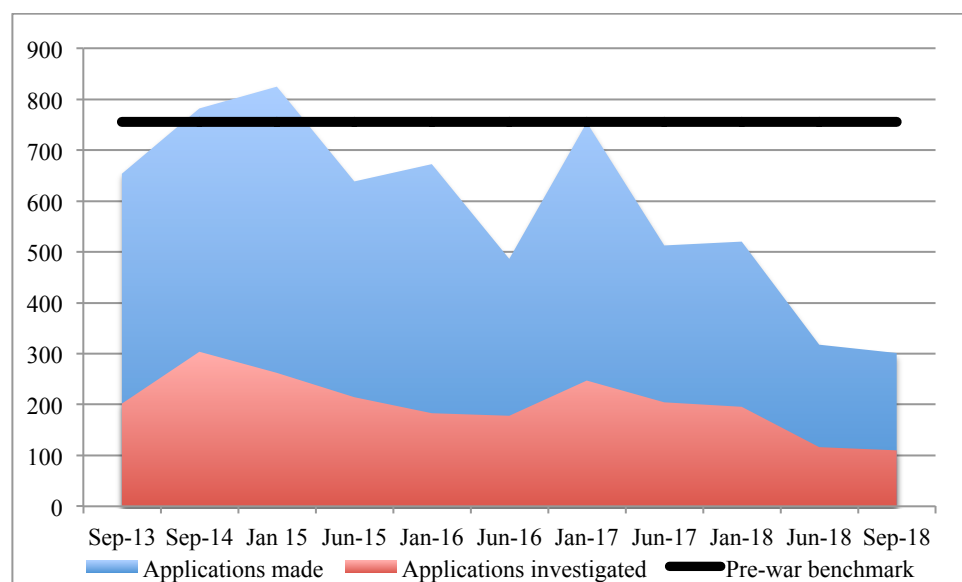
¹⁹⁷ G.C. Fiegehen, P.S. Lansley, and A.D. Smith, *Poverty and Progress in Britain, 1953-73: A Statistical Study of Low Income Households their Number, Types and Expenditure Patterns* (Cambridge: Cambridge University Press, 1977), 62.

¹⁹⁸ Alcock, *Understanding Poverty*, 105-6.

¹⁹⁹ Treble, *Urban Poverty in Britain*, 91.

preceding 1914 provides a useful pre-war benchmark. The number of applications investigated is also shown. In a later analysis, the applications investigated will be categorised into causative factors such the main-wage earner's incapacity or desertion, wife's incapacity, illness, old age or vagrancy.

Figure 2.2. Poor Relief Applications to Govan Parish, 1913-1918.



Source: Glasgow City Archives, Parish of Govan Combination, Applications for Relief, D-HEW 17/732 and 733, 753–816, 1/9/1913–30/9/1918.

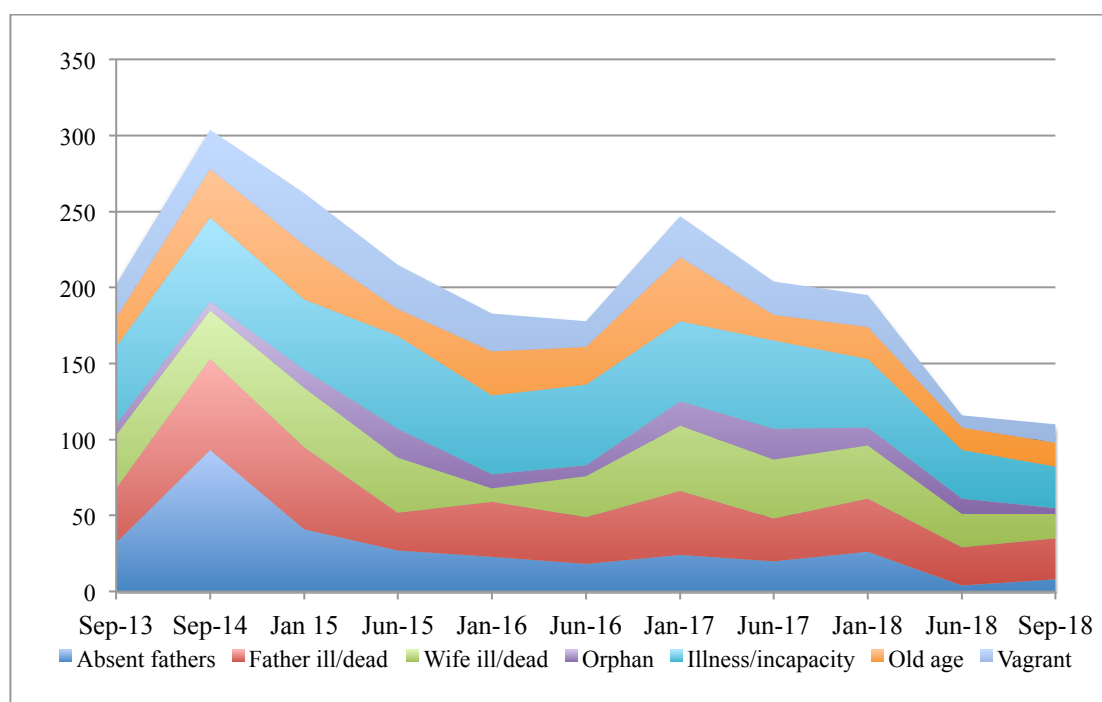
A clear pattern emerges from the number of applications submitted. Claims in September 1914 were twenty per cent higher than in the previous year. Applications continued to increase with January 1915 recording the highest number of applications during the war but reduced thereafter to rise again sharply in January 1917. After this, applications decreased towards the end of the war. There was greater hardship than the peace-time benchmark during the first 9 months of the war but less thereafter with applications at the end of the war being half of the level in September 1913. The number of inspectors' reports submitted shows a similar profile with more reports submitted in January 1915 and 1917 reducing to half of the September 1913 level by the end of the war. The poor relief applications for Scotland followed a similar pattern having reduced from 83,037 applications in 1914 to 41,274 applications in 1918 with a marked reduction in 1916 but with no increase in 1917, as was the case in Govan.²⁰⁰

²⁰⁰ Local Government Board of Scotland, *Annual Reports*, (HMSO); 1914 Cd. 8041, xxvii; 1915 Cd. 8273, xxiii; 1916 Cd. 8517, xv; 1917 Cd. 9020, xxxii; 1918 Cmd. 230, xlvi.

The applications for poor relief suggest that there were distinct phases of hardship and relative affluence during the war with a significant reduction in poverty by the end of the war.

Whilst the number of applications made and investigated show variations in the incidence of poverty, more detailed information is required to identify the changes in the nature and causes of poverty. An analysis of the causative factors is shown in Figure 2.3. The aggregate of the causative factors equates to the total number of applications investigated by the poor relief inspectors in these months.

Figure 2.3. Govan Parish: Reasons for Poor Relief Applications



Source: Glasgow City Archives, Parish of Govan Combination, Applications for Relief, D-HEW 17/732 and 733, 753–816, 1/9/1913–30/9/1918.

It is evident that all causes of hardship increased during the difficult periods of late 1914 and early 1915 and again in the winter of 1917. The numbers of orphans, elderly and vagrants committed to the poorhouse increased in late 1914 and early 1915: this pattern was repeated in the winter of 1917. Incapacity among main wage-earners due to death or illness also increased in these two periods. Applications halved towards the end of the war but not all causes of hardship reduced proportionately.

There was little change in the level of applications towards the end of the war in respect of the elderly and only a twenty-five per cent reduction in the incidence of

the loss of the main wage-earner's income due to illness or death. In contrast, applications arising from the desertion or misconduct of the father by the end of the war were only a quarter of the peace-time level with most other causes being at least half of the peace-time level. This suggests that, by the end of the war, families suffered significantly less hardship due to the absence of a parent through desertion, misconduct or incapacity and that illness within the family had also reduced; however, the elderly did not share in this general improvement.

It would be simplistic to assume that poverty was alleviated simply due to a reduction in adverse family circumstances without acknowledging the impact of war-time work and earnings. Also, it would be incorrect to assume that all benefited from the improved economic conditions. Winter accepts that the improvements in living standards were not universal or uniform within society but Bryder challenges Winter on the basis that there had not been sufficient attention in his work to differences between those employed on war, or non-war related, work and those on fixed incomes who would have suffered from price inflation. A more detailed review of the poor relief applications will show whether there were sections of the community that did not benefit from this significant reduction in poverty.

The period between late 1914 and early 1915 was the most difficult period for families during the war. Unemployment and short time working continued to affect many including female workers. The number of workers on short-time working in Britain in September 1914 was 1.7 million males and 0.9 million females; by February 1915, this had fallen to 0.4 million males and 0.3 million females. Irene Andrews records that women suffered more than men with 44 per cent of women unemployed or on short-term working compared to 27 per cent for men.²⁰¹ This was reflected in the Govan poor relief applications. Catherine Moore, a capfinisher, had been out of work owing to the war and could not support her incapacitated husband and family.²⁰² Annie Mulrooney, a power loom weaver, was only operating two looms due to a fall in demand and was only earning 7/- per week and needed assistance.²⁰³ In addition to women, two other groups suffered particular hardship during the early months of the war: families of enlisted men and ethnic minorities.

²⁰¹ I.O. Andrews and M.A. Hobbs, *The Economic Effects of the World War upon Women and Children in Great Britain* (New York: Oxford University Press, 1921), 22, Appendix A, 231.

²⁰² Govan Parish, Applications for Relief, D-HEW 17/763, 168022, 18 January 1915.

²⁰³ Govan Parish, Applications for Relief, D-HEW 17/762, 167647, 5 January 1915.

In September 1914, families of men who had enlisted suffered immediate hardship due to the delay in the payment of government separation allowances. Voluntary organisations intervened but many families were forced to sell their possessions, move into cheaper rooms and apply for poor relief.²⁰⁴ During 1915, the number of families in hardship due to absent fathers reduced by some two-thirds mainly due to the introduction of separation allowances. However, this did not eradicate hardship among enlisted men's families. John McArthur's wife took her own life shortly after he enlisted and their four children had to be taken into care. Common law wives did not qualify for separation allowances in this period nor did families of deserters. Marion Peers had been receiving 35/- per week which was stopped when her husband deserted; Elizabeth Moore also had 28/- stopped when her husband exceeded his leave.²⁰⁵ Whilst separation allowances may have eased hardship, servicemen's families had to live on a fixed income whilst prices rose; food prices increased by a third by September 1915 compared to 1914 and would double by the end of the war.²⁰⁶

There were many claims from ethnic minorities in 1914 and 1915 due to the 1914 Aliens Restriction Act which had conferred enemy alien status on certain immigrants. The family of Lazarus Micals, a Russian born photo enlarger, had to ask for poor relief following his imprisonment. He had been arrested when he made a delivery to a customer in Tarbet, Loch Fyne which was in a restricted area.²⁰⁷ Abraham Lichtenger, watchmaker, was an enemy alien and had to leave Edinburgh since it was a 'Prohibited Area'. Both sons, of military age, had been interned and he applied for relief which was granted. Fedor Dutchbein, a German music and language teacher, was interned and his wife received parish relief for rates. She had been given an 11/- per week government separation allowance. Ethnic minorities were particularly affected by the reduced demand for itinerant and casual work. Abraham Silverman, a Jewish slipper maker, had no work since the beginning of the war and

²⁰⁴ J. Lomas, "Soldiering On: War Widows in First World War Britain," in *The Home Front in Britain: Images, Myths and Forgotten Experiences since 1914*, eds. M. Andrews and J. Lomas (Basingstoke: Palgrave Macmillan, 2014), 42-43.

²⁰⁵ Govan Parish, Applications for Relief, D-HEW 17/763, 168084, 19 January 1915; D-HEW 17/763, 168000, 15 January 1915; D-HEW 17/777, 173500, 28 September 1915.

²⁰⁶ A.L. Bowley, *Prices and Wages in the United Kingdom, 1914-1920* (Oxford: Humphrey Milford, 1921), Table XXIII, 70.

²⁰⁷ Govan Parish, Applications for Relief, D-HEW 17/763, 167967, 14 January 1915; D-HEW 17/766, 169335, 6 March 1915; D-HEW 17/777, 173469, 13 September 1915; D-HEW 17/763, 168108, 30 January 1915; D-HEW 17/763, 168069, 19 January 1915.

had to apply for assistance as his family were on the point of starvation. Moam Kissia, a Jewish vendor of paintings, left to find work and his family had to apply for relief. Enlistment also affected the families of ethnic communities. Mary Parducci, two months pregnant, applied to the parish for relief after her husband, an ice cream shop waiter, enlisted in the Italian Army. Frank Rosalli, an Italian artists' model, applied for his family to be removed to the Poor House anticipating his summons to join the Italian Army. Ethnic minorities were particularly vulnerable after the onset of war due to the alien status of certain immigrants as well as the downturn in trade for itinerant and casual work.

Applications for poor relief started to decline after mid 1915. However, a new category, war widows, started to apply for assistance. Widows' pensions were lower than separation allowances and the widow had to be 'deserving' of help by their good behaviour and respectability. J. Lomas notes that widows' pensions for a deceased private, which accounted for 80 per cent of all pensions, were minimal compared to those for officers thereby perpetuating the class hierarchy.²⁰⁸ Patrick McShane had been killed in the Dardenelles and his widow had been given a pension of 21/- per week. She applied for relief from rates which was granted. Isabella Duncan also applied for relief from payment of 8/2d rates after her husband had been killed at Rouen. She had been given a pension of 23/- per week.²⁰⁹ This is a further indication that those on fixed incomes, which would have been sufficient in 1914, were finding it difficult to cope with rising prices. However, mid 1915 through to 1916 was a period of relative stability with fewer desertions by husbands and less evidence of short-time working or unemployment and consequently, a reduction in poor relief applications.

There was a marked change in 1917 with a fifty-five per cent increase in poor relief applications in the second half of the year. This was a period of industrial unrest during which the skilled engineers in the Clyde Workers Committee were particularly militant.²¹⁰ The unrest led to a Commission of Enquiry that concluded that the increased cost of living was the principal cause of the unrest.²¹¹ Food prices had been

²⁰⁸ Lomas, "Soldiering On: War Widows in First World War Britain," 45 and 52.

²⁰⁹ Govan Parish, Applications for Relief, D-HEW 17/781, 175687, 14 January 1916; D-HEW 17/782, 175975, 27 January 1916.

²¹⁰ D. Stevenson, *British Society, 1914-45* (London: Penguin, 1984), 87.

²¹¹ Commission of Enquiry into Industrial Unrest, "Report of the Commissioners for Scotland," *Parliamentary Papers*, (HMSO, 1917), Cd. 8669, 3.

increasing since the start of the war and had doubled by June 1917 although earnings in some trades such as engineering and shipbuilding had increased to compensate, to some extent, for the increase in prices.²¹²

Widows and others on fixed incomes were not insulated from these increases and during 1917 an increasing number applied for poor relief. As J. Lomas observes, a war widows' pension averaging 13s. 6d. only alleviated the most basic want whilst a bus conductress could earn £2 per week and a munitions worker, over £3 per week.²¹³ Many widows had low incomes from casual work supplemented by renting rooms or taking in lodgers. Whilst not destitute, they needed assistance and applied for relief from the payment of rates. Annie McGraw, a widow aged 45 years old, with four children, applied for relief from rates of 22/10d per annum. She kept a lodger for 20/- per week board and lodgings. Mary Sally, a widow aged 53 years of age, took in three lodgers, paying 16/- each, into her two apartment house. She was granted relief from payment of 13/6d per annum in rates.²¹⁴ The relief from rates for widows continued to the end of the war which suggests that those on fixed incomes continued to face hardship from the increased cost of living throughout 1917 and 1918.

During 1918, the number of applications reduced dramatically. By June 1918, the level of applications was the lowest recorded during the war and half of the level in September 1913. There were almost no desertions or fathers being arrested for misconduct; vagrancy had almost been eliminated and parental incapacity due to death, illness or accident had reduced by a third based on the poor relief applications. The numbers of elderly being admitted to the Poorhouse Hospital did not reduce and the cost of living continued to create hardship for some. For example, in January 1918, Christina Greig, 28 years of age and blind, who had been cared for by two maiden aunts asked for assistance since they could not continue to do so due to the increased cost of living.²¹⁵

For those in work, national weekly earnings had almost doubled by 1918, compared to 1914, which almost compensated for the increase in retail prices in the

²¹² W.H. Beveridge, *British Food Control* (London: Oxford University Press, 1928), Table XIV, 322; Bowley, *Prices and Wages in the United Kingdom*, 98.

²¹³ Lomas, "Soldiering On: War Widows in First World War Britain," 49.

²¹⁴ Govan Parish, Applications for Relief, D-HEW 17/794, 181910, 9 January 1917; D-HEW 17/795, 182051, 15 January 1917.

²¹⁵ Govan Parish, Applications for Relief, D-HEW 17/808, 188040, 5 January 1918.

same period.²¹⁶ The Charity Organisation Society reported that the rise in prices had been offset by those in employment with the bulk of requests for assistance coming from children, the elderly and the sick and disabled.²¹⁷ It is evident that those employed on war-work benefited from the war conditions but those not employed such as, widows, dependants of enlisted men and annuitants, were not insulated from price inflation and were disadvantaged by conditions during the war. Bryder was correct to identify the diverging experience of different parts of the community during the war and, whilst Winter did acknowledge this divergence, he did not give it sufficient weight in his conclusions.

The preceding analysis was based on the Govan Parish poor relief applications. The pauperism statistics for the Parish of Glasgow, which covered the central part of the city, show a similar profile to Govan Parish as shown in Table 2.1.

Table 2.1. Pauperism in the Parish of Glasgow

Six months ending November	1913	1914	1915	1916	1917	1918
Applications for relief	10,662	11,081	8,094	6,972	n/a	5,453
Indoor roll	4,112	3,672	2,496	2,203	n/a	1,849
Outdoor roll	7,695	8,127	7,790	7,718	n/a	6,124
Ins and outs	1,221	1,295	847	679	n/a	298
Desertions	785	757	442	370	n/a	280

Source: Parish of Glasgow, *Statistical Report by the Inspector of the Poor, 1914-19*, quoted in W.R. Scott and J. Cunnison, *The Industries of the Clyde Valley during the War* (Oxford: Humphrey Milford, 1924), 171. The figures for 1917 were excluded by Scott and Cunnison and the original report can not be traced.

Applications for poor relief increased in 1914 followed by a gradual reduction in 1915 and 1916. By the second half of 1918, applications for relief were half of the peace-time level in September 1913. The ‘Ins and Outs’ were men and women who could only get occasional work and then had to fall back on parish relief. By 1918, this was only a quarter of the peace-time level which suggests that there was more regular work for casual workers. Whilst the numbers receiving indoor relief in the Poor House had halved, the numbers on outdoor relief only reduced by twenty-five per

²¹⁶ J. Dowie, “1919-20 is in Need of Attention,” *Economic History Review*, 28 (1975): Figure 1, 446; Table A1, 449.

²¹⁷ M. Roof, *A Hundred Years of Family Welfare: A study of the Family Welfare Association (Formerly the Charity Organisation Society, 1869-1969)* (London: Michael Joseph, 1972), 118.

cent. The smaller reduction in those receiving outdoor relief was replicated around Scotland with only a twenty-one per cent reduction in outdoor relief.²¹⁸ Outdoor relief provided small sums to ease hardship to supplement an inadequate income. This suggests that there continued to be households suffering hardship through to the end of the war. The similarity between the statistics for Govan and Glasgow parishes confirms that the Govan poor relief applications can be accepted as indicative of the levels of poverty in the wider city.

The changes in poverty in Glasgow during the war can now be summarised. The Govan poor relief claims over the period of the war indicate that there were two periods of increased hardship between late 1914 and early 1915, and again in 1917, with a significant reduction in claims in 1918 to a third of the pre-war level. A more detailed examination of the individual poor relief applications shows that this reduction was not evident in all sections of the community. Families of servicemen, ethnic minorities, widows and others on fixed incomes feature prominently in applications for poor relief throughout the war with their hardship increasing towards the end of the war due to price inflation eroding their standard of living. Others were more fortunate. By 1918, there were very few applications from families of skilled or unskilled men, other than those who were incapacitated by death or illness. The families of those in work benefited from higher earnings and this was reflected in a significant reduction in applications. The poor relief applications would appear to support Winter's assertion that the worst features of Victorian and Edwardian urban poverty had been eliminated during the war. However, this would be a premature conclusion. The poor relief evidence requires corroboration since families, for reasons of pride or avoidance of social stigma, may have endured poverty without applying for poor relief. It is, therefore, possible that the poor relief applications provide an incomplete indication of poverty during the war. Other sources which provide qualitative, rather than quantitative, evidence need to be examined to establish whether the conclusions gained from the poor relief applications are sound.

Additional Sources

The third part of this chapter will review other sources such as the records of benevolent societies, medical examinations of school children and the provision of

²¹⁸ Local Government Board of Scotland, *Annual Reports*; 1914 Cd. 8041, xiii; 1918 Cmd. 230, xlii.

free meals and clothing to necessitous school children to validate, or otherwise, the conclusions derived from the poor relief applications. The Dorcas Society provided help to former patients of hospitals, including Glasgow's Victoria Infirmary. Needy cases were given clothing, food tickets and help with rents. During 1917, there was a fifty per cent increase in the number of cases of hardship, compared to 1916, and the amount paid towards rents increased five-fold.²¹⁹ The 1917 annual report made special mention of the case of two ladies: 'past middle age, who had suffered misfortune due to the war and ill-health with diminished dividends and increased prices who were at the end of their resources'. The amount paid by the Dorcas Society towards rents increased from £15. 2/9d in 1917 to £21. 11/4d in 1918. Funds given towards rents rose and were seven times greater in 1918 than in 1916 which suggests that hardship for some former patients continued to the end of the war.²²⁰ Another potential indication of hardship during 1917 was the large bequest of £500 given by the estate of the late Miss M.S.Shaw to the Gorbals Benevolent Society.²²¹ The normal level of bequests from donors had varied from four guineas to £50.

The health of school children, as evidenced by their change in stature, school medical inspections and their need for free meals and clothing, provides additional information on the changes in hardship during the war. It will be argued that the health of school children improved during the war and that child poverty reduced but that not all children benefited from these improvements. Increased employment in the well-remunerated war industries created challenges for working parents with regard to child care whilst others on fixed incomes, such as the wives of soldiers, struggled to clothe their children.

The historiography on school children's health during this period is sparse. Winter and Bryder make no reference to this age-group preferring to focus on maternal and infant health.²²² Rosie Kennedy's work covers many aspects of children's lives during the war but makes only passing reference to their health.²²³ Richard Wall analysed the issue of free meals to children in London during the war to

²¹⁹ Glasgow City Archives, TD 603/2, *Reports of the Dorcas Society in connection with The Victoria Infirmary*, 1914-1919, Annual Report for year ending 30 November 1917, 8.

²²⁰ *Reports of the Dorcas Society*, Annual Report for year ended 30 November 1918, 8.

²²¹ Glasgow City Archives, TD 1136/1/3, Barony of Gorbals Benevolent Society, *List of Subscribers and Legacies*, 1 November 1911 to 1 November 1938, Report for 1917.

²²² Winter, *Great War and the British People*, 141-153; Bryder, "Healthy or Hungry," 150-153.

²²³ R. Kennedy, *The Children's War: Britain, 1914-1918* (Basingstoke: Springer, 2014), 149.

conclude that child poverty had reduced in the period.²²⁴ Gail Braybon is silent on child health but highlights the need during the war for childcare to release mothers for war work and the conflict between caring for the family and the opportunity to supplement the family income.²²⁵ The issue of child care for working mothers will emerge in the evidence gathered for Glasgow.

Harris does address the issue of the health of school children during the war with particular reference to their stature and, more specifically, changes in their height as an indicator of changes in health.²²⁶ The school medical inspection records provide comprehensive information on the health, weight, height and physical condition of the children who were inspected. Harris regards these inspections as subjective and favours changes in the average height of children as a more objective measure of child health. His analysis of heights for the period between 1914 and 1918 for a number of local authority areas in Scotland, England and Wales leads him to conclude that the war had relatively little effect on the average standard of child health between 1914 and 1918.²²⁷

The school medical inspection reports in Glasgow present a more positive picture of improving child health during the war. The School Board of Glasgow reported that the number of children classified as having ‘very bad’ nutritional status in year ending 31 July 1918 was only 38 children compared to 120 children in year ending July 1915 and that the incidence of rickets had reduced from 1,971 cases to 728 cases in the same period.²²⁸ In 1918, Govan Parish School Board reported that the general nutrition of children had been well maintained during the previous five years and that children had been better clothed; also, that average height and weight of children had shown a progressive increase.²²⁹ The school medical inspections may have been subjective and they only accounted for a third of the school roll but the

²²⁴ R. Wall, “English and German Families and the First World War, 1914-18,” in *The Upheaval of War; Family, Work and Welfare in Europe, 1914-18*, eds. R. Wall and J. Winter (Cambridge: Cambridge University Press, 1988), 45-47.

²²⁵ G. Braybon and P. Summerfield, *Out of the Cage: Women’s Experiences in Two World Wars* (London: Pandora, 1987), 104-107.

²²⁶ Harris, *Health of the Schoolchild*, 82-89.

²²⁷ Harris, *Health of the Schoolchild*, 84, 87.

²²⁸ Glasgow City Archives, D-ED 9/1/33, *School Board of Glasgow, Annual Reports: Medical Inspection of Children*, year ending 30 June 1915, 6, 8; year ending 31 July 1918, 5.

²²⁹ Glasgow City Archives, D-ED 1/4/18, Govan Parish School Board, *Annual Reports: Medical Inspection of Children*, year ending 30 June 1918, 15-16.

reports suggest that the health of children improved during the war, an indication that poverty had reduced during the period.

The provision of free school meals and clothing provides useful quantitative evidence of the changes in hardship between 1914 and 1918. Richard Wall uses the numbers of free meals provided in his study of the health of London schoolchildren during the war to assess changes in poverty during the war. Wall shows that five per cent of the London school roll were given free meals before 1914; ten per cent in September 1914, and only just over one per cent by 1918.²³⁰ The Chief Medical Officer for England and Wales reported in 1916 that children were better fed and clothed since the inception of the school medical service in 1908 and, later, in 1918, that the number of poor children being fed during the last year of the war was the lowest since 1912-13.²³¹

The issue of free meals by Glasgow School Board followed a similar profile. During the year ended October 1915, the Board had provided 252,022 meals compared to 123,000 meals in the previous year with the increase being ‘due to the delay in payment of dependants’ allowances for men who had enlisted and the dislocation of trade after the outbreak of war which caused temporary unemployment’.²³² During the 1914-15 Christmas and New Year holidays, 44 per cent of children on the Glasgow School Board roll received free meals.²³³ By March 1915, the number of dinners supplied had increased six-fold to 192,128 dinners with the increase being ‘to a very large extent accounted for by the children of men serving with the colours’.²³⁴ In December 1915, the Board concluded that the hardship in the early months of the war had subsided and decided that ‘in view of the small number of children requiring free dinners the provision of meals during the holidays should be discontinued.’²³⁵ The Glasgow Board provided only 52,549 meals in the year ending October 1916 compared to 252,022 meals in the previous year, the decrease being due

²³⁰ Wall, “English and German Families and the First World War,” 45, 47.

²³¹ Annual Reports of the Chief Medical Officer of the Board of Education, Report for 1916 (HMSO, 1917), Cd. 8746, 142; Report for 1918 (HMSO, 1919), Cmd. 420, 174-5.

²³² Glasgow City Archives, D-ED 9/1/33, School Board of Glasgow, *Annual Reports*, 1914-15, 9.

²³³ Glasgow City Archives, D-ED 1/1/18, School Board of Glasgow, *Minutes of Meetings of the Committee on Poor and Necessitous Children*, 2 December 1914, 444; School Board of Glasgow, *Annual Report*, 1914-15, 9.

²³⁴ School Board of Glasgow, *Minutes of Meetings of the Committee on Poor and Necessitous Children*, 2 March 1915, 680; Glasgow City Archives, D-ED 1/1/18, School Board of Glasgow, *Minutes of Meetings*, 20 October 1914.

²³⁵ Glasgow City Archives, School Board of Glasgow, *Committee on Poor and Necessitous Children*, 1 June and 7 December 1915.

to the rise in the incomes of families.²³⁶ The significant increase in the provision of free meals in late 1914 through to mid 1915 corresponds to the increase in poor relief applications in the same period as does the decline from 1916 onwards. However, the number of free meals did not increase in early 1917, as was the case for poor relief applications.

Towards the end of the War, the Glasgow School Board faced a new challenge: the need for supervision and feeding of children whose parents were employed in the war-industries. In April 1917, the Sub Committee on Child Welfare of the Glasgow Corporation Health Committee reported a need for crèche accommodation for children of married women working in the munitions factories so that children 'would not be taken into unsuitable quarters'.²³⁷ The Glasgow School Board estimated that, at June 1917, there were 2,300 children who had been orphaned by the war and a further 4,300 children had been deprived of home supervision due to parents or guardians being out at work.

By April 1918, women could earn £2 16s 8d per week in national projectile factories compared to pre-war earnings of 10s to 14s per week in factories.²³⁸ The number of women employed, throughout all occupations, increased by 1.5 million to 4.8 million in April 1918. Married women now accounted for 40 per cent of women in employment whereas before the War it was the norm for women to leave their employment on marriage. Gail Braybon suggests that working-class women were in a particularly difficult position reconciling the opportunity for high earnings with duties as wives and mothers.²³⁹ Angela Woollacott notes that munitions work entailed a minimum of a 48 hour week over five or five and a half days. Many travelled to the Scottish Filling Factory, 10 miles west of Glasgow, by train. Each train carried 800 passengers and the trains left Glasgow every 15 to 20 minutes.²⁴⁰

The Glasgow Board provided hostels for children in 6 schools during the whole of the mother's working hours during the week, on Saturdays, and during holidays. The hostels provided 410,979 meals during 1917-18, only 19,396 of which

²³⁶ School Board of Glasgow, *Annual Report, 1915-16*, 10.

²³⁷ *Glasgow Herald*, 11 April 1917

²³⁸ A. Woollacott, *On Her Their Lives Depend, Munitions Workers in the Great War* (London: University of California, 1994), 115-116.

²³⁹ G. Braybon, *Women Workers in the First World War: the British Experience* (London: Croom Helm, 1981), 46-49; 131.

²⁴⁰ Woollacott, *On Her Their Lives Depend*, 47 and 66.

were for necessitous children with the remainder being paid for by the parents.²⁴¹ This supports the views of Braybon and Woolcott that war-work placed strains on family life. More meals were supplied in the last year of the war to children of parents employed on war work than the sum of all meals to necessitous children during the war. The small number of necessitous children at the end of the war supports Winter's statement that the war had 'eliminated the worst features of urban poverty which had caused the high death rates of late-Victorian and Edwardian Britain'.²⁴² However, the issue of free boots and clothing challenges this conclusion.

School boards provided boots and clothing to children from poorer homes. In the two years preceding the war, twice as many children within the Govan Parish Board received free boots as qualified for free meals.²⁴³ Boots were a significant expense for family budgets costing between 4 and 5 shillings in 1914 and they were an essential form of footwear for poorer children.²⁴⁴ The number of children given boots by the Govan Board in the year to May 1915 doubled to 3,548 children. Thereafter, numbers fell again to pre-war levels in 1916 but increased again each year to the end of the war, by which time, 2,293 children were receiving boots, representing 6 per cent of the Board's school roll. Fewer children received clothing from the Govan Board but the pattern was similar with higher numbers in 1914-15 followed by a reduction in the following year and a notable increase in the last year of the war. At the end of the war, only 32 children within the Govan Board received free meals but 2,293 children received boots and 811 children received clothing.²⁴⁵ The increase in the provision of boots in the early period of the war corresponds with the increase in poor relief applications and of the provision of free meals, as does the reduction from 1916 onwards. The increase in provision of free boots towards the end of the war corresponds with the increase in poor relief applications in 1917. Low-income families may have been able to provide food for their children but not boots and clothing that had become particularly expensive towards the end of the war.²⁴⁶

²⁴¹ School Board of Glasgow, *Annual Report*, 1916-17, 10, 25.

²⁴² Winter, *Great War and the British People*, 140.

²⁴³ Glasgow City Archives, D-ED 1/4/4/6, Govan Parish School Board, *Fourteenth Report*, Table XVI, 36.

²⁴⁴ Glasgow City Archives, Govan Parish School Board, *Minutes of Meetings*, 14 September 1914; M. Brown, *Children in the First World War* (Stroud: Aberley, 2017), 34.

²⁴⁵ Glasgow City Archives, D-ED 1/4/4/6, Govan Parish School Board, *Fifteenth Report*, 15, 28.

²⁴⁶ Bowley, *Prices and Wages in the United Kingdom*, 65.

Many of the children requiring boots and clothing were dependants of servicemen. During 1916-17, servicemen's children accounted for 73 per cent of those receiving assistance from the Glasgow School Board.²⁴⁷ The Board reported a large increase in the number of children requiring clothing in the autumn of 1916 'due to the increased cost of living with no increase in the Army and Navy allowances and pensions; whereas, wages had risen for the industrial classes'.²⁴⁸ Towards the end of the War, four times as many children received boots and clothing as before the War; whereas, the number of meals supplied to necessitous children at the end of the war was a tenth of the pre-war period.²⁴⁹

The additional sources from benevolent societies and school records support the conclusion that emerged from the poor relief applications that poverty in Glasgow had reduced significantly during the war. However, a fresh perspective has emerged in that there is clear evidence of poverty among sections of the community. The significant increase in the issue of free boots and clothing as the war progressed indicates that many families were suffering hardship. Many were families of men who had enlisted. The Glasgow Parish pauperism statistics and the Dorcas Society records show that outdoor relief remained high through to the end of the war and that those on fixed incomes experienced hardship due to the increased cost of living. As indicated by Bryder, some sections of the community had been disadvantaged by the conditions during the war; Winter is less forthcoming on those disadvantaged by the war-time conditions.²⁵⁰ The incidence of poverty during the immediate post-war period needs to be considered before reaching a conclusion on whether poverty had been eliminated during the war.

Poverty after the War

The fourth, and final, part of this chapter addresses the incidence of poverty after the Armistice to establish whether the reduction in war-time reduction in poverty was permanent or transitory. Winter suggests that one of the effects of the War was to 'compress the class structure in such a way as to reduce the distance between the

²⁴⁷ *School Board of Glasgow, Annual Report, 1916-17*, 10; *School Board of Glasgow, Annual Report, 1917-18*, 6, 10.

²⁴⁸ *School Board of Glasgow, Annual Report, 1915-16*, 10; *School Board of Glasgow, Minutes of Meetings*, 9 November 1916.

²⁴⁹ *School Board of Glasgow, Annual Report, 1914-15*, 9.

²⁵⁰ Bryder, "Healthy or Hungry," 150.

survival chances of different classes and between different strata within classes'.²⁵¹ This suggests a permanent change in social structure; however, it will be argued that not only was this reduction in poverty temporary but that there was greater hardship after the war than in the years immediately preceding or during the war. After the war, Glasgow had to make the transition from a major munitions centre to the pre-war reliance on staple export industries, such as engineering and shipbuilding. As noted in Chapter 1, these industries went into decline due to overseas markets being depressed due to a fall in their own commodity prices and other competitors having captured market share from Britain during the war.²⁵² This slump was evident in other industrial regions that were dependent on staple industries; Clydeside, North-east England and South Wales had an unemployment rate in the early 1920s of nearly fifty per cent compared to a national average of twelve per cent.²⁵³

There was a sharp increase in poverty in Glasgow in the immediate post-war years. Glasgow Parish, the central part of the city, had 6,124 individuals in receipt of outdoor relief in 1918.²⁵⁴ By 1922, this had increased to 115,913 persons, of whom 90,615 were classed as able-bodied unemployed.²⁵⁵ Parishes were barred from providing relief to the able-bodied unemployed and national insurance only provided temporary relief. Such was the scale of distress in the early 1920s that Poor Law policy changed and parishes provided relief to the unemployed.²⁵⁶ The numbers in receipt of outdoor relief remained above 66,000 for the remainder of the 1920s.²⁵⁷ The highest number given outdoor relief during the war had been 8,127 individuals in 1914.²⁵⁸

Poor relief applications to Govan Parish increased immediately after the Armistice. By September 1919, applications had increased to 498 applications

²⁵¹ Winter, *Great War and the British People*, 140.

²⁵² See Chapter 1, page 24; D.H. Aldcroft, *The British Economy between the Wars* (Oxford: Philip Allan, 1983), 74.

²⁵³ N. Whiteside, *Bad Times, Unemployment in British Social and Political History* (London: Faber & Faber, 1991), 69.

²⁵⁴ Cunnison, and J.B.S. Gilfillan, eds., *The Third Statistical Account of Scotland: Glasgow* (Glasgow: Collins, 1958), Table 154, 949, Table 156, 951; Scott and Cunnison, *Industries of the Clyde Valley*, 171.

²⁵⁵ Cunnison, *Third Statistical Account of Scotland: Glasgow*, Table 156, 951.

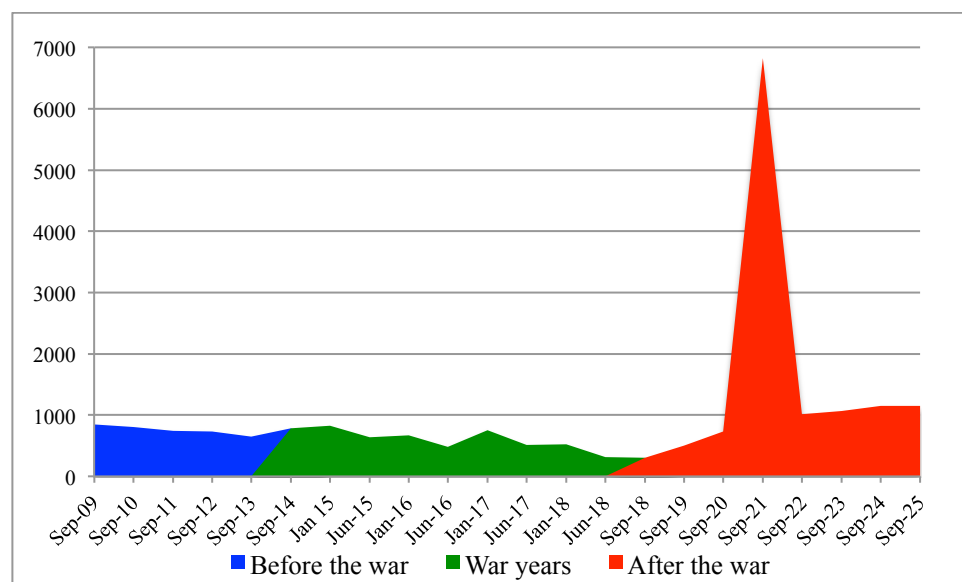
²⁵⁶ I. Levitt, *Poverty and Welfare in Scotland, 1890-1948* (Edinburgh: Edinburgh University Press, 1988), 107, 112, 115.

²⁵⁷ Cunnison, *Third Statistical Account of Scotland: Glasgow*, Table 156, 951.

²⁵⁸ Parish of Glasgow, *Statistical Report by the Inspector of the Poor, 1914-19*, quoted in W.R. Scott and J. Cunnison, *The Industries of the Clyde Valley during the War* (Oxford: Humphrey Milford, 1924), 171.

compared to 301 in the previous September and increased again in September 1920 to 733 requests which was more than double the level at the end of the war but similar to the pre-war benchmark.²⁵⁹ The post-war boom of 1919 and 1920 was followed by a severe downturn in 1921 and 1922.²⁶⁰ In September 1921, Govan Parish received 6,821 applications for poor relief which indicates a quite exceptional level of hardship.²⁶¹ Whilst the number of applications reduced thereafter, they did not fall below 1,000 applications in each September and increased again to 1,300 applications in September 1925.²⁶² The increased hardship in Govan after the war compared to the years before, and during, the war is evident in Figure 2.4.

Figure 2.4. Govan Poor Relief Applications, 1909-1925 (incl. 1921).



Source: Glasgow City Archives, Parish of Govan Combination, Applications for Relief, D-HEW 17/645–1031, 1/9/1909–30/9/1925.

The exceptional number of applications in 1921 distorts the scaling of the other years: Figure 2.5 provides the same information without the exceptionally high figure in 1921.

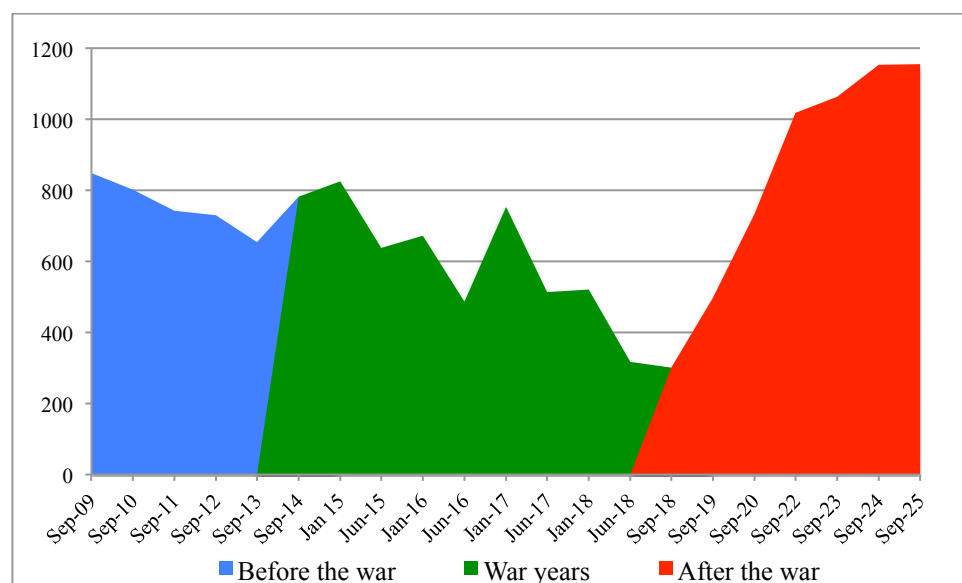
²⁵⁹ Glasgow City Archives, Govan Parish, Applications for Relief, D-HEW 17/849–851.

²⁶⁰ R.H. Campbell, *Scotland Since 1707: The Rise of an Industrial Society* (Edinburgh: John Donald, 1985), 192; Slaven, *Development of the West of Scotland*, 183.

²⁶¹ Govan Parish, Applications for Relief, D-HEW 17/873–907.

²⁶² Govan Parish, Applications for Relief, D-HEW 17/948–1031.

Figure 2.5. Govan Poor Relief Applications, 1909-1925 (excl. 1921).



Source: Glasgow City Archives, Parish of Govan Combination, Applications for Relief, D-HEW 17/645-1031, 1/9/1909-30/9/1925.

The reduction in the number of poor relief applications during the war is evident in Figure 2.5 as is the quantum increase after the war. Any improvement in social conditions during the war was lost with the Armistice and the hardship thereafter was of a greater scale than any benefit during the war. Furthermore, the high levels of some 1,000 applications per month continued for the remainder of the 1920s.

The increase in hardship after the war is also evident in the increase in free school meals. In the last year of the war, Glasgow School Board had supplied 75,085 free dinners.²⁶³ In 1920/21, the Education Authority of Glasgow (previously Glasgow School Board) supplied 931,439 meals. In the following year, the Education Authority provided 3,024,115 free school dinners with 63,000 children, one in three of the school roll, being in receipt of free meals, boots or clothing. The number of children receiving free meals, boots or clothing reduced in the following three years to some 30,000 pupils, one in six of the school roll.²⁶⁴ This compares with a maximum of 12,057 pupils during the war, one in eleven of the school roll.²⁶⁵ In

²⁶³ School Board of Glasgow, *Annual Report for 1917/18*, 10.

²⁶⁴ Education Authority of Glasgow, *Annual Report for 1920/21*, 8; *Annual Report for 1921/22*, 10; *Annual Report for 1922/23*, 9; *Annual Report for 1923/24*, 9; *Annual Report for 1924/25*, 17.

²⁶⁵ School Board of Glasgow, *Annual Report for 1917/18*, 10.

1924/25, Glasgow School Board was still supplying three times more free dinners than in the last year of the war.²⁶⁶

The difficulties of the post-war years are encapsulated by Samuel MacDonald, soon to be Provost of Clydebank, in a letter to his daughter in Canada in July 1923:

Trade here has been worse than when you went away and the people are still flocking to the 'States' - the break up of family home life is a daily occurrence. The quota for the USA is booked up already the last sailing is 23 October. So far as Clydebank is concerned the outlook for the coming winter is very dismal. And now, what chance is there in Toronto for Rachel, Jeannie and myself?²⁶⁷

Glasgow suffered more hardship than some other regions due to its dependence on staple export industries. In 1925, Bowley found that poverty in Northampton, Warrington and Bolton was less than half that of 1913 levels; whereas, in Glasgow it was fifty per cent higher than the pre-war level.²⁶⁸ Shipbuilding was a core staple export industry: tonnage launched on the Clyde in 1922 was 388,000 gross registered tons compared to 646,000 in 1919 and employment had reduced to 18,211 employees compared to 54,089 employees in 1920.²⁶⁹ In 1936, John Boyd Orr's national study showed that the diet of the lowest income group of four and a half million people was deficient in every constituent element and that the diet of a further nine million was deficient in vitamins and minerals.²⁷⁰ This suggests that Glasgow was not unique in experiencing poverty and inadequate diets in the inter-war years; however, it is evident that the transition from a major munitions centre to a peace-time reliance on depressed staple export industries resulted in particularly high levels of poverty compared to other regions. The war-time reduction in poverty did not survive the return to peace-time; indeed, the hardship in the post-war years in Glasgow was

²⁶⁶ Education Authority of Glasgow, *Annual Report for 1925/26*, 15.

²⁶⁷ Letter dated 17 July 1923 from Samuel MacDonald, Justice of the Peace, and Provost of Clydebank between 1923 and 1925, to his daughter Agnes MacDonald in Ontario, Canada from the collection of private letters held by the MacDonald family.

²⁶⁸ Bowley, *Has Poverty Diminished?*, Table E, 18.

²⁶⁹ A. McKinlay, "The Inter-War Depression and the Effort Bargain: Shipyard Riveters and the 'Workman's Foreman', 1919-1939," in *Scottish Economic and Social History*, 9 (1989): Table 1, 65.

²⁷⁰ J. Boyd Orr, *Food Health and Income: Report on a Survey of Adequacy of Diet in Relation to Income* (London: Macmillan, 1936), 49.

significantly greater than at any time during the war or in the five years preceding the war.

Conclusion

The four elements of this study have been completed and it is now possible to reach conclusions on the causes and incidence of poverty during the war. Rowntree suggested that low pay was the principal cause of poverty; whereas, Booth suggested that it was due to irregular work. Both regarded adverse family circumstances such as the death of the main wage earner or the burden of large families as subsidiary to inadequate earnings. The Govan evidence for September 1914 suggests that adverse family circumstances, such the death or incapacity of a parent, was the most common reason for poverty. However, the fluctuations in the poor relief applications before, during and after the war show that economic cycles had a profound effect on the incidence of poverty. This is perhaps not surprising but it shows the extent to which poverty was not due to indolence or personal failings but the opportunity, or otherwise, to earn a living wage.

It is appropriate to return to the debate between Winter and Bryder/Harris. Winter states that the worst elements of Victorian and Edwardian poverty were eliminated during the war. Conversely, Bryder cites the increase in tuberculosis deaths as an indication of an increase in malnutrition and suggests that the living standards of those on fixed incomes or non war-related work had been eroded by price inflation. Harris finds no evidence of an improvement in children's heights and concludes that the War had no material effect on health. Winter did not respond to Harris and the Govan poor relief study has not provided sufficient information specific to children. Child health will be considered in detail in a later chapter.

The poor relief applications to the Govan Parish provide strong evidence that poverty had reduced substantially by the end of the war and was only one-third of the level in September 1913. The pauper statistics for Glasgow Parish and the other sources, such as school records, also confirm this very significant reduction in poverty. In the context of Glasgow, Winter's thesis has been validated with Bryder, perhaps, having placed too much emphasis on tuberculosis mortality. There are, however, three caveats to Winter's thesis which arise from the study.

Firstly, poverty did not decline throughout the war; in fact, the war caused increased hardship in 1914 and early 1915 and again in 1917 although poverty during

the war was at, or below the levels of the five year period which preceded the war. Two-thirds of the reduction in poverty was achieved in the last year of the war. This suggests an oscillation in living standards between 1914 and 1918 with a period of affluence towards the end of the war.

Secondly, Winter presents the reduction in poverty as a structural change which compressed the social structure due to the poorest benefiting the most. This suggests a permanence that is not supported by the underlying causes of poverty or the incidence of applications after the war. The fragility of family circumstances is evident from the poor relief applications. An interruption in earnings of only a few weeks would place an unskilled worker's family in destitution; a skilled worker's family may survive for a few months before becoming destitute. Most applications arose from adverse family circumstances such as the desertion, death or incapacity of a parent. The potential for such adverse circumstances reduced during the war due to full employment and higher earnings but were not, and could not, be eliminated. Poverty returned when the benign economic conditions came to an end. Indeed, the widespread hardship in the 1920s far exceeded the levels of poverty before, or during, the war. The legacy of the war was greater poverty rather than a compression of the social structure.

Thirdly, Bryder was more perceptive than Winter in identifying social groups who had been disadvantaged during the war such as those on fixed incomes or those not employed on war-related work. It is apparent that war conditions created disadvantaged groups; for example, the families of enlisted men were placed in a more impoverished position than others whose wage-earners worked in the war industries. Due to inadequate separation allowances and rising prices, the families of enlisted men were in difficulty throughout the war and latterly some could not clothe their children or provide them with footwear. Ethnic minorities also suffered more than others due to their alien status and the difficulty in finding work. Finally, the standard of living of widows and others on fixed incomes was progressively eroded by price inflation. As the war progressed, this category became more significant among the applications for poor relief. The doubling of retail prices was a severe challenge to those who did not benefit from the rise in industrial wages towards the end of the war.

In summary, the levels of poverty by the end of the war were only a third of the pre-war benchmark which suggests a material, and beneficial, change for those

who lived below or close to the poverty line in Glasgow. Winter's thesis has been validated to an extent but the temporary nature of this improvement has been demonstrated. Winter under-estimated the extent to which war conditions disadvantaged military families and those on fixed incomes, such as widows; Bryder had been more perceptive in this regard. The thesis that the war had eliminated the worst features of urban poverty is valid as long as it is acknowledged that not all shared in this improvement and that poverty had been alleviated, rather than eliminated, during the war.

Chapter Three

Living Standards: The Escape from Poverty

The improvement in the standard of living is the best explanation for the decline in mortality rates among the working population in wartime Britain.¹

The artisan felt less superiority, the labourer and the semi-skilled man more self-assurance.²

The previous chapter provided substantive evidence that poverty in Glasgow reduced significantly during the war. This chapter seeks to establish the reasons for the improved living standards that led to this reduction. Jay Winter draws a causal link between higher living standards and lower mortality rates. Improved living standards is, therefore, a key part of Winter's thesis that wartime Britain became a healthier place to live.³ It has been established in the previous chapter that those employed on war-related work benefitted most during the war whilst families reliant on fixed incomes, such as widows and dependants of enlisted men, suffered hardship as a result of price inflation. Nevertheless, writing in 1924, Scott and Cunnison suggested that living standards, overall, improved during the war compared to the pre-war period. They cite the absence of unemployment and the reduction in pauperism with children being better fed and clothed and less likely to succumb to infant mortality. Furthermore, W. Scott and J. Cunnison note an accumulation in wealth with the value of deposits and investments in the Glasgow Savings Bank increasing from £4.1 million in 1914 to £17.0 million in 1918 with small deposits accounting for half of this increase. Scott and Cunnison noted that circumstances on Clydeside were less benign after the war with a severe depression in 1921/22 that led to high unemployment. Writing in early 1922, Scott and Cunnison were unable to determine whether would be a short-lived depression or a more permanent downturn.⁴

¹ J.M. Winter, *The Great War and the British People* (London: Macmillan, 1985), 214-215.

² R. Roberts, *The Classic Slum: Salford life in the First Quarter of the Century* (Harmondsworth: Penguin, 1971), 200.

³ Winter, *Great War and the British People*, 214-215.

⁴ W.R. Scott and J. Cunnison, *The Industries of the Clyde Valley during the War* (Oxford: Humphrey Milford, 1924), 170-173, 183-184.

The challenge to Winter's thesis on living standards is similar to that made by Linda Bryder and Bernard Harris in the preceding chapter on poverty. However, important issues are raised which are particularly relevant to a study of living standards. Bryder notes that the earnings of workers outwith the war economy, such as in the building, textile and printing trades, did not keep pace with the increase in the price of food or fuel and that those on fixed incomes also suffered a similar deterioration in living standards.⁵ Ian Gazeley shows that retail prices increased faster than average weekly earnings between 1914 and 1917 and that earnings did not exceed price inflation until the last year of the war.⁶ Peter Dewey reaches a similar conclusion of wages lagging prices for much of the war and concludes that actual earnings 'roughly matched' price inflation, particularly for those in the war industries.⁷ Those not in the war industries were less fortunate. Janis Lomas highlights the considerable hardship of war widows living on a fixed income during a period of high price inflation.⁸ Servicemen's families on fixed separation allowances would have suffered likewise – as shown by the preceding study of poverty in Glasgow during the war. The improvement in living standards may have been social-class specific. Dewey suggests that the improvement was most evident among the less well-off and that the middle and upper classes were disadvantaged due to higher taxes and the loss of pre-war luxuries.⁹ Gazeley is more circumspect and suggests that full employment together with the war-time earnings of female family members led to only 'some improvement' in working-class living standards.¹⁰

Winter's argument has therefore been qualified in that changes in living standards may have varied over time and by social class, age, occupation, industry sector and perhaps gender. An improvement in living standards may be limited to those in the war industries with unskilled workers faring significantly better than skilled trades. Conversely, as suggested by Dewey, the middle and upper classes may have suffered a deterioration in living standards. Workers in non-essential industries

⁵ L. Bryder, "The First World War: Healthy or Hungry?," *History Workshop Journal*, 24 (1987): 153.

⁶ I. Gazeley, *Poverty in Britain, 1900-1965* (Basingstoke: Palgrave Macmillan, 2003), Table 2.10, 61.

⁷ P. Dewey, *War and Progress; Britain, 1914-1945* (London: Longman, 1997), 41.

⁸ J. Lomas, "Soldiering on: War Widows in First World War Britain," in *The Home Front in Britain: Images, Myths and Forgotten Experiences since 1914*, eds. M. Andrews and J. Lomas (Basingstoke: Palgrave Macmillan, 2014), 49.

⁹ Dewey, *War and Progress*, 37.

¹⁰ Gazeley, *Poverty in Britain*, 63.

would have experienced a reduction in real wages and those on fixed incomes would have suffered significant hardship due to the high levels of price inflation.

This chapter will seek to identify whether, overall, living standards improved in Glasgow during the war. This study will be in four sections. Firstly, the impact of the war on living standards, in general terms, will be evaluated with reference to key factors: housing, price and wage inflation, food prices and supply, and diet. Secondly, the growth in occupational earnings will be considered with particular emphasis on the opportunities for well-paid employment for women and juveniles. Thirdly, a more specific study will consider why changes during the war were so beneficial to the poorest in society which Jay Winter described as 'The Escape from Poverty' and Robert Roberts as 'The Great Release'.¹¹ This will focus on the changes in the relationship between household income and expenditure for poor working-class families during the war. The number of families which benefited from an improvement in living standards will also be estimated. The fourth, and final, section will consider changes in living standards after the war to establish whether these improvements continued into peace-time. It will be argued that there was not a general increase in living standards and that any such improvement was limited to the poorer families who could take advantage of employment in the war industries and that these advantageous employment conditions ended with the signing of the Armistice.

Winter suggests the poor were lifted out of poverty as a result of full employment and higher earnings.¹² This is not in dispute as a general observation but it is an incomplete assessment of the changes in the circumstances of poor families. It will be argued that the increased earnings of women and juveniles on war-work together with government price controls on basic necessities, which accounted for a higher proportion of their household expenditure, lifted many families out of poverty. This would have been dependent on family members being able to take advantage of war-output related earnings; failing this, the family would have remained in poverty. Two caveats to Winter's thesis will be suggested. Firstly, that the improvement in living standards was only evident during the last year of the war and that the preceding war years had been lean years for many families. Secondly, that the improvement in earnings was dependent on the continuation of the war effort. Peace

¹¹ Winter, *Great War and the British People*, 37; Roberts, *Classic Slum*, 186.

¹² Winter, *Great War and the British People*, 238.

did not bring prosperity; indeed, the post-war years brought great hardship with high levels of unemployment. Household earnings and outgoings are key to this chapter and much of the evidence has been extracted from the poor relief applications and contemporary records of commodity prices, such as bread. The poor relief applications are a particularly useful source since details of earnings and outgoings were verified by the poor relief inspectors.

Changes in living standards before the war provide context to the changes during the war. Britain had experienced a sustained period of stability in prices and wages for fifty years before the outbreak of war with some improvement in living standards. Glasgow also benefited from this improvement but suffered greater economic volatility. Inflation in prices and wages in Britain did not exceed one per cent per annum in this period although there were incremental changes. The increase in the standard of living in Glasgow in the late nineteenth century may have been greater than the national trends with skilled workers' wages increasing faster than in other industrial centres. The improvement in living standards was evident in the expansion in retailing in Glasgow for working-class customers by entrepreneurs such as Thomas Lipton.¹³

However, the benign economic climate in Glasgow changed as a result of two downturns in trade in the early twentieth-century. The first downturn between 1900 and 1902 was followed by a more severe slump between 1908 and 1910 when up to one in five shipbuilding workers were unemployed.¹⁴ There was industrial unrest on Clydeside after 1910 due to rising prices, stagnating real wages and wage levels still being lower than comparable regions in England.¹⁵ A Board of Trade Enquiry showed that rents and retail prices in Glasgow had risen by 10 per cent between 1905 and 1912; whereas, wage rates had only increased by between 4 and 8 per cent which suggests that there had been some erosion in living standards in the immediate pre-war period.¹⁶

¹³ W.H. Fraser and I. Maver, eds., *Glasgow, Volume 2: 1830-1914* (Manchester: Manchester University Press, 1996), 325.

¹⁴ Fraser and I. Maver, *Glasgow, Volume 2*, 373; I. Maver, *Glasgow*, (Edinburgh: Edinburgh University Press, 2000), 135-136.

¹⁵ Glasgow Labour History Workshop, "The Labour Unrest in West Scotland, 1910-14," in *Roots of Red Clydeside, 1910-1914? Labour Unrest and Industrial Relations in West Scotland*, eds. W. Kenefick and A. McIvor (Edinburgh: John Donald, 1996), 25-26.

¹⁶ Board of Trade, "Report of an Enquiry into Working-class Rents and Retail Prices together with the Rates of Wages in Certain Occupations in Industrial Towns of the United Kingdom in 1912," (HMSO, 1913), Cd. 6955, vii, 276.

By 1913, the trade cycle had become more benign and Glasgow's economy was again prospering.¹⁷ The Charity Organisation Society reported in 1913 that there was great prosperity in Anderston, plentiful employment in Bridgeton and that the shipbuilding and engineering works in Govan were fully employed.¹⁸ In 1914, the Society again reported good conditions of trade and 'unexampled prosperity'.¹⁹ By 1914, prosperity had returned to Glasgow with good order books and low levels of unemployment although it is evident that the staple industries on Clydeside were prone to recurring cyclical trade depressions.

Impact of the War on Living Standards

The first section is an assessment of some of the key factors which impinge on the living standards of a civilian population namely housing, wage and price inflation, price and availability of food, and diet. The first to be considered is housing. This had been a long-standing and significant social problem in Glasgow before the war. Living in small houses was the norm for working-class families. In 1911, 20 per cent of families lived in one-roomed houses and 46 per cent in two-roomed. John Butt suggests that many chose to live in smaller and cheaper houses as a matter of prudence due to the risk of irregular work. Working-class districts were densely populated. The high density of 62 persons per acre in 1911 had existed since 1851 despite the increase in municipal acreage from 5,063 acres to 12,975 acres in the same period.²⁰

The war had an immediate impact on the housing market with 16,000 incoming munitions workers increasing the demand for housing. Almost all working-class houses were rented from private landlords who responded by increasing rents in the heavily industrialised areas, such as Govan and Partick.²¹ This led to a series of rent strikes in 1915 that were promoted by working-class women through the Glasgow Women's Housing Association, supported by the Independent Labour Party.

¹⁷ A. Slaven, *The Development of the West of Scotland: 1750-1960* (London: Routledge Keegan Paul, 1975), 182.

¹⁸ Glasgow City Archives, GC 361.7609.76094.1435GLA, Glasgow Charity Organisation Society, *Annual Report*, 1912-13, 2.

¹⁹ Glasgow City Archives, GC 361.7609.41435GLA, Glasgow Charity Organisation Society, *Annual Report*, 1913-14, 2-3.

²⁰ J. Butt, "Working-class Housing in Glasgow, 1851-1914," in *The History of Working-Class Housing*, ed. S.D. Chapman (Newton Abbot: David & Charles, 1971), Table 2.1, 60; Table 2.8, 81; 85.

²¹ S. Damer, "State, Class and Housing in Glasgow, 1885-1919," in *Housing, Social Policy and the State*, ed. J. Melling, (London: Croom Helm, 1980), 61, 91.

The rent strikes were successful with the passing of the Rent and Mortgage Restrictions Act in 1915 which restored rents to their pre-war level for the duration of the war.²² Adrian Gregory describes the legislation as the most significant piece of social and economic legislation in the first half of the twentieth century.²³ The outcome of the rent strikes was somewhat of a pyrrhic victory. The legislation locked property investors into a low investment return for the foreseeable future and landlords stopped the construction of new houses and did not repair the existing housing stock so that it was in a worse condition at the end of the war.²⁴ Approvals for new houses in Glasgow declined to only 330 houses between 1915 and 1919 compared to 6,600 houses between 1905 and 1909. It should be noted that approvals for new houses had already reduced significantly between 1910 and 1914 but the rent restrictions brought the faltering process of construction of new houses by private investors for working-class tenants to an end.²⁵

The resolution of the rent dispute did not alleviate the increased pressure on the housing stock during the war. It is estimated that the population of Glasgow increased by some 100,000 persons between 1911 and 1918.²⁶ Chalmers stated that the shortage of accommodation became urgent almost from the beginning of the war and that the war resulted in an acute housing shortage. This was partially alleviated by the reduction in the number of unoccupied houses from 13,476 houses in 1914 to 637 in 1919 with 85 per cent of this reduction being in one and two apartment houses. The demolition of 1,234 houses classified as unfit for habitation was deferred so that they could be occupied but these properties gradually became derelict since the tenant paid no rent and the landlord did not maintain the property.²⁷ In June 1915, Glasgow Presbytery reported that there were a very great number of houses in the eastern district which were unfit for habitation and that there were 12,000 to 14,000 houses unfit for habitation in the city which were occupied by 50,000 people. The Presbytery

²² Maver, *Glasgow*, 194.

²³ A. Gregory, *The Last Great War, British Society and the First World War* (Cambridge: Cambridge University Press, 2008), 147.

²⁴ J. Melling, "Clydeside Rent Struggles and the Making of Labour Politics in Scotland, 1900-39," in *Scottish Housing in the Twentieth Century*, ed. J. Melling (Leicester: Leicester University Press, 1989), 69; R. Finlay, *Modern Scotland, 1914-2000* (London: Profile Books, 2004), 47.

²⁵ A.K. Chalmers, *The Health of Glasgow, 1818-1925* (Glasgow: Corporation of Glasgow, 1930), 57.

²⁶ Scott and Cunnison, *Industries of the Clyde Valley*, 164.

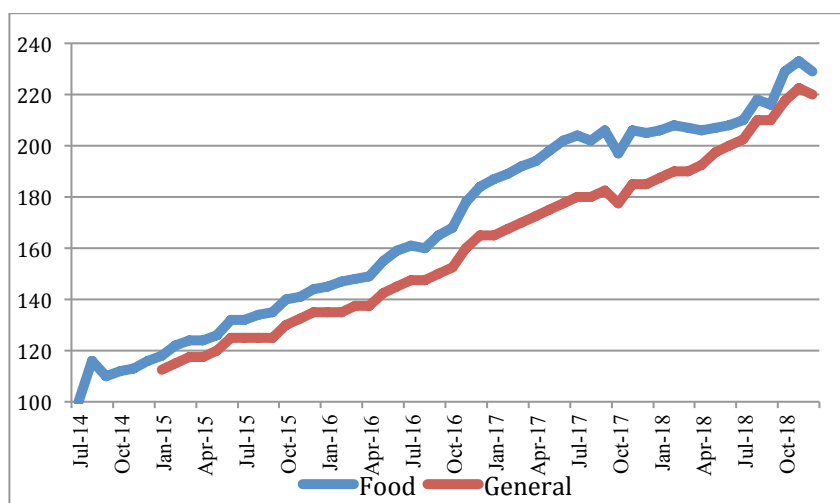
²⁷ Chalmers, *Health of Glasgow*, 46-48, 50, 58.

also reported that there were insufficient houses in the south-west of the city for the enormous number of men working in the area.²⁸

Housing did not contribute to an improvement in living standards during the war other than rents being fixed at 1914 levels. It is apparent that housing conditions worsened due to a combination of demand exceeding supply and the deterioration in the fabric of the housing stock. The moratorium on rent increases also brought to an end the provision of working-class housing by private investors which had far-reaching consequences for house building in the inter-war years.

One of the immediate consequences of the outbreak of war was price inflation. In the first four months of the war, retail prices increased more than in the previous 40 years and continued to increase thereafter for the remainder of the war.²⁹

Figure 3.1. Changes in Retail Prices, 1914-1918.



Source: A.L. Bowley, *Prices and Wages in the United Kingdom, 1914-1920*, (Oxford: Humphrey Milford, 1921), Table XXIII, 70.

Note: Food and General Retail Prices, 1914=100.

The changes in the food retail price index and the general retail price index are shown in Figure 3.1. Jay Winter calculates that the average working-class family suffered price inflation equivalent to 21-22s per week by the end of the war which would require an engineering labourer's wage to double to compensate for this increase in

²⁸ Glasgow City Archives, CH2/171, Presbytery of Glasgow, Church of Scotland, *Minutes and Reports from District Committees*, 16 June 1915.

²⁹ A.L. Bowley, *Wages and Income in the United Kingdom since 1860* (Cambridge: Cambridge University Press, 1937), 31; A.L. Bowley, *Prices and Wages in the United Kingdom, 1914-1920* (Oxford: Humphrey Milford, 1921), Table XXIII, 70.

retail prices.³⁰ Peter Dewey notes that, whilst the national retail food index rose by 130 per cent, the working-class food index rose by only 105 per cent.³¹ Increases in food prices had a significant effect on the standards of living since, according to Gazeley, food accounted for sixty per cent of the expenditure of most working-class families.³² Retail food prices increased 10 per cent on the outbreak of war and increased thereafter to September 1917, by which time, prices had doubled compared to July 1914. Cereals and meat, perhaps the most essential of foodstuffs, experienced the highest rate of inflation from the outbreak of war until mid-1917 with cereals, such as wheat, barley and oats, being two and half times higher than the pre-war price. Meat prices remained stable until spring of 1915 after which there were two years of price increases with meat being twice as expensive at the end of the war as at the outbreak of war. Prices of other foodstuffs, such as tea, coffee, sugar and butter, rose more steadily throughout the war.³³ Price inflation was not limited to food with the total cost of living index at the end of the war being only marginally below that for food prices at some two and a quarter times the level in July 1914.³⁴ Textiles became particularly expensive towards the end of the war. Raw cotton was three to three and a half times higher at the end of the war than in 1914. Household coal only increased by fifty per cent due to government price controls. The price of palm oil, which was used for the manufacture of margarine, was also protected by government price controls.³⁵ The overall trend during the war, therefore, was a doubling in retail prices. The rate of increase was more modest after mid-1917 with the notable exception of clothing.

The increase in the cost of food was a major issue for families. However, the increase in food prices was not uniform. A family whose diet was restricted to cheaper staple foods experienced lower price increases; bread increased by only 55 per cent by the end of the war and potatoes by 59 per cent. The diet of the more affluent suffered the highest price increases; imported beef increased 190 per cent by the end of the war, fish by 167 per cent, milk by 141 per cent, eggs by 412 per cent

³⁰ Winter, *Great War and the British People*, 231, Table 7.9, 236.

³¹ P. Dewey, "Nutrition and Living Standards in Wartime Britain," in *The Upheaval of War; Family, Work and Welfare in Europe, 1914-18*, eds. R. Wall and J. Winter (Cambridge: Cambridge University Press, 1988), 214.

³² I. Gazeley, "The Cost of Living for Urban Workers in Late Victorian and Edwardian Britain," *Economic History Review*, 42 (1989): 210.

³³ Bowley, *Prices and Wages in the United Kingdom*, Table VI, 19-21, 23.

³⁴ Bowley, *Prices and Wages in the United Kingdom*, 24; Table XIII, 35-36; 62-75.

³⁵ Bowley, *Prices and Wages in the United Kingdom*, 29, 31.

and sugar by 241 per cent. Increases in the price of staple foods varied over time which allowed working-class families to substitute foods; for example, potatoes were cheaper in 1915 and early 1916 than in July 1914 but more than double the price from July 1916 to July 1917 at a time of shortage but relatively cheap thereafter. Bread had doubled in price by September 1917 but this increase was then halved due to government price controls. Some foods were consistently cheaper; the price increases in margarine were two-thirds lower than butter and bacon two-thirds lower than imported beef and mutton for most of the war.³⁶

The increases in retail food prices, therefore, favoured poorer families whose diet was based on staple foods and who were prepared to substitute foods to their advantage. Margaret Ferguson's study of labouring families in Glasgow during the war shows that sausages, bacon and margarine were used as cheaper alternatives to meat and butter.³⁷ Poorer families also benefited the most from government price controls particularly on the price of bread. The more affluent families, consuming more protein and fats, experienced higher price increases with a marked increase in the cost of the food basket for more affluent families from the middle of 1917. There was industrial unrest in 1917 that led to a government enquiry which concluded that the increase in food prices had been a major factor. Representations to the Commission of Enquiry were solely from the artisan class; unskilled workers, whose staple diet had benefited most from government price controls, were not represented.³⁸ Clearly, more affluent families could have replaced proteins and fats with staple, more starchy, foods but this would have been a degradation in their living standards.

Food shortages could have serious consequences for public order as evidenced by the 'bread' strikes in Russia in early 1917 which preceded the Bolshevik revolution and the strikes in January 1918 when four million Germans took to the streets.³⁹ Lloyd George reflected after the war that maintaining the food supply to the civilian population had been the ultimate deciding factor in the war.⁴⁰ Britain's food

³⁶ Bowley, *Prices and Wages in the United Kingdom*, Table XVI, 42-45; 51-52.

³⁷ M. Ferguson, "The Diets of Labouring Class Families during the Course of the War," *Journal of Hygiene*, 18 (1920): 409, 411.

³⁸ Commission of Enquiry into Industrial Unrest, "Report of the Commissioners for Scotland," *Parliamentary Papers*, (HMSO, 1917), Cd. 8669, 13.

³⁹ H. Strachan, *The First World War* (London: Pocket Books, 2006), 236, 282.

⁴⁰ D. Lloyd George, *War Memoirs* (London: Ivor Nicholson and Watson, 1933-6), vol. 3, 1269 quoted in L.M. Barnett, *British Food Policy During the First World War* (London: Routledge, 1985), xiii.

supply was vulnerable given the high level of imports in 1914 and the threat from Germany's submarine fleet. In 1914, 77 per cent of all wheat and flour, 39 per cent of meat, and 61 per cent of fresh milk was imported; the only foodstuffs not imported in any quantities were fish and potatoes.⁴¹ The diet of the working class, which accounted for 80 per cent of the population, was reliant on a narrow range of staple foods much of which was imported.⁴² The early attempts by the government to ensure an adequate supply of food had mixed success; however, as the war progressed, government introduced a new policy to safeguard the supply of the most important staple food: bread.

Bread was the most important staple food for working-class families who consumed 7lb of bread per person per week compared to 3lb of potatoes. Working-class families consumed slightly lower than the national average for bread and potatoes but only between a half and a third of the national average for fats, meat and milk.⁴³ Boyd Orr's post-war study confirms that bread, potatoes and margarine were the mainstays for the lower income groups.⁴⁴ Bread was, therefore, a key element of the working-class diet with the white wheaten loaf accounting for 95 per cent of bread consumption. The reliance on bread was most marked amongst the poorest families; as incomes rose, less bread was eaten and the consumption of sugar, sweetmeats and meat increased.⁴⁵ The nutritional content of the diet of the poorest families may have been inadequate at between 2,000 to 2,200 calories per day but bread was the cornerstone of their diet.⁴⁶

A 'breadstuffs policy' was introduced in October 1916 to ensure that there was always sufficient bread to meet demand without recourse to rationing. Flour became less refined as more was extracted from the wheat grain with other cereals, such as barley, maize, beans, and potatoes being added. By April 1918, this had almost doubled the output of flour from a given tonnage of grain. Dewey suggests that

⁴¹ W.H. Beveridge, *British Food Control* (Oxford: Oxford University Press, 1928), Table XVIII, 359.

⁴² Barnett, *British Food Policy*, 3.

⁴³ D.J. Oddy and D. Miller, eds., *The Making of the Modern British Diet* (London: Rowman & Littlefield, 1976), Table II, 221; D.J. Oddy, "Working-Class Diets in Late Nineteenth-Century Britain," *Economic History Review*, 23 (1970): 317.

⁴⁴ J. Boyd Orr, *Food Health and Income* (London: Macmillan, 1936), 49-50.

⁴⁵ J.C. Drummond, *The Englishman's Food*, quoted in Oddy and Miller, *Making of the Modern British Diet*, 214-215; E.J.T. Collins, "The 'Consumer Revolution' and the growth of Factory Foods: changing patterns of Bread and Cereal-eating in Britain in the Twentieth Century," in Oddy and Miller, *Making of the Modern British Diet*, 27.

⁴⁶ Oddy and Miller, *Making of the Modern British Diet*, 225.

this was why bread was not rationed during the war.⁴⁷ The result was ‘war bread’ which was a darker loaf and less popular than the pre-war refined white loaf; perhaps less palatable but not less nutritious.⁴⁸ The new loaf was introduced on 2 January 1917 and it is perhaps significant that newspapers carried photographs on the eve of introduction of boys ‘enjoying’ the new bread.⁴⁹

Figure 3.2. War Bread – and very good, too.



Source: *Daily Record*, 5 December 1916.

Britain had 3.3 million tons of flour in stock in September 1918 compared to 2.7 million tons in September 1914. With the exception of the first half of 1917, wheat and flour stocks during the war had been similar to those at the beginning of the war, taking into consideration the normal seasonal diminution in stocks before the autumn harvest. The annual national consumption of wheat, milled for flour, between 1909 and 1913 was 4.5 million tons and consumption continued at this level to 1916. Other cereals were used to supplement wheat during 1917 and 1918 when the annual consumption of cereals, milled for flour, increased to 4.9 million and 5.0 million tons respectively.⁵⁰ The weekly per capita consumption of wheat and other cereals used for

⁴⁷ P. Dewey, “Food Production and Policy in the United Kingdom, 1914-1918,” *Royal Historical Society Transactions*, 30 (1980): 86-87.

⁴⁸ Beveridge, *British Food Control*, 17, 81-82, 95.

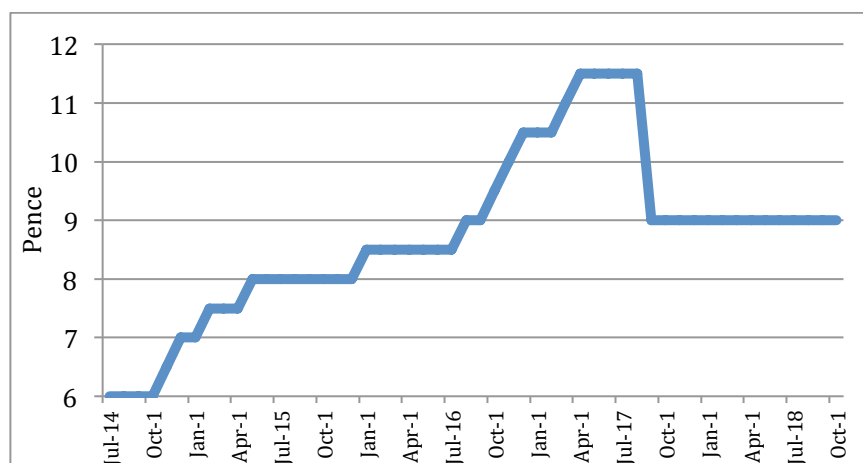
⁴⁹ *Daily Record*, 1 January 1917.

⁵⁰ Beveridge, *British Food Control*, Table XVI, 346-347; Table XX, 361.

flour between 1909 and 1913 was 4.3lb. By 1918, this had increased to 4.8lb per head of population.⁵¹ Supplies of this strategically important staple food had not only been safeguarded during the war but consumption had increased by 12 per cent.

The ‘breadstuffs policy’ also extended to price controls to lessen the impact of price increases. The retail price of bread was set by the local associations of master bakers with Glasgow generally following the prices set in London. The retail price of the 4lb loaf in Glasgow was six pence in July 1914. Prices increased from November 1914 onwards but accelerated from mid-1916 to a peak of 11½ pence in August 1917 as shown in Figure 3.3.

Fig. 3.3. Increase in the Price of Bread.



Source: *Glasgow Herald, Sunday Post*, August 1914–October 1918.

In July 1917, the Commission of Enquiry recommended that that the increased cost of food should be, to some extent, borne by the government.⁵² Later that month, Lord Rhondda, Food Controller, announced that, from 17 September 1917, the price of the 4lb loaf would be reduced to nine pence; the cost to the Exchequer was substantial at £50 million per annum and the subsidy remained in place until December 1920.⁵³ Consequently, for the remainder of the war, the most important staple food had one of the lowest price increases of any major food group.

Imports of food were made more difficult by Germany’s introduction of unrestricted submarine warfare on 1 February 1917. Food imports reduced from 16.3

⁵¹ Beveridge, *British Food Control*, Table XXI, 362-363.

⁵² Commission of Enquiry into Industrial Unrest, “Summary of Reports,” *Parliamentary Papers*, (HMSO, 1917), Cd. 8696, 7.

⁵³ Beveridge, *British Food Control*, 109.

million in 1916 to 13.8 million in 1917 and 11.9 million in 1918.⁵⁴ Existing food stocks and the use of domestic produce delayed the onset of food shortages until later in 1917. During the last quarter of 1917, shortages of margarine, butter, bacon and tea led to food queues in the major cities.⁵⁵ In Glasgow, the shortage of potatoes was a particular concern in the spring of 1917, although this was due to a poor harvest rather than submarine activity.⁵⁶ Towards the end of the year, Glasgow experienced shortages of sugar and tea.⁵⁷ Local rationing schemes were introduced in December 1917 and the *Glasgow Herald* was able to report later in the month on the success of these measures.⁵⁸ Local rationing schemes were replaced by a comprehensive system of rationing which was introduced nationally on 14 July 1918. Rationing did not end until November 1920, although many foods came off rationing between late 1918 and mid-1919.⁵⁹

A useful local perspective is provided by the diaries of Thomas Livingstone, a Glasgow mercantile book-keeper. In October 1917, he first reported shortages of sugar, tea and butter that continued sporadically to the end of December 1917. Shortages of tea, cheese and margarine were again recorded in January 1918 with no shortages being reported thereafter.⁶⁰ The food shortages appear to have been an inconvenience which was resolved after rationing was introduced. Margaret Ferguson's study of the impact of rationing on the diet of labouring-class families during the war showed that rationing had little effect on their diet and that temporary shortages were compensated by the greater use of other foods such as flour. Ferguson makes an important observation when she states that income was a more important determinant of the content of the diet than rationing.⁶¹ The Sumner Committee concluded in June 1918 that the working classes were able to purchase food of the same nutritional value as in June 1914 and that the families of unskilled workmen

⁵⁴ D. Stevenson, *With Our Backs to the Wall: Victory and Defeat in 1918* (London: Allen Lane, 2011), 19, 375.

⁵⁵ Beveridge, *British Food Control*, 195.

⁵⁶ *Daily Record*, 19 February 1917, 5 March 1917.

⁵⁷ *Daily Record*, 12 October 1917.

⁵⁸ *Glasgow Herald*, 28 December 1917.

⁵⁹ Beveridge, *British Food Control*, 217.

⁶⁰ T.C. Livingstone and R. Scott, ed., *Tommy's War: A First World War Diary, 1913-18*, (London: Harper Press, 2008), 10 October 1917, 20 October 1917, 24 November 1917, 31 December 1917, 3 January 1918, 29 January 1918.

⁶¹ M. Ferguson, "The Diets of Labouring Class Families during the Course of the War," *Journal of Hygiene*, 18 (1920): 409, 416.

were slightly better fed in 1918.⁶² Ian Gazeley has re-examined the Sumner Committee findings using additional data for 1904 which Sumner had used as the benchmark to assess working-class consumption in 1918. This additional data leads Gazeley to concur with Sumner's conclusion that the working-class diet had been broadly maintained during the war.⁶³

From a national and a local perspective, there was sufficient supply of food for the populace to maintain a healthy diet although shortages may have made it more difficult for some families to consume the same diet as they had consumed before the war. The diet of poorer families remained similar in nutritional value as before the war with some substitutions in the foods consumed; food shortages did not have a major impact on their diet.

Whilst the supply of food was reasonably maintained, the rising cost of food led to industrial unrest on which a Commission of Enquiry reported in July 1917.⁶⁴ The Commission proposed that cost of food should be subsidised by the government; a subsidy on the price of bread was introduced in September 1917.⁶⁵ This did not placate the Shipbuilding and Engineering and Allied Trades Federation which shortly afterwards threatened a general strike if action was not taken on food prices. By January 1918, a general strike over food prices seemed likely with 533,000 working days lost in the month.⁶⁶ The *Glasgow Herald* commented in February 1918 that 'almost all revolutions start because people wait in crowds for food'.⁶⁷ The War Cabinet was 'much perturbed at the rumours of revolutionary feeling among the working class' and the impact this domestic issue was having on the armed forces. Margaret Barnett suggests that for the mass of the population rising food prices were the outstanding problem of the war.⁶⁸

William Beveridge presents a more positive view of government price controls suggesting that price increases for controlled foods were reduced to one-quarter of the rate of increase before controls were introduced; in contrast, prices on uncontrolled foods quadrupled. Price increases may have been more modest after the

⁶² Report of the Working Classes Cost of Living Committee, *Parliamentary Papers*, (HMSO, 1918), Cd. 8980, 9.

⁶³ I. Gazeley and A. Newell, "The First World War and Working-class Food Consumption in Britain," *European Review of Economic History*, 17 (2013): 88.

⁶⁴ Commission of Enquiry into Industrial Unrest, "Report of the Commissioners for Scotland," 3.

⁶⁵ Barnett, *British Food Policy*, 136

⁶⁶ Barnett, *British Food Policy*, 143.

⁶⁷ *Glasgow Herald*, 21 February 1918, quoted in Barnett, *British Food Policy*, 143.

⁶⁸ Barnett, *British Food Policy*, 36, 44.

introduction of controls but they continued to rise and by October 1918 retail food prices in October 1918 were 2.3 times higher than in July 1914.⁶⁹ Beveridge, who had been Permanent Secretary in the Ministry of Food during the war, acknowledged the limited success of price controls but consoled himself that the Sumner Report confirmed that the working class were able to purchase food of the same nutritive value as in 1914.⁷⁰ Government price controls only had a limited effect in controlling retail price increases in the last year of the war; however, the most significant price control during the war was on bread.

The final key factor to be considered is diet. Before 1914, the nutritional content of the diet of the poorest families would have been inadequate with only 2,000 to 2,200 calories, and 50-60 grams of protein, per head per day. The working father probably took precedence and his wife and children would have been undernourished.⁷¹ Dorothy Lindsay's study of the 'poorer labouring classes' in Glasgow between 1911 and 1912 shows that families with an income below 20 shillings per week, or where income was irregular, had a diet which was 'quite inadequate for the proper development and growth of the body or for the maintenance of a capacity for active work'.⁷² Two-thirds of the families in the study had an inadequate diet.⁷³ The study shows that a small reduction in income below the 20 shillings threshold resulted in a marked deterioration in diet. Food and rent absorbed between 83 per cent and 92 per cent of the income of families below the 20 shillings per week threshold with little or no surplus for other expenses such as heat or clothing.⁷⁴

Shortages and price increases led to changes in the nation's diet during the war. Between 1914 and 1918, the consumption of bread increased by 12 per cent and potatoes by 23 per cent.⁷⁵ The consumption of beef decreased by 12 per cent in the same period, mutton decreased by 39 per cent, pork by 75 per cent and offal by 12 per

⁶⁹ Beveridge, *British Food Control*, Table XIV, 322; 326.

⁷⁰ Beveridge, *British Food Policy*, 327. Beveridge is referring to the Report of the Working Classes Cost of Living Committee, *Parliamentary Papers*, (HMSO, 1918), Cd. 8980, chaired by Lord Sumner.

⁷¹ Oddy and Miller, *The Making of the Modern British Diet*, 225.

⁷² D.E. Lindsay, *Report upon a Study of the Diet of the Labouring Classes in the City of Glasgow carried out during 1911-12* (Glasgow: Corporation of Glasgow, 1913), 6.

⁷³ Beveridge, *British Food Control*, 12-23.

⁷⁴ Lindsay, *Diet of the Labouring Classes*, 17-19, 32-33

⁷⁵ A.R. Prest and A.A. Adams, *Consumers' Expenditure in the United Kingdom* (Cambridge: Cambridge University Press, 1954), Table 2, 14, Table 28, 51.

cent.⁷⁶ The consumption of other foods also reduced: eggs by 48 per cent, fish by 40 per cent and milk by 32 per cent.⁷⁷ Consumption of other foods increased: bacon and ham by 64 per cent, condensed milk by 263 per cent and margarine by 60 per cent.⁷⁸ By 1918, the nation was drinking 62 per cent less beer and 53 per cent less spirits than in 1914.⁷⁹ With the exception of the reduced alcohol intake, the changes in consumption suggest a less nutritious diet during the war with an increased reliance on bread and potatoes, less protein and dairy products consumed, replaced by bacon, margarine and condensed milk. Beveridge takes the broad view that the British people had a cheaper and better diet than had there been no price controls and that their diet was on the whole better than before the war.⁸⁰ Ferguson shows that rationing did not affect the diets of labouring families in Glasgow during the war since few could afford the food allowances provided in the rationing scheme.⁸¹ The calorific value and protein content of the diets of labouring families remained constant during the war; however, fats consumed reduced by 23 per cent.⁸² Margarine was more affordable than meat and less milk, potatoes and sugar was consumed with more bread being eaten. Ferguson concludes that despite substantial increases in income by 1918 labouring families still could not afford an adequate diet.⁸³

The Ferguson survey contradicts the view that increased incomes and a more nutritious diet had contributed towards better health albeit that the survey was based on a small sample size. The numerous letters from ‘Soldier’s Wives’ to the *Daily Record* in 1918 highlight the difficulty that military families had in maintaining an adequate diet. One such letter stated that the family of mother and three children had only 16s. 6d. per week after rent for food and clothing and comments that, ‘I do not hesitate to say that we are nearly starved’. Another letter states that ‘It is not the scarcity of food which troubles the soldier’s wife but the scarcity of money’.⁸⁴ In contrast, the Committee on Industrial Unrest in 1917 was given evidence in relation to Scotland that the increase in the aggregate earnings of industrial workers in the largest

⁷⁶ Prest and Adams, *Consumers’ Expenditure*, Table 5, 18; Table 6, 19; Table 7, 20; Table 8, 21.

⁷⁷ Prest and Adams, *Consumers’ Expenditure*, Table 11, 26; Table 13, 30; Table 18, 38.

⁷⁸ Prest and Adams, *Consumers’ Expenditure*, Table 22, 46; Table 24, 47; Table 9, 22.

⁷⁹ Prest and Adams, *Consumers’ Expenditure*, Table 48, 76; Table 49, 79.

⁸⁰ Beveridge, *British Food Control*, 338.

⁸¹ Ferguson, “Diets during the Course of the War,” 415.

⁸² Beveridge, *British Food Control*, 410.

⁸³ Ferguson, “Diets during the Course of the War,” 409-410, 415.

⁸⁴ *Daily Record*, 1 April and 1 June 1918.

industries had compensated for the increase in the cost of living.⁸⁵ As previously noted, this reflects the circumstances of the skilled, rather than the labouring, working class. The determinant of the quality of the diet appears to have been the quantum of family income rather than the availability of food; therefore, evidence of an increase in earnings may point towards an improvement in diet.

Occupational Earnings

This second section gives consideration to the growth in earnings during the war and the extent to which unskilled labour benefited more than artisans. As noted, earnings lagged behind price increases which led to industrial unrest. However, war conditions provided opportunities for women and juveniles to secure well-paid work which could transform a household's income albeit that the work entailed long hours, hard physical labour and hazardous conditions. Full employment, overtime and higher incomes for men in the war industries may have more than compensated for rising prices. However, Bowley suggests that prices increased faster than wages with a reduction in real wages and living standards. This erosion was most acute between 1915 and 1917 which is evident from growing industrial unrest. In July 1917, 50,000 Lanarkshire miners went on strike to protest against food prices. Over 3 million working days were lost due to strikes in the last six months of 1917.⁸⁶ The Commission of Enquiry into Industrial Unrest in July 1917 concluded that high food prices and cost of living in relation to wages was the leading cause of industrial unrest and recommended that government subsidies should be introduced to reduce food prices.⁸⁷

Wages did not start to rise until the middle of 1915 by which time retail prices had increased by 32 per cent. During 1916, wage increases became more general with government intervention in 1917 to establish more uniform rates across occupations and districts. Munition workers enjoyed a higher increase than skilled workers in other industries due to the payment of piece-work incentives. The differential between skilled and unskilled workers narrowed with unskilled workers received proportionally higher increases; for example, engineering artisans' time-rates increased by 73 per cent between 1914 and 1918; whereas, engineering labourers'

⁸⁵ Commission of Enquiry into Industrial Unrest, "Report of the Commissioners for Scotland," 3.

⁸⁶ Bowley, *Prices and Wages in the United Kingdom*, 106, 143.

⁸⁷ Commission of Enquiry into Industrial Unrest, "Summary of Reports," 5-7.

time-rates increased by 113 per cent in the same period. Bowley concludes that in the summer of 1917 rates of wages had advanced less than the cost of living but that employment was plentiful and that the standard of living had not fallen; also, that the wage increases granted in 1918 finally restored parity between wage and price inflation in the last year of the war.⁸⁸ It is evident that households were faced with a challenging environment whereby earnings lagged prices for most of the war. However, the war-time employment opportunities for women and juveniles allowed many families to safeguard and perhaps enhance their standard of living.

The labour market for working-class women before the war provided few opportunities for advancement. Most worked in a narrow range of unskilled and low-paid occupations, such as domestic service, cleaning or sewing outwork, many of which were seasonal with intermittent work. Many women in employment were between fifteen and twenty years of age since women were expected to leave work on marriage.⁸⁹ As previously noted, the outbreak of war led to economic dislocation and unemployment.⁹⁰ Women's employment was particularly affected with widespread unemployment and short time working.⁹¹ However, after this initial period, the war provided women with more work opportunities and higher earnings. By 1918, there were 1.35 million more women in work in Britain than in 1914 with most of this increase having occurred by April 1917.⁹² This included 735,000 women who were employed in munitions. Arthur McIvor describes these opportunities as an economic emancipation; Gail Braybon suggests that it provided a new sense of self-worth.⁹³ The munitions girl who had to shovel 20 to 25 tons of raw material each day may have had a different perspective.⁹⁴

The financial rewards of this labour were substantial. Before the war, women in factories in Britain could earn 10 to 14 shillings per week; this increased to 30 to 35

⁸⁸ Bowley, *Prices and Wages in the United Kingdom*, Table XVI, 43; 96, 98, 105, 107.

⁸⁹ J.H. Treble, "The Characteristics of the Female Unskilled Labour Market and the Formation of the Female Casual Labour Market in Glasgow, 1891-1914," *Scottish Economic and Social History*, VI (1986): 33-35; Appendix 1, 45.

⁹⁰ See Chapter 2, pages 53-54.

⁹¹ G.R. Griffiths, *Women's Factory Work in World War One* (Stroud: The History Press, 2014), 25-27.

⁹² A. Marwick, *Women at War, 1914-1918* (London: Fontana, 1977), Table 3, 166; G. Braybon, *Women Workers in the First World War: the British Experience* (London: Croom Helm, 1981), 46-47.

⁹³ A.J. McIvor, "Women and Work in Twentieth Century Scotland," in *People and Society in Scotland: Volume III, 1914-1990*, eds. A. Dickson and J.H. Treble (Edinburgh: John Donald, 1992), 144; G. Braybon and P. Summerfield, *Out of the Cage: Women's Experiences in Two World Wars* (London: Pandora, 1987), 131.

⁹⁴ R. Adam, *A Woman's Place, 1910-1975* (London: Chatto & Winders, 1975), 50.

shillings per week by the end of the war.⁹⁵ In Glasgow, women munitions workers could earn between 50 and 60 shillings per week with overtime and bonus payments.⁹⁶ The financial rewards brought married women back into the work place and they now accounted for forty per cent of working women in Britain.⁹⁷ Women outside munitions work also enjoyed higher wages. In Glasgow, a shop girl could earn 14 shillings a week compared to 7 shillings a week before the war and a tailoress could earn 14 shillings a week in 1918 compared to 4 to 6 shillings a week in 1914.⁹⁸

Women met resistance in the work place from male skilled workers with dilution being a contentious issue, particularly on Clydeside.⁹⁹ Marwick considers that this was a struggle between trade unions and the government with the remaining barriers of prejudice being removed when conscription was introduced in 1916.¹⁰⁰ Braybon considers that the craft unions, particularly the Amalgamated Society of Engineers, were hostile towards women entering the workplace and that this continued after the imposition of dilution by the government.¹⁰¹ Women received lower pay and bonuses since they were regarded by employers as ‘docile’ and useful only for repetitive work.¹⁰² Blackwell suggests that women were expected to have different spheres working only in areas appropriate for women, which would rarely be skilled work.¹⁰³ Gordon and Breitenbach describe the deep-rooted sexual division of labour in Scotland whereby skill was a social construct, saturated with male bias, with women’s work being synonymous with unskilled work. However, they also suggest that women did not regard work as a negative experience and that it could be a source of pride and satisfaction.¹⁰⁴

Despite the hostility from organised labour, women in Glasgow responded positively to the new employment opportunities during the war. The tramway system

⁹⁵ A. Woollacott, *On Her Their Lives Depend, Munitions Workers in the Great War* (London: University of California, 1994), 116.

⁹⁶ Govan Parish, Applications for Relief, D-HEW 17/807, 188320, 22 January 1918.

⁹⁷ Braybon, *Women Workers in the First World War*, 49.

⁹⁸ Govan Parish, Applications for Relief, D-HEW 17/808, 188394, 26 January 1918; D-HEW 17/754, 164729, 21 September 1914; D-HEW 17/807, 188045, 7 January 1918; D-HEW 17/753, 164526, 14 September 1914.

⁹⁹ K. Blackwell, “Women on Red Clydeside: The Invisible Workforce Debate,” *Journal of Scottish Historical Studies*, 21 (2001): 140,

¹⁰⁰ A. Marwick, *The Deluge: British Society and the First World War* (London: Bodley Head, 1965), 83.

¹⁰¹ Braybon, *Women Workers in World War One*, 12, 81.

¹⁰² Braybon and Summerfield, *Out of the Cage*, 47-56.

¹⁰³ Blackwell, “Women on Red Clydeside,” 148.

¹⁰⁴ E. Gordon and E. Breitenbach, eds., *The World is Ill-divided: Women’s Work in Scotland in the Nineteenth and Early Twentieth Centuries* (Edinburgh: Edinburgh University Press, 1990), 6.

had employed 6,000 workers, mainly male, at the beginning of the war with 3,000 men enlisting by the end of the war. This provided opportunities for women with 2,388 women being recruited although only 306 of whom became drivers. However, most new jobs for women were in the munitions industry. Munitions was a new industry on Clydeside - only 200 persons had been employed in arms manufacture before the war. Cunnison suggests that there were 28,087 women employed in munitions by the end of the war with more women than men employed in the industry.¹⁰⁵ Baillie considers this to be a significant under-estimate and that between 60,000 and 70,000 women were employed in munitions work on Clydeside. This area specialised in the manufacture of heavy shells which were machined in works in Govan, Bridgeton and Cathcart and then sent to filling factories on the periphery of the city with women in the west of Scotland accounting for a higher percentage of the workforce compared to English factories.¹⁰⁶

A large proportion of women in munitions work were in shell making and filling factories; such was the demand for munitions workers that special trains left Glasgow for the Scottish Filling Factory in Georgetown, Renfrewshire, every 15 to 20 minutes during the day with up to 800 passengers per train.¹⁰⁷ Georgetown was the second largest shell-filling factory in Britain and, by the end of the war, employed 11,789 workers of whom 9,900 were women.¹⁰⁸ This was highly-remunerated work due to the system of piece-work payments and collective bonus schemes which had been introduced to maximise the output of shells.¹⁰⁹ In 1918, the average time rate for women was 31s. 9d. to which was added a production-related bonus of 20s. 10d. that almost equated to the average male time-related earnings of 69s. 9d. Earnings in munitions had kept pace with price inflation since the time rate of 25s. per week in 1916 had increased to 52s. per week in 1918 as a result of increases in the time rate and the introduction of production incentives.¹¹⁰

Women munitions workers were primarily from local communities and many had not been employed or had been previously been in low-paid casual work. Scott

¹⁰⁵ Scott and Cunnison, *Industries of the Clyde Valley*, 98, 176.

¹⁰⁶ M. Baillie, "The Women of Red Clydeside: Women Munitions Workers in the West of Scotland during the First World War," Ph.D. diss., McMaster University (2002), 26, 28, 34, 36.

¹⁰⁷ Woollacott, *On Her Their Lives Depend*, 47.

¹⁰⁸ Baillie, "The Women of Red Clydeside," 28-29; Ministry of Munitions, *Official History of the Scottish Filling Factory (No. 4 National), Georgetown, Renfrewshire* (Glasgow: Directing Board of the Factory, 1919), 133.

¹⁰⁹ Scott and Cunnison, *Industries of the Clyde Valley*, 101.

¹¹⁰ Ministry of Munitions, *Scottish Filling Factory*, 133, 152.

and Cunnison suggest that the women came from the textiles industry in the West of Scotland whilst others were wives or relatives of soldiers who had not been in employment.¹¹¹ Studies of munitions factories showed that one-third had not been in formal employment and had probably been part of Glasgow's casual labour force, perhaps earning a few shillings a week as sweated home workers in the needle trades. Of this third, many were widows or married women some of whom were soldiers' wives supplementing inadequate separation allowances. The remaining two-thirds had been in employment in mills, factories or in domestic service, which was the most common previous occupation.¹¹² The munitions factories were on the periphery of Glasgow and most women were drawn from Glasgow. Towards the end of the war, women were drawn from the Western Highlands and Islands and a large proportion from Ireland.¹¹³ Women carried out all the processes after the original forging involving metal working, shell-filling and labouring work. Their achievement was remarkable; some 8.5 million shells were manufactured in Glasgow and the West of Scotland during the war. In addition, some 19 million shells and 27 million cartridges were filled at Georgetown, Renfrewshire, during the war by 12,000 workers, most being women. Scott and Cunnison in 1924 give faint praise to the women munition workers stating that the worth of the women's contribution had been generally 'conceded' but they observed that this was only because the work was repetitive and that few women showed much aptitude for all-round training.¹¹⁴

The increased employment of women had mixed consequences. Women had long working days due to long shifts and travel by train to remoter locations such as Georgetown in Renfrewshire. Scott and Cunnison suggest that that domestic life became more difficult with the increased employment of mothers and that parental control suffered as evidenced by the increase in crime in 1920-1.¹¹⁵ Women's earnings may have contributed to the family finances but it also entailed long hours and dangerous working conditions. Working hours were five shifts of up to 12 hours with another half shift on a Saturday being common. Night shift work for women, which had been banned before the war, was particularly arduous and injurious to married women who also had family responsibilities. Fatigue led to an increase in

¹¹¹ Scott and Cunnison, *Industries of the Clyde Valley*, 99.

¹¹² Baillie, "The Women of Red Clydeside," 7, 39-40.

¹¹³ Ministry of Munitions, *Scottish Filling Factory*, 145.

¹¹⁴ Scott and Cunnison, *Industries of the Clyde Valley*, 98, 100, 105, 109.

¹¹⁵ Scott and Cunnison, *Industries of the Clyde Valley*, 177.

industrial accidents which were two and a half times more frequent in twelve-hour shifts than in ten-hour shifts. The Health of Munition Workers Committee observed in 1915 that ‘there is significant amount of physical disability among women’ due to their long hours, hard physical work and the difficulty in obtaining food. Women munitions workers were exposed to a wide range of chemicals which could cause mercury poisoning, eczema, dermatitis and suffocation. The greatest health risk was from toxic jaundice from tetra-chlorethane (‘TNT’), used as ‘dope’ in aircraft wings and trinitrotoluene, used in explosives. The Scottish Filling Factory were pleased to report that in a work force of some 10,000 persons there had only been 5 fatalities from explosions in three years of production with a further 4 deaths from TNT poisoning. The hazardous work environment is evident since 1,000 persons in the factory reported each week to the ambulance station with injuries.¹¹⁶ The arduous conditions led to a high rate of labour turnover. For example, only thirteen per cent of the labour force at the Cardonald National Projectile Factory remained throughout the period of operation; many women only stayed for shorter periods of between two weeks to six months.¹¹⁷ Nevertheless, their period of employment in munitions, albeit with long hours and arduous conditions, had provided additional family income at a time of rising prices.

The demand for labour during the war brought more juveniles into employment. The number of boys and girls under eighteen in work in Britain increased from 1,936,000 in July 1914 to 2,278,000 in January 1918, an increase of 18 per cent. The largest increase was in the employment of young girls which increased by 37 per cent as girls left home to work in munitions.¹¹⁸ In the years before 1914, most teenage boys in Glasgow had drifted into unskilled work on leaving school. Richard Tawney notes that boys continued with unskilled work in their adult working life drifting between employers and being more prone to periods of unemployment than skilled workers.¹¹⁹ The war provided the opportunity to break this cycle; however, Scott and Cunnison report that many boys favoured work driving horse-drawn delivery vans, or later in the war, motor lorries, which gave them

¹¹⁶ Ministry of Munitions, *Scottish Filling Factory*, 181, 185.

¹¹⁷ Woollacott, *On Her Their Lives Depend*, 66, 174, 182, 192-193.

¹¹⁸ Andrews and Hobbs, *Economic Effects upon Women and Children*, 168.

¹¹⁹ Andrews and Hobbs, *Economic Effects upon Women and Children*, 530, 534; R.H. Tawney, “The Economics of Boy Labour,” *Economic Journal*, 19 (1909): 517.

financial independence.¹²⁰ Nationally, the number of boys entering apprenticeships for skilled trades significantly declined during the war. Irene Andrews suggests that unskilled work with high wages in munitions plants proved more attractive.¹²¹

High wages involved long working hours with boys being expected to work the same hours as men with 70 to 80 hours per week being common.¹²² The employment of young girls followed a similar pattern. They would substitute for boys who had gravitated to more physical work by taking on unskilled work running errands or undertaking delivery work; some were more fortunate and became clerical workers in city offices. Following adult women into munitions work was also attractive due to the high wages on offer. Girls worked the same hours as women on either 8 or 12 hour shifts up to a maximum of 60 hours per week although overtime was permitted on three days per week if they were over sixteen years of age. Andrews suggests that long hours, hard physical work and overcrowded homes led to exhaustion and affected the health of boys and girls.¹²³

There were, however, significant monetary compensations for juveniles during the war. Andrews suggests that the increase in earnings of juveniles under eighteen years of age was the highest of any group of workers during the war. Boys and girls were able to earn between 20 shillings and 40 shillings per week in the munitions factories, as much as skilled men earned before the war.¹²⁴ Older boys on piece work in the munitions factories could earn more than their foremen. Girls under sixteen years of age could earn as much as adult women. The increase in earnings of juveniles was evident in Glasgow. Typically, a boy in 1914 earned 7 shillings a week as a van or delivery boy or 5 shillings a week as an apprentice engineer but by 1918 a thirteen-year-old boy, exempt from school, was earning 12 shillings a week as a mess boy and his seventeen-year-old brother was earning 28 shillings a week as a clerk.¹²⁵ Girls enjoyed similar increases. In 1914, a nineteen-year-old girl earned between 6 and 7 shillings a week as a shop assistant or working in a factory but could earn between 32

¹²⁰ Scott and Cunnison, *Industries of the Clyde Valley*, 177-178.

¹²¹ Andrews and Hobbs, *Economic Effects upon Women and Children*, 175.

¹²² Ministry of Munitions, *Health of Munition Workers Committee, Memorandum No.5, Hours of Work* (HMSO, 1916), Cd. 8186, 3, 6.

¹²³ Andrews and Hobbs, *Economic Effects upon Women and Children*, 181, 188.

¹²⁴ Andrews and Hobbs, *Economic Effects upon Women and Children*, 177.

¹²⁵ Govan Parish, Applications for Relief, D-HEW 17/754, 164604, 16 September 1914; D-HEW 17/754, 164615, 16 September 1914; D-HEW 17/803, 186220, 12 September 1917.

and 40 shillings per week in the Glasgow munitions factories.¹²⁶ However, for many juveniles, war-work did not give them skills or experience that were transferable to peace-time and the work entailed long hours, shift work and difficult working conditions. As with women workers, the war allowed juveniles to provide much needed additional family income at a time of rising prices.

The Escape from Poverty

This is the third section of this chapter. The first part of this section provides illustrative examples of the changes in household earnings and expenditure across the social spectrum. It will show how the poorest in society, in particular, benefited from an improvement in living standards if employed in the war industries; whereas, those on fixed incomes or in non-war related employment lived in hardship. It will be argued that the improvement in living standards was more limited than suggested by Winter and that the improvement was only evident in the last year of the war. The second part will estimate how many families enjoyed an improvement in living standards, or otherwise, and will seek to take a broad view on whether there was an overall improvement in living standards in Glasgow, as suggested by Winter.

Robert Roberts describes the increase in living standards in Salford during the war as ‘The Great Release’ when ‘the poorest in the land during the war started to prosper as never before’ and that ‘the lowest orders, fast forgetting their stations and growing in economic stature each day went on the make while the making was good’.¹²⁷ Winter attributes this escape from poverty to an increase in real wages resulting from the virtual eradication of unemployment, the transfer from low-paid to better jobs, more overtime, women and children securing relatively well-paid jobs and the reduction in the differential between unskilled and skilled rates of pay.¹²⁸ Gazeley considers that regular wages, with overtime, together with higher earnings from women war workers only led to ‘some improvement in working-class living standards’.¹²⁹ It has already been established in the previous chapter that poverty reduced during the war indicating that there were beneficial changes in the circumstances of the poorer families in Glasgow.

¹²⁶ Govan Parish, Applications for Relief, D-HEW 17/754, 164729, 21 September 1914; D-HEW 17/753, 164302, 4 September 1914; D-HEW 17/807, 188238, 17 January 1918; D-HEW 17/811, 189714, 17 April 1918.

¹²⁷ Roberts, *Classic Slum*, 199-200.

¹²⁸ Winter, *Great War and the British People*, 238.

¹²⁹ Gazeley, *Poverty in Britain*, 3.

Winter cites increased earnings as the reason for the escape from poverty but does not address the impact of price inflation on the household expenditure of poorer families. The escape from poverty was due to two factors: the enhanced earnings of women and young adults and the price increases in staple foods being lower than other foods as a result of government price controls. The more expensive foods, which poorer families could not afford, were not subject to government price controls and suffered higher price increases.

Basic necessities accounted for a higher proportion of a poorer family's household expenditure than for more affluent families. Before 1914, families with an income of less than 25 shillings per week spent 92 per cent of their income on rent and food which reduced to 73 per cent if the family income exceeded 25 shillings per week. The composition of expenditure on food also varied with income. A family with an income of 90 shillings per week spent 77 per cent on animal protein, such as beef, eggs and butter, and only 15 per cent on cereals, such as bread. In contrast, a family with earnings of 23 shillings per week spent 46 per cent on animal proteins and 40 per cent on cereals.¹³⁰

The poorest families gained the most from government price controls on basic necessities. Whereas prices generally doubled during the war, basic necessities increased at a lower rate.¹³¹ Government legislation fixed rents at 1914 levels for the duration of the war. Coal was also subject to government control and increased by only 70 per cent and gas by 41 per cent.¹³² The price control on bread has already been noted.¹³³ Poorer families also changed to cheaper foods. The consumption of bread increased by a fifth and more was spent on bread than either dairy products or meat, both of which had become relatively expensive. Butter doubled in price and poorer families changed to margarine which had only increased by 69 per cent. Very modest amounts were spent on eggs, milk or fish. Sugar appears to have been the only luxury in their diet although a fifth less was consumed due to the high increase in price.¹³⁴

The consequence of lower price increases on necessities can be illustrated by the finances of Family DII, comprising two adults and five children, who formed part

¹³⁰ Lindsay, *Diet of the Labouring Classes*, 32-33, 68.

¹³¹ See pages 85-87 of this chapter for information on price increases during the war.

¹³² Bowley, *Prices and Wages in the United Kingdom*, 63.

¹³³ See page 90.

¹³⁴ Ferguson, "Diets of Labouring Class Families during the Course of the War," 409-410.

of Lindsay's study of the labouring classes in Glasgow between 1911 and 1912.¹³⁵ The occupation of the wage-earner is not given but the basic earnings of 23 shillings per week, without overtime, was typical for a general labourer with the family being classed by Lindsay as being a 'poorer' working-class family.¹³⁶ Changes in household income and expenditure during the war years have been estimated. The earnings of a labourer have been extracted from the poor relief applications and changes in commodity prices have been taken from national indices and published prices, such as the set price for bread. The national cost of living index increased by 125 per cent during the war and retail food prices by 133 per cent.¹³⁷ In contrast, the cost of living for Family DII only increased by 63 per cent and food prices by 76 per cent due to government price controls and changes to lower-cost foods. This is shown in Table 3.1.

Table 3.1. Household Income and Expenditure: General Labourer.

	1914	1916	1917	1918	Inflation 1914-1918	
Basic earnings	23s	30s	35s	46s.	100%	
Rent	3s 6d.	3s 6d.	3s 6d.	3s 6d.	nil	
Coal, gas etc.	2s 6d.	2s 9d.	3s 6d.	4s 0s.	60%	¹³⁸
Bread/cereals	7s 0d.	10s 6d.	13s 4d.	10s 6d.	50%	¹³⁹
Sugar	1s 6d.	1s 7d.	1s 7d.	2s 7d.	72%	¹⁴⁰
Butter/margarine	1s 4d.	1s 6d.	2s 3d.	2s 3d.	69%	¹³⁷
Other foods	6s 8d.	11s 3d.	13s 2d.	13s 4d.	100%	¹³⁷
Total expend.	22s 6d.	31s 1d.	37s 4d.	36s 2d.	63%	
Surplus	0s. 6d.	-1s 1d.	-2s 4d.	9s 10d.		

Source: Glasgow City Archives, Govan Parish, Applications for Relief, D-HEW 17/753, 807 and 808. D.E. Lindsay, *Report upon a Study of the Diet of the Labouring Classes in the City of Glasgow carried out during 1911-12* (Glasgow: Corporation of Glasgow, 1913).

In 1914, Family D11 managed to pay for food and rent with little left over for clothing. They would have lived on the borderline of poverty and survived as long as there was regular work. The increase in earnings in 1916 did not compensate for the

¹³⁵ Lindsay, *Diet of the Labouring Classes*, Appendix 1, 37; Appendix 2, 39.

¹³⁶ Lindsay, *Diet of the Labouring Classes*, 16.

¹³⁷ Bowley, *Prices and Wages in the United Kingdom*, Table XXIII, 70.

¹³⁸ Beveridge, *British Food Control*, Table XV, 323. The retail price of coal increased 77 per cent between July 1914 and December 1918; Bowley, *Prices and Wages in the United Kingdom*, 63.

¹³⁹ Refer to page 90 regarding government price controls on bread.

¹⁴⁰ Bowley, *Prices and Wages in the United Kingdom*, Table XVI, 42; 43-45.

increase in prices with the family being marginally poorer. This trend continued to mid-1917 which was the most difficult period for Family D11 during the war. Earnings had continued to increase but much of the price inflation during the war had already occurred by 1917 and there had been a significant increase in staple foods, such as bread and potatoes, between mid-1916 and 1917. Ferguson shows that, by 1917, families economised by consuming less sugar and replacing butter with margarine. However, this did not compensate for price inflation exceeding the increase in earnings and Family D11 would have experienced considerable hardship in mid-1917. There was a further increase in basic earnings in 1918 which together with the government bread subsidy and a reduction in the price of potatoes eliminated hardship and gave the family disposable income of almost ten shillings a week. Their cost of living had increased by only 63 per cent during the war against the national average of 125 per cent. This, together with some household economies, gave Family D11 disposable income, after payment of necessities, of almost 10 shillings per week which was a considerable improvement in their circumstances compared to 1914. Family D11 had been lifted out of poverty but only in the last year of the war.

The other factor to recognise is that family income was highly dependent on the age-composition of the family. The main wage-earner could work overtime or shifts and earn an additional ten shillings a week which could help to eliminate the deficit in the family's finances. It is apparent that not all general labourers had this option; some were simply provided with a war bonus of two shillings a week.¹⁴¹ The most significant increases in household income came from family members who had hitherto not been employed or had been in low-paid work. Families without members of working age were at a disadvantage as were, say, widows on a fixed income with a young family. The varying impact of the war on household income can be illustrated by the income of three families: Family A, unskilled worker with several children of working age; Family B, skilled worker with several children of school age; and Family C, widow who was dependent on a fixed income. Whilst the families are constructs, the earnings have been extracted from poor relief applications which provide verified information on earnings for named individuals.

¹⁴¹ Govan Parish, Applications for Relief, D-HEW 17/788, 178518, 19 June 1916; D-HEW 17/795, 182253, 22 January 1917.

Table 3.2. Household Income: Family A: Unskilled Worker with Older Children.

	Occupation	Earnings (1914)		Occupation	Earnings (1918)	
Husband	Labourer	23s	¹⁴²	Labourer	46s	¹⁴³
Wife	Housewife	nil			nil	
Daughter (20)	Shop asst.	7s	¹⁴⁴	Munitions	55s	¹⁴⁵
Son (18)	Apprentice	13s	¹⁴⁶	Apprentice	30s	¹⁴⁷
Daughter (16)	Tailoress	6s	¹⁴⁸	Tailoress	14s	¹⁴⁹
Scholar		nil			nil	
Family income		49s			145s	

Source: Glasgow City Archives, Govan Parish, Applications for Relief, see footnotes for references to individual items.

Family A's income has trebled between 1914 and 1918. The husband's wage has only doubled by 1918 which is in line with the basic earnings of general labourers in the poor relief applications. There was a wider range of labourers' earnings in 1918 than in 1914. Dilution provided opportunities for labourers to become semi-skilled and work with skilled men thus earning significantly more; for example a shipyard fitter's helper could earn between 60 and 80 shillings per week.¹⁵⁰ The opportunity to earn more through overtime is evident in the earnings records with labourers earning up to an additional 20 shillings per week during a 'full' week.¹⁵¹ A plater's helper could earn a further 10 shillings a week by working a night shift.¹⁵² The earnings of the twenty-year-old daughter of 55 shillings a week was typical of many young munitions workers and would have transformed the family's circumstances. These high earnings allowed some young mothers to take on munitions work and pay family members 20 shillings a week to look after their children.¹⁵³ These high earnings were of a 'windfall' nature and would not continue in peace time. However, the war-time increase in household income is dramatic; if the father could undertake shift work,

¹⁴² Govan Parish, Applications for Relief, D-HEW 17/753, 164228, 2 September 1914.

¹⁴³ Govan Parish, Applications for Relief, D-HEW 17/808, 188438, 29 January 1918.

¹⁴⁴ Govan Parish, Applications for Relief, D-HEW 17/753, 164729, 21 September 1914.

¹⁴⁵ Govan Parish, Applications for Relief, D-HEW 17/807, 188320, 22 January 1918.

¹⁴⁶ Govan Parish, Applications for Relief, D-HEW 17/753, 164493, 10 September 1914.

¹⁴⁷ Govan Parish, Applications for Relief, D-HEW 17/807, 188238, 17 January 1918.

¹⁴⁸ Govan Parish, Applications for Relief, D-HEW 17/753, 164526, 14 September 1914.

¹⁴⁹ Govan Parish, Applications for Relief, D-HEW 17/807, 188045, 7 January 1918.

¹⁵⁰ Govan Parish, Applications for Relief, D-HEW 17/811, 189586, 8 April 1918.

¹⁵¹ Govan Parish, Applications for Relief, D-HEW 17/812, 190041, 11 May 1918; D-HEW 17/811, 189744, 19 April 1918; D-HEW 17/811, 189434, 26 March 1918.

¹⁵² Govan Parish, Applications for Relief, D-HEW 17/804, 186738, 11 October 1917.

¹⁵³ Govan Parish, Applications for Relief, D-HEW 17/811, 189558, 5 April 1918.

overtime or semi-skilled piece work then the increase in income would be even higher.

Family B, as shown in Table 3.3, benefits from the earnings of a skilled worker but has only one daughter of working age with three children of school age. This family demonstrates that the earnings of the artisan class, who had been among the most affluent in the working class, just kept pace with price inflation. Earnings have doubled and this was typical for many skilled workers who were paid on time rates rather than piece-work rates. In this case, only one daughter was of working age and the mother remained at home. Again, this was typical of many artisan households.

Table 3.3. Household Income: Family B: Skilled Worker with Young Children.

	Occupation	Earnings (1914)		Occupation	Earnings (1918)	
Husband	Tinsmith	37s.	¹⁵⁴	Boilermaker	75s.	¹⁵⁵
Wife	Housewife	nil		Housewife	nil	
Daughter (16)	Machinist	6s.	¹⁵⁶	Finisher	14s.	¹⁵⁷
Scholar		nil			nil	
Scholar		nil			nil	
Scholar		nil			nil	
Family income		41s.			89s.	

Source: Glasgow City Archives, Govan Parish, Applications for Relief, see footnotes for references of individual items.

This family would not have suffered hardship although their food basket would have included more meat, fish, eggs and milk than was the case among poorer families and these became relatively more expensive than staple foods. These could have been replaced by cheaper alternatives and some families may have done so although this would have been a reduction in their standard of living.

The third family, as shown in Table 3.4, is headed by a war widow who had young children. When her husband was in the military she supplemented her separation allowance by taking on low-paid cleaning work. After his death, she was not able to work due to the number and age of the children. Her options to supplement the modest pension were limited. Most widows either rented one of their rooms,

¹⁵⁴ Govan Parish, Applications for Relief, D-HEW 17/754, 164637, 17 September 1914.

¹⁵⁵ Govan Parish, Applications for Relief, D-HEW 17/812, 189864, 29 April 1918.

¹⁵⁶ Govan Parish, Applications for Relief, D-HEW 17/753, 164597, 16 September 1914.

¹⁵⁷ Govan Parish, Applications for Relief, D-HEW 17/813, 190509, 13 June 1918. Girl worked as a Blanket Finisher at the Templetons factory.

perhaps living in the kitchen, or took in a lodger. Her income of 38s per week in 1918 was below that of an unskilled labourer who would be earning at least 45s per week at this time. Although not destitute, this family would have had to lead a very frugal existence and would not have been able to afford any ‘luxuries’ such as new clothes.

Table 3.4. Household Income: Family C: Widow with Young Children.

	Occupation	Earnings (1914)		Occupation	Earnings (1918)	
Husband	Killed in action	nil		Killed in action	nil	
Wife	Cleaner	12s.	¹⁵⁸	Pension	24s.	¹⁵⁹
Other income	Lodger	13s.	¹⁶⁰	Lodger	14s.	¹⁶¹
Scholar		nil			nil	
Scholar		nil			nil	
Scholar		nil			nil	
Family income		25s.			38s.	

Source: Glasgow City Archives, Govan Parish, Applications for Relief, see footnotes for references for individual items.

These tables clearly show that the escape from poverty was linked to the combined earning potential of the family. If the mother or older children could take war work then their earnings could lift the family out of poverty. However, if the children were too young to work, and the mother remained at home, then the outcome was quite different. These examples are illustrative and families would have responded to the new employment opportunities in many ways; for example, some mothers became munitions workers and paid a neighbour to look after their family. Nevertheless, the striking feature of many family budgets was the transformative impact of the earnings of older children. It is therefore apparent that the highest uplift in living standards would be among unskilled workers’ families whose children, and perhaps mother, could work in the war industries and whose diet would continue to be based on staple foods, such as bread and potatoes.

¹⁵⁸ Govan Parish, Applications for Relief, D-HEW 17/753, 164357, 7 September 1914. Widow was a Carriage Cleaner at Queen Street Station.

¹⁵⁹ Govan Parish, Applications for Relief, D-HEW 17/795, 9 January 1917. Husband killed at Loos on 20 September 1915.

¹⁶⁰ Govan Parish, Applications for Relief, D-HEW 17/754, 164847, 24 September 1914.

¹⁶¹ Govan Parish, Applications for Relief, D-HEW 17/8795, 182145. Husband killed at the Battle of Loos. Brother resided as a lodger.

The key question is whether the improvement in living standards benefited most, some or only a few in society. Winter suggests that there was an overall improvement in living standards. The evidence with regard to Glasgow does not support this view but does confirm that Bryder was correct to highlight that sections of the community on fixed incomes were disadvantaged by rising prices. Given the lack of information for the civilian population in this period, it is only possible to give an indication based on disparate facts and approximations. There are three categories to be considered; servicemen's families who suffered hardship since they were reliant on fixed government separation allowances; employees in the non-war related industries who did not receive a substantial war-time enhancement in earnings and, finally, those who were employed in the war industries and benefited from a significant uplift in earnings.

The first category is servicemen's families. It is estimated that 200,000 men from Glasgow served in the military.¹⁶² It is likely that 40 per cent were married, based on the national age profile of servicemen and the average age of marriage in Glasgow in this period.¹⁶³ Therefore, 80,000 households in Glasgow lost their main wage earner and had to rely on government separation allowances. There were 230,000 households in Glasgow so one in three households lost their main wage-earner and were reliant on modest, fixed separation allowances which became progressively eroded by price inflation.¹⁶⁴ The number who became war widows was relatively low. There were 17,695 casualties with casualty rates being higher among the younger single men.¹⁶⁵ A third of these casualties were likely to have been married which suggests that there were 5,900 war widows in Glasgow by the end of the war. Many more men were wounded and it is likely that up to 18,000 of the 80,000 married servicemen were wounded but it is not possible to establish whether their injuries were temporary or led to a discharge with

¹⁶² Maver, *Glasgow*, 190.

¹⁶³ Registrar-General for Scotland, *Sixty-First Annual Report of the Registrar General for Scotland 1915*, Cd. 8339 (HMSO, 1916), Table 17, xc; *Sixty-Fifth Annual Report of the Registrar General for Scotland 1919*, Table 17, xcvi; J.M. Winter, "Britain's 'Lost Generation' of the First World War," *Population Studies*, 31 (1977): Table 5, 451.

¹⁶⁴ Chalmers, *Health of Glasgow*, 47. The figures are for 1922-1925 adjusted for the small number of houses built between 1918 and this period – refer Chalmers, *Health of Glasgow*, 57.

¹⁶⁵ The Scottish Military Research Group, *The City of Glasgow Roll of Honour of the Great War, 1914-18*, (2011), accessed from www.scottishmilitaryresearch.co.uk on 24 January 2017.

subsequent incapacity for their civilian occupations.¹⁶⁶ Servicemen's families accounted for one in three families in Glasgow during the war having to subsist on fixed separation allowances, the value of which became progressively eroded by price inflation. Of these families, up to a third had a main wage-earner who did not return or did so, incapacitated.

The second category includes those not employed in the war industries and therefore likely to be paid on time rates without any enhancement to remuneration other than modest fixed rate war bonuses. For example, the war bonus paid to a male civil servant was only 6 shillings and 4 shillings for a female.¹⁶⁷ The professional, domestic and commercial sectors accounted for thirty per cent of male and female occupations in Glasgow in 1911. The remainder were employed in the industrial sector. However, almost a third in the industrial sector were employed in ancillary occupations such as food, drink and textiles which may not have been remunerated as part of the war industries.¹⁶⁸ This suggests that half of the adult labour force did not receive the high earnings paid within the war industries.

The third category were employed in the metal working, engineering and shipbuilding trades in the industrial sector. It is likely that 175,000 to 200,000 men were employed in this category, which included 100,000 in the shipbuilding industry.¹⁶⁹ The unskilled workers on piece-work had the highest increase in earnings with skilled men still on time rates, overtime and shift allowances. Perhaps only 100,000 to 150,000 of the men in this category had significantly higher earnings. Few women were employed in this sector at the beginning of the war; however, between 60,000 and 70,000 women were recruited into the Clydeside munitions factories. One-third were married women, including a large number of soldiers' wives, who had not been in employment with the remaining two-thirds being younger single women who had been employed in a range of low paid occupations, such as domestic service or mill workers.¹⁷⁰ This suggests that around 200,000 male and female

¹⁶⁶ Winter, "Britain's 'Lost Generation' of the First World War," Table 4, 451.

¹⁶⁷ *Glasgow Herald*, 18 December 1917.

¹⁶⁸ Rodger, R., "Employment, Wages and Poverty in the Scottish Cities, 1841-1914," in *Perspectives of the Scottish City*, ed. G. Gordon (Aberdeen: Elsevier Science, 1985), Table 1, 29.

¹⁶⁹ "The Home Front," in www.firstworldwarglasgow.co.uk accessed on 25 January 2017.

¹⁷⁰ Baillie, "The Women of Red Clydeside," 34, 39-40.

workers, one in three of the adult labour force, were in the war industries with attendant high earnings.

Some conclusions can be drawn. There were approximately 80,000 families who faced hardship as a result of the enlistment of the main wage earner. Of these, perhaps 20,000 married women avoided hardship by working in munitions. Consequently, one in four households in Glasgow had to live on an inadequate fixed income. It is likely that half of the labour force were in non-war related occupations and therefore paid on time-rates with a small fixed war bonus. There were 200,000 men and women employed in the war industries with significantly higher earnings. This represents one in three of the adult labour force.

These are approximations and it may be that families had a combination of occupations and incomes which spanned these three categories. It is, however, possible to reach some conclusions. There were 230,000 households in Glasgow - at least one in four had to live on fixed separation allowances, a third to a half were reliant on non-war-related occupations and a third benefited from the high earnings in the war industries. This refutes Winter's claim that there was an overall improvement in living standards and suggests that the improvement in earnings was limited to one household in three whose earnings came from unskilled male and female piece work in the war industries. The remaining households would have suffered hardship or some erosion in living standards.

Living Standards after the War.

The fourth and final section of this chapter considers changes in living standards after the war up to the mid-1920s. The post-war demand for consumer goods and investment led to a boom in 1920 and the first half of 1921 but as demand subsided and government policy changed from expansion to contraction there was a slump in the second half of 1921 and in 1922.¹⁷¹ Constantine states that the inter-war years were a period of improving living standards in Britain as evidenced by the increase in

¹⁷¹ T. Hatton, "Unemployment and the Labour Market in Inter-war Britain," in *The Economic History of Britain since 1700, Volume 2: 1860-1939*, eds. R. Floud and D.N. McCloskey (Cambridge: Cambridge University Press, 1994), 384.

the consumption of food, expenditure on clothing, furniture and electrical goods.¹⁷² Improving living standards in Britain were due to wage increases being higher than price rises. Bowley shows that, compared to 1914, wages were 94 per cent higher in 1924 with the cost of living only 75 per cent higher and that this improvement in real wages continued throughout the 1920s.¹⁷³

These increases in real wages did not extend to the unemployed. There were only 140,000 unemployed in Britain in 1918 representing 0.8 per cent of the working population. Demobilisation led to an increase in unemployment in 1919 but the post-war boom led to lower levels of unemployment in 1920 and 1921. However, by 1922, the slump had led to a very significant increase in unemployment with 2,212,000 persons out of work equivalent to 11.3 per cent of the working population. Whilst unemployment levels reduced thereafter there were still 1,503,000 unemployed in 1929.¹⁷⁴ Unemployment in the inter-war period was two or three times higher than the national average in the staple industries such as coal, textiles, shipbuilding and engineering and higher in the north and west where these staple industries were located. Unemployment in Scotland in 1929 was 11 per cent compared to 3 per cent in South-east England which had a higher concentration of service and light industries.¹⁷⁵ Glasgow's staple industries had increased capacity during the war and were badly affected by the downturn with 90,000 workers unemployed by early 1922.¹⁷⁶ Shipbuilding output on the Clyde fell from 672,000 tons in 1920 to 175,000 tons in 1923. By October 1921, 23 per cent of the Scottish shipbuilding workforce was claiming unemployment benefit.

Industrial unrest was a feature of this period and underlines the extent to which depressed trade and unemployment affected standards of living. In January 1919, a cadre of Glasgow shop stewards campaigned for a reduction in working hours so that more men could be employed.¹⁷⁷ Their demands were not met and a general strike was called. The demonstration by 60,000 strikers in George Square, Glasgow, on 31 January 1919 resulted in conflict between the protestors and the police, after

¹⁷² S. Constantine, *Social Conditions in Britain, 1918-1939* (London: Methuen, 1983), 14.

¹⁷³ Bowley, *Wages and Income since 1860*, Table VII, 30.

¹⁷⁴ Hatton, "Unemployment and the Labour Market in Inter-war Britain," 384.

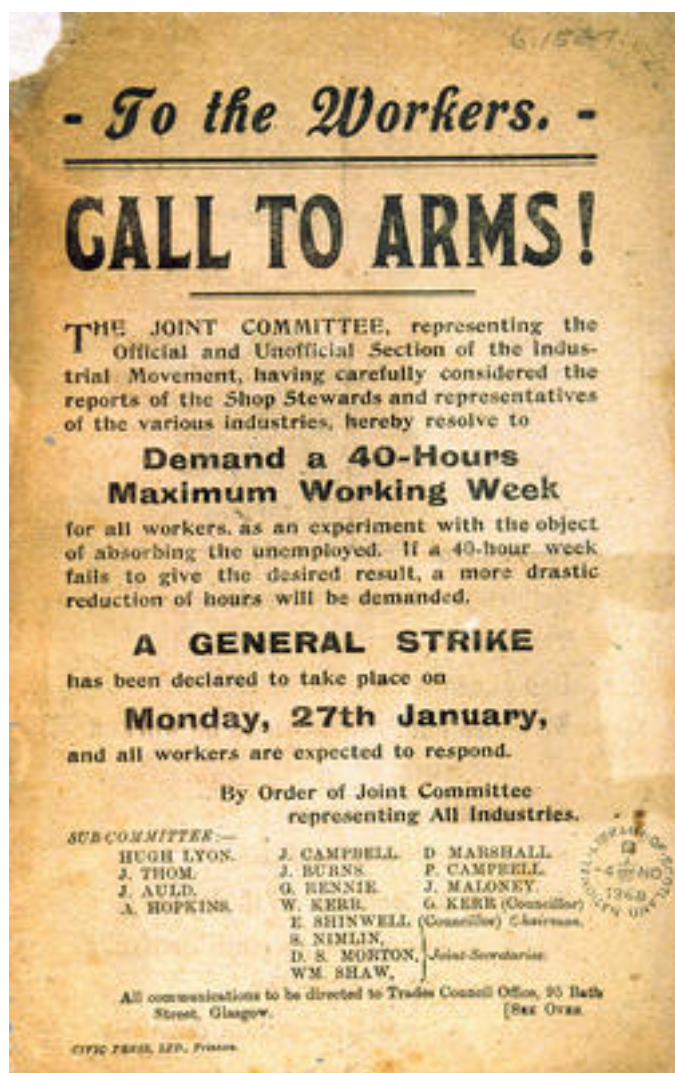
¹⁷⁵ Hatton, "Unemployment and the Labour Market in Inter-war Britain," 372-373; Table 14.5, 374.

¹⁷⁶ C.H. Lee, 'The Scottish Economy and the First World War', in *Scotland and the Great War*, eds. C.M.M. Macdonald and E.W. McFarland (Edinburgh: John Donald, 2014), 14; Scott and Cunnison, *Industries of the Clyde Valley*, 183.

¹⁷⁷ See Figure 3.4

which, troops and tanks were dispatched to Glasgow to restore order.¹⁷⁸ Robert Munro, Secretary of State for Scotland, commented, “It was a misnomer to call it a strike – it was a Bolshevist rising.”¹⁷⁹ Some in the cadre may have had a political agenda but the underlying problem was unemployment and poverty.¹⁸⁰

Figure 3.4. Forty-hour week dispute, 1919



Source: Glasgow City Council, Glasgow Museums, Burrell Collection Photo Library, Image number 930.2001.31

¹⁷⁸ K. MacAskill, *Glasgow 1919: The Rise of Red Clydeside* (London: Biteback, 2019), 204-216; 225-234.

¹⁷⁹ MacAskill, *Glasgow 1919*, 227.

¹⁸⁰ I. McLean, *The Legend of Red Clydeside* (Edinburgh: John Donald, 1983), 134-136; MacAskill, *Glasgow 1919*, 247.

Depressed trade also affected the coal industry which had been taken under Government control during the war. In early 1921, coal exports fell in both value and quantity with the industry trading at a loss which led to the industry being handed back to the private mine-owners on 31 March 1921. Rather than rationalise the fragmented industry, owners proposed to stem the trading losses by wage cuts of up to 50 per cent. This was unacceptable to the miners and they were locked out on 1st April 1921.¹⁸¹ A national rail and transport strike was called in support of the miners, which would have resulted in two million workers stopping work, but this did not materialise. The miners remained locked-out for three months and finally had to return under poorer terms than was originally offered by the owners.¹⁸² In the fractured post-war economy, Herbert Smith, President of the Miners' Federation stated that the problem was, "First we have too many men in the industry and secondly we have too many pits".¹⁸³

The fragile recovery of the coal industry after 1921 was reversed by the return of sterling to the Gold Standard in 1925 which made exported coal more expensive and led to a downturn in trade and trading losses.¹⁸⁴ The unresolved issues of 1921 returned; mine owners as an alternative to rationalisation insisted on substantial wage cuts and longer hours to stem the losses and the miners refused to accept their proposals and were again being locked out. On this occasion, the wider trade union movement supported the miners and a general strike was called with two and half million on strike on 4 May 1926 which caused widespread disruption, particularly in the transport networks.¹⁸⁵ Nine days later, the Trades Union Congress called off the strike without any substantive concessions for the miners.¹⁸⁶ The miners continued to

¹⁸¹ P. Renshaw, "Black Friday, 1921." *History Today*, 21 (1971). Accessed from www.historytoday.com on 13 February 2019: 9-13.

¹⁸² Renshaw, "Black Friday, 1921": 13, 27, 30.

¹⁸³ A. Reid and S. Tolliday, "Review of M. Morris, *The General Strike* (Harmondsworth: Penguin, 1976); G.A. Philips, *The General Strike: The Politics of Industrial Conflict* (London: Weidenfield and Nicolson, 1976); P. Renshaw, *The General Strike* (London: Eyre Methuen, 1975); J. Skelley, *The General Strike, 1926* (London: Lawrence and Wishart, 1976); J. Hinton and R. Hyman, *Trade Unions and Revolution: The Early Industrial Politics of the Communist Party* (London: Pluto, 1975); M. Woodhouse and B. Pearce, *Essays on the History of Communism in Britain* (London: New Park, 1975)," *Historical Journal*, 20 (1977): 1007.

¹⁸⁴ A. Perkins, *A Very British Strike: 3 May-12 May 1926* (London: Pan Macmillan, 2006), 51; Reid and Tolliday, "Review of M. Morris *et al*": 1007.

¹⁸⁵ Perkins, *A Very British Strike*, 119; P. Renshaw, *The General Strike* (London: Eyre Methuen, 1975), 174-175.

¹⁸⁶ Renshaw, *The General Strike*, 224-225.

press their case and remained locked-out until November 1926 when hardship forced their return to work on more draconian terms than had been offered in May.¹⁸⁷

The industrial unrest in the period between 1919 and 1926 involved large numbers of workers in the coal, shipbuilding, engineering and transport industries. The root cause of the unrest was the economic dislocation after the war which had a serious impact on employment levels, occupational earnings, working hours and shift patterns. Industrial action failed to secure better conditions with many workers in a more parlous state after a strike or lock-out than before - a bitter harvest after the sacrifices of the war.

Housing in Glasgow did not improve in the post-war years. Chalmers stated that the war created an acute housing shortage of such a magnitude that it could only be met by a special building effort which was beyond the resources of a single local authority.¹⁸⁸ Maver suggests that the political outcome of the rent dispute was that the provision of municipal housing became a key issue in the post-war construction programme.¹⁸⁹ After the war, plans were put in place for large-scale house-building by local authorities; however, this was not realised. Inflation during the war had more than doubled building costs. The economic disruption after the war and the state of the nation's finances, weakened by the cost of the war, led to the reduction in housing subsidies to local authorities. The new houses which were built barely kept pace with the increase in population. The war had created the need for municipal housing but the legacy of the war frustrated these plans.

Peace led to an improved diet for poorer people in Britain. The nation's consumption of food changed between June 1918 and September 1920 with more beef, cheese, margarine, lard, sugar and tea being consumed with less bacon, ham and rice. The nutritional value of the nation's diet in 1920 had only marginally improved compared to 1914 or 1918. However, substantial inequalities in diet remained. The diet of the lowest income group was almost half the nutritional value of the highest income group and was below the 'adequate' nutritional value requirement in every respect. The consumption of bread and potatoes declined significantly as incomes increased; conversely, the consumption of sugar and margarine increased significantly

¹⁸⁷ Renshaw, *The General Strike*, 229-230.

¹⁸⁸ Chalmers, *The Health of Glasgow*, 56.

¹⁸⁹ Maver, *Glasgow*, 194.

as incomes decreased.¹⁹⁰ Boyd Orr's national study suggests that the increased consumption of fruit, vegetables and animal fats had improved the nation's diet by 1924-1928, compared to 1909-1913 and that this improvement continued to 1934. However, this improvement was restricted to the higher income groups; bread, potatoes and margarine continued to be the mainstays for the lower income groups.¹⁹¹

During the post-war years there appears to be a divergence between Glasgow and elsewhere in Britain. Poverty in London was lower in the 1920s than before the war and, in 1928, one-third of the levels in 1889-91.¹⁹² In 1923-4, Bowley found that the number of families lacking the minimum income for subsistence in Northampton, Reading, Stanley and Bolton had fallen by a half over the previous decade and was only one-fifth of the 1913 levels if the main wage-earner was in work.¹⁹³ Boyd Orr's study in the 1930s also confirms that poverty was reduced and diet improved, although he finds that the diet for the lower income groups was still inadequate. In contrast, Glasgow suffered from the decline of its staple industries after the war with much hardship as a result of the 1921 recession. The continuing industrial unrest in the 1920s suggests that this was not a time of improving living standards in Glasgow, as was the case in England. Any improvements in living standards in Glasgow during the war did not survive the transition to peace.

Conclusion

Winter's view is that living standards improved during the war to the extent that mortality rates reduced and public health improved. Bryder is sceptical about any such improvement and Bowley, Gazeley and Dewey accept that there may have been some improvement but only towards the end of the war. The underlying social factors suggest that there was a marked deterioration in living standards in Glasgow. Housing became more congested and of poorer quality. Rising prices eroded household purchasing power; food, in particular, became significantly more expensive forcing some families to use cheaper foods. Although there was a reasonable supply of food until late 1917, there is a sense that families sometimes struggled to maintain their preferred diet. There were also increased working hours compounded by longer

¹⁹⁰ E.A. Winslow, "Changes in Food Consumption among Working-Class Families," *Economica*, 6 (1922): Table 1, 260-261; Tables V and VII, 266; 268.

¹⁹¹ J. Boyd Orr, *Food Health and Income* (London: Macmillan, 1936), 49-50.

¹⁹² Boyd Orr, *Food Health and Income*, 16.

¹⁹³ A.L. Bowley and M.H. Hogg, *Has Poverty Diminished?* (London: P.S. King & Son, 1925), 16, 21.

journeys from home to work and a more demanding work environment. None of these social factors point towards an improvement in living standards.

In addition, it is evident that living standards in Glasgow became more polarised during the war. There were those who benefited from the fruits of the war economy and those who were disadvantaged. The disadvantaged were in two categories. Professional and commercial staff and workers in non-war-related occupations were paid on time-rates with a modest, fixed rate war bonus. This group suffered an erosion of living standards due to prices rising faster than their income. The second category were those on fixed incomes such as servicemen's families subsisting on separation allowances. This group would have suffered greater hardship. At best, these families could survive by being frugal but as the war, and attendant price inflation, continued so their hardship increased. These two categories accounted for between half and two-thirds of the households in Glasgow.

In sharp contrast, some households benefited significantly from the war economy. These families would have wage-earners in the war-industries such as munitions or shipbuilding. Unskilled men, women and juveniles benefited from output related piece-work payments and incentive bonus schemes which incentivised workers to maximise output. Skilled men in these industries continued to be paid on time-rates and could just maintain their standard of living by increased hours. The most dramatic change was within families whose children, and possibly mother, could take up work in the war-industries. It is likely that a third of households in Glasgow significantly improved their standard of living for these reasons; the unskilled workers' families with working-age children were the main beneficiaries of the war economy; however, these improvements were temporary being dependent on the demand for war materials.

Full employment did not continue into peace-time and the economic dislocation to the staple industries as a result of the war placed Clydeside in a worse position than during the slumps before the war. The recession in 1922 was particularly severe and although this abated, high levels of unemployment continued throughout the 1920s. The 'peace dividend' in Glasgow was escalating levels of poverty, unemployment and industrial unrest which contrasts with the national trend of lower levels of poverty and improved diet.

In summary, it is possible to confirm that the poorest families, with unskilled wage-earners, benefited the most from improved living standards during the war. This

accords with Winter's view but his contention that living standards, overall, improved is not correct with regard to Glasgow. Only a section of the community benefited significantly from the war economy; probably a third of households. Bryder was correct to highlight the hardship of those on fixed incomes and, similarly, Dewey was accurate in identifying the erosion in living standards of the more affluent. However, this does not negate Winter's thesis of the linkage between living standards and health. The most significant improvement in living standards was in the section of the community with the poorest health record. The next chapter will consider changes in adult public health in this period with particular regards to social class.

Chapter Four

Health: Winter's Paradox

There occurred both an absolute and a relative improvement in the survival chances of manual workers, and in particular of the worst-off groups among them.¹

The average health of the population was fairly maintained during the war...[mortality] rates on the whole were lower than during any previous period of like duration.²

This chapter will consider, in the context of Glasgow, Jay Winter's contention that civilian health improved during the war which he describes as a paradox given the social privations of war. Winter also suggests that the working class were the main beneficiaries of this improvement, particularly those on low incomes.³ However, Winter has been challenged by Linda Bryder who cites the increase in tuberculosis during the war as evidence that nutrition and health deteriorated in this period.⁴ An improvement in health was evident in Glasgow although the Medical Officer of Health, Dr A.K. Chalmers, was more circumspect and stated that the average health of the population was 'fairly maintained' during the war but indicated that mortality rates were 'lower than during any previous period of like duration'.⁵ It will be argued that civilian health did improve in Glasgow during the war and that this was most marked in the poorest districts. The immediate post-war years were even more of a paradox since social conditions significantly deteriorated but mortality rates showed a continuing improvement.

It has been established that poverty reduced significantly during the war although the most significant reduction was in the last year of the war. There had been significant increases in poor relief applications between late 1914 and early 1915 with

¹ J.M. Winter, *The Great War and the British People* (London: Macmillan, 1985), 116.

² Dr. A.K. Chalmers, Report of the Medical Officer of Health, 1914-1919, Glasgow City Archives, D-TC 7/11/3/14.22, 6.

³ Winter, *Great War and the British People*, 102, 115, 140.

⁴ L. Bryder, "The First World War: Healthy or Hungry?," *History Workshop Journal*, 24 (1987): 146, 155.

⁵ Report of the Medical Officer of Health, 1914-1919, 6.

many families destitute following the enlistment of the main wage-earner or as a result of the disruption to trade which had led to unemployment. Applications increased again towards the end of 1917 which suggests a second period of hardship. However, by the end of the war, poor relief applications were a third of the pre-war levels which indicates a significant war-time reduction in poverty albeit with two periods of increased hardship in the winter of 1914/15 and in late 1917. It also has been shown that living standards differed as a result of the occupation and social class of the main-wage earner and whether they were employed in the war industries or had enlisted. Families on fixed incomes, such as annuitants or widows in receipt of pensions, experienced increasing hardship as rising prices eroded living standards. However, the largest group in this category were servicemen who found it increasingly difficult to support their family during the war.⁶ Where the main wage-earner was in civilian employment, living standards varied by occupation and industry sector. Unskilled workers on piece-work in the war-industries benefited the most, particularly towards the end of the war. Artisan families' income just kept pace with price inflation and the middle classes probably suffered some erosion in their living standards. It is estimated that only a third of the families in Glasgow experienced a significant improvement in living standards; it was the poorest in the community – the unskilled workers and their families – who experienced the highest increase in living standards.⁷ This wide variation in living standards due to differences in personal circumstances by time, occupation, industry sector and the civilian or military occupation of the main-wage earner is particularly relevant to a study of health since Winter draws a strong correlation between higher living standards and improved health.⁸

The improvement in social conditions identified by Winter is challenged by Linda Bryder, Bernard Harris and, to a lesser extent, by Ian Gazeley, as noted in the previous two chapters.⁹ Bryder considers Winter's reliance on mortality data without consideration of morbidity information on, say, chronic ill health to have limited the value of his conclusions. Also, the male statistics used were incomplete since they were for insured workers only and did not allow for the return of large numbers of ex-

⁶ See Chapter 2, pages 61-63.

⁷ See Chapter 3, pages 102-110.

⁸ Winter, *Great War and the British People*, 213-215.

⁹ Bryder, "Healthy or Hungry?," 153; B. Harris, "The Demographic Impact of the First World War: An Anthropometric Perspective," *Social History of Medicine*, 06/03 (1991): 358; I. Gazeley, *Poverty in Britain, 1900-1965* (Basingstoke: Palgrave Macmillan, 2003), 63.

servicemen, many of whom were wounded. Bryder promotes the use of female mortality figures as a sounder alternative which show a reduction over the war years but an increase in respiratory mortality. In particular, Bryder notes the twenty-five per cent increase in female mortality from respiratory tuberculosis in England and Wales between 1913 and 1918 with women between twenty and twenty-five years of age suffering an increase of thirty-five per cent. After the war, tuberculosis mortality rates reduced and were nine per cent below the 1913 level in 1920.¹⁰ Bryder regards this as significant suggesting that malnutrition during the war was the key factor in these changes, rather than overcrowding or conditions in munition factories.¹¹ The incidence of female tuberculosis deaths is central to Bryder's challenge to Winter's contention that improved social conditions led to improved civilian health.¹²

Harris uses age-specific mortality rates to challenge Winter by suggesting that the war did not improve the survival chances of men who were old enough to stay out the trenches and that female death rates from influenza, bronchitis and pneumonia increased during the war. Harris suggests that reductions in other diseases were due to lower birth rates, reduced consumption of sugar by diabetics and less alcohol consumed rather than an improvement in social conditions as suggested by Winter.¹³ The main challenge to Winter is, therefore, on three counts: that male survival chances did not improve; that female respiratory tuberculosis mortality rates increased, and that other female respiratory mortality rates increased, namely influenza, bronchitis and pneumonia. These issues need to be considered to establish whether Britain became a healthier place to live during the war, using Glasgow as a case study.

This consideration of civilian health in Glasgow will be in four parts. Firstly, the change in mortality rates during the war will be considered relative to the health trends in the period before the war. Secondly, a more detailed analysis of mortality by the principal cause of death will identify any change in the incidence of particular diseases. Those linked to social conditions, such as tuberculosis, will be of particular interest. Thirdly, mortality by social class will be considered to establish whether changes in health were social-class-specific. Mortality by social class was not

¹⁰ Bryder, "Healthy or Hungry?," 142-146.

¹¹ Bryder, L., *Below the Magic Mountain: a Social History of Tuberculosis in Twentieth Century Britain* (Oxford: Oxford University Press, 1988), 110, 112.

¹² Bryder, "Healthy or Hungry?," 150.

¹³ Harris, "Demographic Impact of the First World War," 347-349.

recorded; however, municipal wards can be aggregated into groups with similar health profiles. It will be evident that districts with the highest mortality rates were the poorest areas in the city; conversely, those with low mortality rates were the most affluent districts. Mortality rates, therefore, provide a basis to segregate municipal districts into social classes and to identify whether changes in mortality were social-class-specific. Fourthly, the health trends from 1919 to 1925 will be considered to identify whether any changes in public health during the war were permanent or transitory.

It will be argued that civilian health did improve in Glasgow during the war and that the reduction in mortality rates represented a substantive change compared to the immediate pre-war and post-war period. Furthermore, it will be shown that the war-time improvement was due to a general reduction in the incidence of most diseases rather than a marked reduction in any particular group of diseases or changes in medical practice. It will also be demonstrated that the improvement was class-specific with the poorest having gained the most with the lowest improvements in health in the more affluent districts. With regard to the challenges to Winter, it will become evident that the arguments of Bryder, *et al*, fail with regard to Glasgow. Mortality from the diseases linked to social conditions, such as tuberculosis, reduced in Glasgow during the war rather than increased as was the case in England and Wales.

This study will also demonstrate that higher living standards did not prevent spikes in mortality from infectious diseases, such as influenza, or from respiratory diseases, such as pneumonia and bronchitis, which were prevalent during inclement weather. There were periods of hardship during the war and the correlation between poverty and high mortality will be demonstrated, particularly with regard to the 1914/1915 period. Finally, a review of health trends between 1919 and 1925 will suggest that Glasgow continued to be a healthier place to live after the war, particularly within the poorer municipal districts. This occurred despite significantly higher levels of unemployment and poverty than during the war. This may have been due to an improved resistance to disease acquired during the war or better health care and welfare benefits in the post-war years.

This chapter makes extensive use of health statistics, primarily mortality rates. The health of those who lived in the poorest districts will emerge as an important

issue. The focus on quantitative evidence will be complemented by the qualitative evidence on what it was to be poor in Glasgow in this period.

Figure 4.1. Women and Child in a Slum Tenement, c.1910



Source: <https://www.theglasgowstory.com>, "Urban Squalor", P-663, accessed 14 October 2018.

The foregoing provides a graphic image of poverty. The picture of a mother and child is particularly instructive with regards to what is missing – furniture, food, cooking utensils, personal possessions, warm clothing for the child, light, ventilation and heat. A doctor in the Gorbals, George Robertson, described a typical visit to homes such as this.

A small gas jet beside the stairway provided the only means of lighting this stench-laden cavern and as I climbed the worn steps usually to answer some call in the hollow early hours of a long dark winter's night, I would creep through the shadows and hear the sound of snoring, children crying or screaming, the never-ending squabbling between husbands and wives. Over two hundred were crowded together in this miserable and hellish tenement.¹⁴

¹⁴ G.R. Robertson, *Gorbals Doctor* (London: Jarrolds, 1970), 56.

Robertson not only communicates the poverty, squalor and idleness in these tenements but also that the inhabitants were trapped in their destitution with a fatalistic acceptance that there was no escape from their condition. A similar account has been given by Alec Glen, a doctor in Govan, who commented on the effect of poverty on the health of the poor.

Food largely bread and carbohydrates and insufficiently clothed, especially in winter. Rickets widespread, tuberculosis rife, diphtheria, scarlet fever, whooping cough and even measles frequently fatal. The health of these people, particularly the women and children, was terribly neglected.¹⁵

These comments provide a sense of what it was to be poor in Glasgow and the seemingly intractable nature of poverty. These images and accounts of poverty should be retained as providing context to the multiplicity of health statistics in this chapter and the deduced improvements in civilian health during the war.

Mortality Rates during the War

The first part of this chapter considers the changes in mortality rates during the war. These changes need to be considered in the context of long-term health trends in the years leading up to the outbreak of war. There had been a sustained reduction in mortality rates in Britain since the late nineteenth century with some debate on whether this was due to improved nutrition or municipal initiatives to improve public health. Mortality rates were 16 per cent lower in England and Wales in the 1890s compared to the 1840s due to reduced mortality from infectious diseases such as tuberculosis, typhoid and smallpox.¹⁶ Improved health continued into the 20th century with mortality rates in England and Wales reducing by a further 15 per cent between 1901 and 1911 with a uniform reduction in all categories of cause of death. Thomas McKeown, *et al*, note that three quarters of the reduction in mortality in the twentieth century was due to fewer deaths from infectious diseases. In the absence of improvements in medical care and any reduction in exposure to infection, other than for tuberculosis, McKeown concludes that improved nutrition, as a result of an

¹⁵ A. Glen, *In the Front Line: A Doctor in War and Peace* (Edinburgh: Birlinn, 2013), 142.

¹⁶ T. McKeown and R.G. Record "Reasons for the Decline of Mortality in England and Wales during the Nineteenth Century," *Population Studies* 16 (1962): Table 1, 101; 119.

increase in the standard of living, was the main contributory factor to improved health.¹⁷ However, Simon Szreter considers that public health initiatives by municipal authorities in the late 19th century to address the insanitary environments created by industrialisation were more important than the ‘invisible hand’ of rising living standards.¹⁸

The improvement in health was also evident in Glasgow. Mortality rates in Glasgow reduced by 34 per cent between the 1860s and the 1900s and by a further 22 per cent by 1911. Glasgow suffered from a high incidence of respiratory-related deaths and much of this reduction in mortality rates was due to fewer deaths from these illnesses. A reduction in other infectious diseases such as typhus and enteric fever and scarlet fever also contributed to the improvement.¹⁹ Carolyn Pennington suggests that public health improvements such as better sanitation, some improvement in housing conditions and better food hygiene contributed to this improvement but that there is limited evidence for improved diet being a significant factor.²⁰ The public works in the second half of the 19th century to bring clean water to the city were one such municipal initiative to improve public health.²¹ This does not account for the marked decline in respiratory deaths since air pollution did not improve in the period. By elimination of other factors, Pennington concludes that improved living standards had the greatest impact on the reduction in respiratory diseases.²²

Whilst the long-term trend had been one of falling mortality rates, there was a change in Glasgow in the immediate pre-war years. Mortality rates had increased in 1908 and 1909 due to inclement weather and economic hardship during a trade depression.²³ There was no improvement in mortality rates between 1910 and 1914

¹⁷ T. McKeown, R.G. Record & R.D. Turner, “An Interpretation of the Decline of Mortality in England and Wales during the Twentieth Century,” *Population Studies*, 29 (1975): Table 4, 398-9; 407, 412-422.

¹⁸ S. Szreter, “The Importance of Social Intervention in Britain’s Mortality Decline c.1850-1914: a Re-Interpretation of the Role of Public Health,” *Social History of Medicine*, 1 (1988): 34-35.

¹⁹ C.I. Pennington, “Mortality, Public Health and Medical Improvements in Glasgow, 1855-1911,” Ph.D. diss., University of Stirling (1977), Table V, 52; Table V1, 53; 55; Table X, 56; Appendix, Table III.

²⁰ Pennington, “Mortality, Public Health and Medical Improvements in Glasgow,” 409.

²¹ Corporation of the City of Glasgow, *Municipal Glasgow; Its Evolution and Enterprises* (Glasgow: Corporation of Glasgow, 1915), 274-276.

²² Pennington, “Mortality, Public Health and Medical Improvements in Glasgow,” 385.

²³ Report of the Medical Officer of Health, 1908, 1; Report of the Medical Officer of Health, 1909, 2; J.H. Treble, *Urban Poverty in Britain 1830-1914* (London: Batsford Academic, 1979), 90; Glasgow Labour History Workshop, “The Labour Unrest in West Scotland, 1910-14,” in *Roots of Red Clydeside, 1910-1914? Labour Unrest and Industrial Relations in West Scotland*, eds. W. Kenefick and A. McIvor (Edinburgh: John Donald, 1996), 25-26.

despite prosperity having returned to the city by 1913 with a marginal increase in mortality.²⁴ Glasgow had absorbed other burghs in November 1912 which could have distorted the rates after this date. However, the rates for the original core of the city between 1910 and 1914 also show no improvement in mortality rates.²⁵ The immediate pre-war period was, therefore, one of largely unchanged public health.

The reasons for the long-term decline in mortality in Britain are a matter of debate but are likely to have been due to improvements in public health within urban centres and higher living standards. There was an established pattern in Glasgow of declining mortality rates in the late 19th century and early 20th century with significant reductions in the principal causes of death. For reasons that are not evident, this trend had arrested in the immediate pre-war period in Glasgow. It is appropriate now to consider changes in mortality rates during the war.

Winter suggests that Britain became a healthier place to live during the war as a result of higher living standards and an improved diet.²⁶ This is not immediately apparent from the mortality statistics for Glasgow that fluctuate to the extent that they neither confirm nor refute Winter's thesis. Chalmers, Glasgow Medical Officer of Health, in his report on the period suggested that civilian health had been 'fairly maintained' but did note that the mortality rates in 1916 and 1917 were the lowest recorded for the city.²⁷

There are no records of morbidity; indeed, much ill health would have been endured without recourse to medical intervention, particularly in the poorer districts. Doctors in areas such as Govan and the Gorbals had nine to ten thousand patients on their lists with many patients being unable to afford their services.²⁸ Consequently, much of this study utilises the primary evidence which is available - mortality rates. It is, however, also useful to note the quantum of deaths in this period. In 1914, there were 17,518 deaths in Glasgow which increased to 20,158 deaths in 1915, the highest annual number of deaths during the war. Both 1916 and 1917 were lower at around 16,600 deaths and it was these years to which Chalmers referred as having the lowest

²⁴ A. Slaven, *The Development of the West of Scotland: 1750-1960* (London: Routledge Keegan Paul, 1975), 182; Glasgow Charity Organisation Society, *Annual Report*, 1912-13, 2.

²⁵ Report of the Medical Officer of Health, 1912, 1; Report of the Medical Officer of Health, 1913, Table VII, 123; Report of the Medical Officer of Health, 1914-19, Table VIII, 132.

²⁶ Winter, *Great War and the British People*, 213-215.

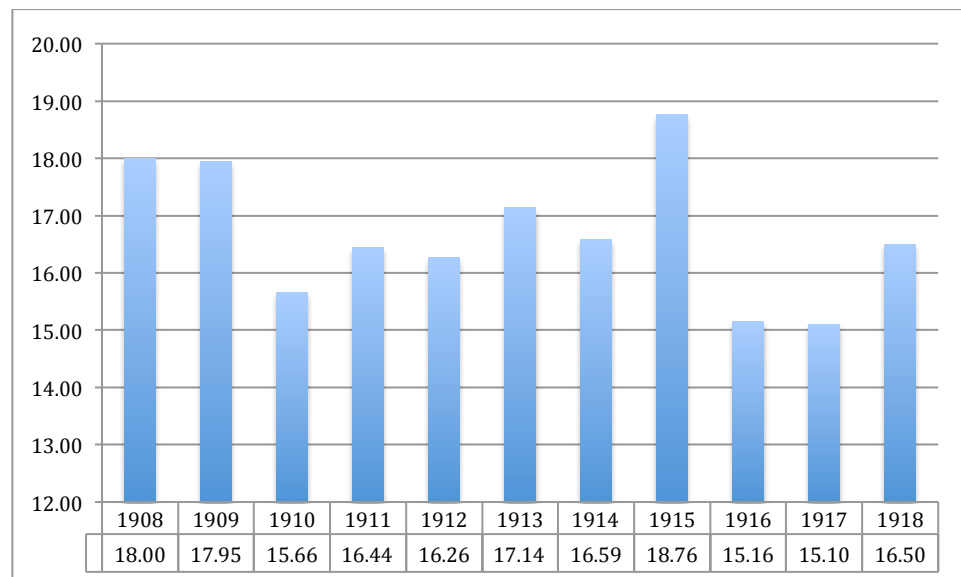
²⁷ Report of the Medical Officer of Health, 1914-19, 6.

²⁸ Glen, *In the Front Line*, 140-142; Robertson, *Gorbals Doctor*, 54-62.

recorded mortality rates for the city. There was a marked increase in deaths in 1918 and 1919 with some 18,300 dying in each of these years.²⁹

During this period, some 200,000 men left for military service which would have had some impact on mortality within Glasgow. Military recruits were screened and were rejected if deemed unfit for service. The increase in the cases of tuberculosis notified to the health authorities shows that those with identified ailments were not accepted into the military. It is likely that the enlistment of healthy men had minimal effect on mortality rates since the remaining population had a higher proportion of unhealthy citizens; for example, 81 per cent of all deaths in Glasgow in 1914 were among those too young or too old for military service. Deaths among civilian males of military service age did decrease during the war but only by 260 deaths between 1914 and 1917; the overall mortality in 1917 was 13,855 deaths.³⁰ It is, therefore, probable that the departure of 200,000 healthy males did not skew the mortality statistics in Glasgow during the war. The mortality rates per thousand of the population, between 1908 and 1918 are shown in Figure 4.1.

Figure 4.2. Mortality Rates in Glasgow, 1908-1918.



Source: *Reports of the Medical Officer of Health, City of Glasgow, 1908, 1; 1909, 2; 1910, 1; 1913, 6; 1914-1919, Table VIII, 132.*

²⁹ Report of the Medical Officer of Health, 1914-19, Table VIII, 132.

³⁰ Report of the Medical Officer of Health, 1914-19, Table XI, 134.

In order to make an informed view of the mortality rates, it is necessary to recognise the impact of infectious disease, inclement weather and poor diet on deaths within the city. A combination of several or all of these factors led to periods of high mortality. Winter's thesis for improvements in health is based on higher living standards and a more nutritious diet. An improved diet may have strengthened the individual's constitution but it would not have removed the risk to life from infectious disease, such as measles or influenza, or inclement weather, such as freezing fog, which led to so many respiratory deaths.

There were 2,640 more deaths in 1915 than in 1914 due to outbreaks of infectious disease, adverse weather and widespread hardship. Mortality was highest in the first half of the year with the first quarter having the highest mortality rate. An outbreak of measles and whooping cough accounted for 37 per cent of this increase. These childhood diseases were cyclical with some years having higher rates of infection than others. Chalmers observed that measles had been more prevalent in 1916 but that the outbreak in 1915 had higher fatalities due to the adverse winter weather. Inclement weather also contributed to a higher incidence of deaths from bronchitis and pneumonia which accounted for a further 40 per cent of increase in mortality.³¹ The first half of 1915 was a period when many servicemen's families suffered severe hardship due to the loss of their main wage-earner's income and the delay in the payment of government separation allowances.³² During 1915, the vulnerable were most at risk; children under 5 years of age and adults over 55 years of age accounted for 85 per cent of these additional deaths as compared to 1914.³³ The combination of adverse weather, infectious disease and poverty resulted in a significant increase in mortality in 1915; however, cyclical infectious disease and adverse weather were the main contributors to this spike in mortality with living standards and nutrition a lesser issue.

The influenza epidemic caused another spike in mortality in 1918 and 1919. This was an exceptionally virulent outbreak which claimed the lives of some 6,300 persons over these years.³⁴ Normal seasonal influenza usually claimed only some 100 lives per annum.³⁵ The epidemic virus attacked across the social spectrum and was

³¹ Report of the Medical Officer of Health, 1914-19, Table VIII, 132, 55, 90.

³² See Chapter 2, page 61.

³³ Report of the Medical Officer of Health, 1914-19, Table XI, 134.

³⁴ See Chapter 6, page 206.

³⁵ Report of the Medical Officer of Health, 1914-19, 90.

particularly evident among healthy adults. Most died from respiratory complications arising from the infection rather than from the influenza virus. For this reason, many deaths during the epidemic were not recorded as influenza-related deaths. Chalmers underestimated the death toll with only deaths directly attributed to influenza being recorded and deaths arising from influenza-related complications being included within other disease categories. Chalmers recorded 2,015 influenza deaths in 1918; a more realistic estimate would be 2,900 deaths.³⁶ It could be argued that influenza claimed lives that might have been lost anyway due to, say, bronchitis. However, the calculation of 2,900 influenza-related deaths is based on additional deaths over and above the normal levels for all respiratory deaths, as recorded in 1917. The overall mortality rate for 1918, excluding the epidemic, would have been 13.90 per thousand which is 16 per cent lower than in 1914. The influenza epidemic led to the spike in mortality in 1918 with an indication that underlying mortality rates, excluding the epidemic, had shown an improvement when compared to the beginning of the war.

The spikes in mortality in 1915 and 1918 demonstrate that not all diseases can be mitigated by improved social conditions and that civilian health was also at the mercy of outbreaks of infectious disease and inclement weather. The influenza epidemic in 1918 clearly demonstrates this since the disease attacked healthy adults and the poor and affluent alike in a year when there had been a substantial increase in living standards for those working in the war industries.³⁷ The influenza epidemic in 1918/19 was unprecedented in its virulence and was an exceptional occurrence and the associated mortality should be disregarded when assessing the underlying health of the civilian population.³⁸

Changes in Underlying Health

The second part of this chapter will seek to identify changes in the underlying health of the civilian population of Glasgow during the war. The underlying changes in civilian health will be calculated by eliminating the deaths from the more volatile infectious and respiratory diseases from the overall mortality figures. Following this, a more detailed consideration will be given to two major categories of diseases,

³⁶ Report of the Medical Officer of Health, 1914-19, 90. The calculation of 2,900 influenza deaths is detailed in Chapter 6, pages 199-203.

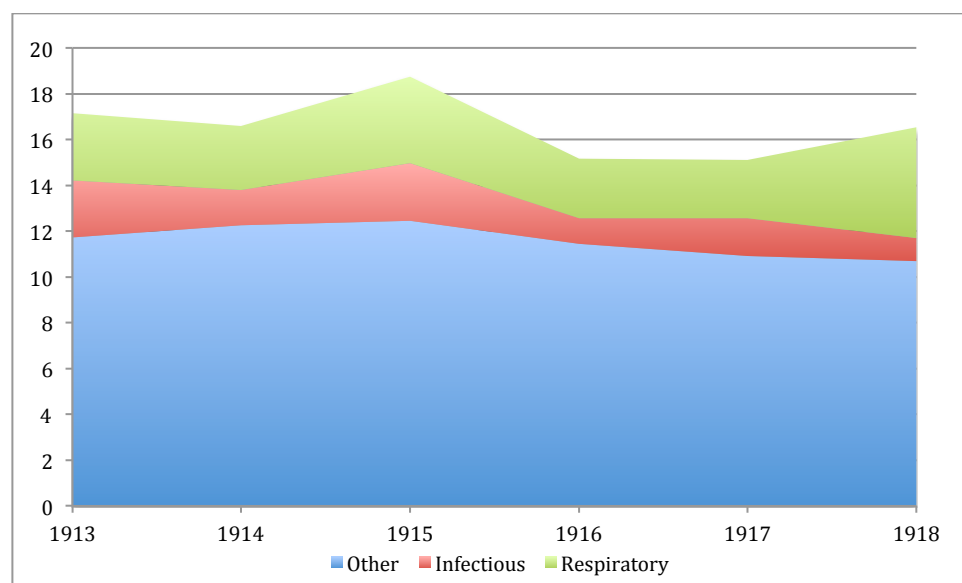
³⁷ See Chapter 6, pages 217-219 for evidence regarding the profile of victims and Chapter 3, pages 102-111 for evidence for improved living standards among the poor.

³⁸ The justification for eliminating the epidemic deaths from the calculation of health improvements during the war is set out in Chapter 6, pages 232-234.

pulmonary tuberculosis and respiratory diseases, which are linked to social conditions and which have been cited by those who have challenged Winter. It will be argued that underlying health did improve during the war and that the challenges to Winter from Bryder and Harris fail in the context of Glasgow.

The mortality rates for infectious and respiratory diseases together with the aggregation of other causes of death are shown in Figure 4.3 with the blue area of the graph representing the underlying mortality rate.

Figure 4.3. Underlying Mortality Rates in Glasgow, 1913-1918.



Source: *Report of the Medical Officer of Health, City of Glasgow, 1914-1919*, 7.

The volatility of infectious and respiratory diseases is evident; however, a more consistent pattern emerges for the other causes of death. ‘Other’ diseases account for two-thirds of all deaths and represent the underlying health of the population, excluding the more volatile respiratory and infectious diseases. Table 4.1, shown on the following page, provides details of the diseases within this category and the mortality rates between 1914 and 1918. Underlying mortality rates show an increase between 1914 and 1915 and a consistent reduction thereafter to 1918. The reduction of 11 per cent between 1914 and 1918 contrasts with the immediate pre-war period that showed no reduction in overall mortality rates. The mortality rates suggest an improvement in the underlying health of the population with all categories of diseases showing a reduction in mortality rates. This occurred despite a deterioration in

medical services with hospitals requisitioned for military use and fewer general practitioners.³⁹

Table 4.1. Underlying Mortality Rates, 1914-1918.

	1914	1915	1916	1917	1918	1914-18 +/-
Tuberculosis	1.98	1.94	1.95	1.83	1.80	-9%
Nervous system	1.73	1.89	1.67	1.59	1.61	-7%
Circulatory diseases	1.72	1.80	1.54	1.56	1.50	-13%
Digestion	1.43	1.25	1.33	1.05	1.03	-28%
Congenital defects	1.17	1.13	0.99	0.93	0.88	-25%
Other	4.22	4.44	3.98	3.96	4.07	-4%
Total	12.25	12.45	11.46	10.92	10.89	-11%

Source: *Report of the Medical Officer of Health, City of Glasgow, 1914-1919*, 7

Note: Figures are deaths per 1,000 population.

Harris argues that the improvement in health during the war was simply a continuation of the pre-war decline in mortality.⁴⁰ The most significant advances in Glasgow had been achieved in the last quarter of the nineteenth century. Progress after 1901 was more modest with an 8 per cent decrease in the overall death-rate between 1901-5 and 1906-10 and only a 3 per cent decrease between 1906-10 and 1911-15 indicating that the rate of reduction in mortality had dissipated before 1914.⁴¹ Chalmers's comment that the average health of the population was only 'fairly maintained' during the war was a cautious assessment but he did not exclude mortality from the influenza epidemic in his assessment. It has been shown that underlying mortality rates reduced by 11 per cent during the war. This was a much higher reduction than in the immediate pre-war period and suggests that conditions during the war led to a step change in the improvement in civilian health and that it was not simply a continuation of pre-war health trends as suggested by Harris.

Following the quantification of the improvement in underlying health, a more detailed consideration of tuberculosis and respiratory diseases is necessary to

³⁹ A.G.V. Simmonds, *Britain and World War One* (Abingdon: Routledge, 2012), 181; J. Hogarth, "General Practice," in *Improving the Common Weal: Aspects of Scottish Health Services, 1900-1984*, ed. G. McLachlan, (Edinburgh: 1987), 172-177; J. Kinnaird, "The Hospitals," in *Improving the Common Weal: Aspects of Scottish Health Services, 1900-1984*, ed. G. McLachlan (Edinburgh: Edinburgh University Press, 1987), 222-223.

⁴⁰ Harris, "Demographic Impact of the First World War," 366.

⁴¹ A.K. Chalmers, *The Health of Glasgow, 1818-1925*, (Glasgow: Corporation of Glasgow, 1930), 59.

ascertain the reasons for any such improvement. Bryder referred to the increase in pulmonary tuberculosis in England and Wales to refute Winter's argument whilst Harris cites the increase in female influenza, pneumonia and bronchitis deaths to challenge Winter. This part will show that the challenges from Bryder and Harris do not apply to Glasgow and that there is clear evidence of an improvement in most categories of disease which supports the conclusion that civilian health improved in Glasgow during the war.

The incidence of pulmonary tuberculosis is key to Bryder's challenge to Winter but it is also important in that the disease is associated with poverty, overcrowding and malnutrition. The incidence of the disease during the war, therefore, provides important evidence on changing social conditions during this period. Bryder's challenge is based on an increase in tuberculosis deaths in England and Wales during the war; whereas, tuberculosis deaths declined in Glasgow during this period. Tuberculosis has been described as the scourge of the labouring poor and an opportunistic infection following in the wake of other illnesses.⁴² The disease was more prevalent in poorer districts in Glasgow with mortality rates three times higher in Calton, a particularly poor area, than in affluent Langside. The disease had profound consequences for families; for example, the Jamieson family of father and three children lived in the kitchen since the tuberculous mother was confined to bed with her medicines and stimulants accounting for nearly half of their meagre earnings.⁴³ Hannah Halliday, aged 38, died of pulmonary tuberculosis on 15 March 1915 leaving seven children, the oldest being 12 years of age. Her husband was a carter only earning 32 shillings a week.⁴⁴ Chalmers notes that the mortality rate for those living in one apartment houses in Glasgow was double that of 3 apartment houses and four times that for 4 apartment houses and concludes that the main cause of infection was badly ventilated, and overcrowded, living and working spaces. Tuberculosis was particularly fatal at certain ages. In Scotland, younger adults, of both sexes, were susceptible to pulmonary tuberculosis; a quarter of deaths were between 15 and 25 years of age and two-thirds were between 15 and 45 years of age.

⁴² F.B. Smith, *The Retreat of Tuberculosis, 1850-1950* (London: Croom Helm, 1988), 19; T. Dormandy, *The White Death: A History of Tuberculosis* (London: New York University Press, 1999), 21.

⁴³ Glasgow City Archives, Parish of Govan Combination, Applications for Relief, D-HEW 17/754, 164596, 15 September 1914.

⁴⁴ Govan Parish, Applications for Relief, D-HEW 17/757, 169441, 10 March 1915.

Children under 15 years of age accounted for two-thirds of non-pulmonary deaths.⁴⁵ Mortality rates were higher among certain occupations, such as metal workers and printers in premises with pervasive dust which led to coughing and exporating.⁴⁶

Deaths from pulmonary tuberculosis in Britain had been declining before the war. Francis Smith notes that more than half of the fall in mortality between 1850 and 1950 had occurred before 1900. In Scotland, the respiratory tuberculosis mortality rate fell by 40 per cent between 1861 and 1901 and by a further 26 per cent between 1901 and 1911. The reduction in England and Wales was similar at 50 per cent and 19 per cent respectively.⁴⁷ The reduction in Glasgow was higher with mortality rates from pulmonary tuberculosis having reduced by 55 per cent between 1870 and 1900 and by 28 per cent between 1900 and 1910.⁴⁸ Clearly, the disease was in long-term decline albeit the rate of decline had slowed in the early 20th century.

Several reasons for the retreat of the disease are mooted although there is some agreement that this was due to an improvement in social conditions. Smith considers poor nutrition and impaired resistance to be the crucial divider between exposure and active manifestation of tuberculosis and that adequate nutrition and comfort enhanced resistance to the disease.⁴⁹ Jacqueline Jenkinson suggests that nutritional standards were only a partial explanation for the incidence of tuberculosis mortality and that over-crowded and sub-standard housing must also be a factor, particularly with regard to the higher rates in Scotland.⁵⁰ Chalmers considered that tuberculosis would only be prevented by removing the conditions which fostered its incidence – small overcrowded homes, low wages and irregular food.⁵¹ Christopher Clayson adds that, in addition to a slow improvement in social conditions, there was a long-term improvement in resistance following gradual elimination of susceptible strains in the population.⁵² Szeleter notes that tuberculosis was often contracted by individuals weakened by other diseases, such as whooping cough. Improvements in

⁴⁵ Kinnaird, "Hospitals." Table XV, 132; 97; A.K. Chalmers, *The Distribution of Tuberculosis Diseases in Glasgow, with Observations on the Relation of Phthisis to Room-density* (Glasgow: Corporation of Glasgow, 1897), 17, 19.

⁴⁶ Smith, *Retreat of Tuberculosis*, p. 212.

⁴⁷ Smith, *Retreat of Tuberculosis*, 236; Table II, 7.

⁴⁸ Chalmers, *Health of Glasgow*, 139.

⁴⁹ Chalmers, *Health of Glasgow*, 19, 243.

⁵⁰ J. Jenkinson, *Scotland's Health: 1919-1948*, (Oxford: Peter Lang, 2002), 276.

⁵¹ Chalmers, *The Distribution of Tuberculosis Diseases*, 19; A.K. Chalmers quoted by C. Pennington in *Health Care as Social History: The Glasgow Case*, eds. O. Checkland and M. Lamb (Aberdeen: Aberdeen University Press, 1982), 96-97.

⁵² C. Clayson, "Tuberculosis," in *Improving the Common Weal: Aspects of Scottish Health Services, 1900-1984*, ed. G. McLachlan (Edinburgh: Edinburgh University Press, 1987), 393.

sanitation and the provision of clean water reduced the incidence of other diseases, hence improving the resistance to tuberculosis.⁵³

Effective treatment for tuberculosis was not available until 1955 with the use of new drugs and mass screening to detect the disease.⁵⁴ In the absence of effective medication in the early decades of the 20th century, isolation in a Poor Law hospital or sanatorium was the only treatment provided for acute cases. Smith suggests that Poor Law hospitals played an important role in providing care for consumptives separate from the community.⁵⁵ However, Neil MacFarlane suggests that funds would have been better spent on providing better housing rather than isolation wards.⁵⁶ Whilst Carolyn Pennington concurs that the Poor Law Hospitals provided necessary care for individuals in the latter stages of their disease, the system of poor relief contributed to the spread of the disease by keeping the infected poor in the community since the prolonged nature of the disease and the lengthy incapacity of the wage-earner discouraged early notification and isolation.⁵⁷

Before the war, Glasgow had followed the pioneering work of Dr Robert Philip in Edinburgh by introducing voluntary notification and isolation with local dispensaries, sanatorium and hospital treatment.⁵⁸ However, isolation was not always possible since notification was often postponed until death or thereafter.⁵⁹ Admissions to the Poorhouse Hospital were often delayed until the disease was very advanced; Robert McCulloch asked for his 46-year-old wife, Elizabeth, to be admitted on 15 September 1914, where she died within the month.⁶⁰ Hannah Halliday was admitted to the Poorhouse Hospital only four days before her death.⁶¹ In 1913, the Astor Committee recommended that treatment should be available to everyone in the community, not just the insured, and that notification should be compulsory.⁶²

⁵³ S. Szreter, "The Importance of Social Intervention in Britain's Mortality Decline c.1850-1914: a Re-Interpretation of the Role of Public Health," *Social History of Medicine*, 1 (1988): 14.

⁵⁴ D. Hamilton, *The Healers: A History of Medicine in Scotland* (Edinburgh: Mercat Press, 1981), 238.

⁵⁵ Smith, *Retreat of Tuberculosis*, 238-239.

⁵⁶ N. M. MacFarlane, "Hospitals, Housing, and Tuberculosis in Glasgow, 1911-51," *The Society for the Social History of Medicine*, 2 (1989): 85.

⁵⁷ C. Pennington, "Tuberculosis," in *Health Care as Social History: The Glasgow Case*, eds. O. Checkland and M. Lamb (Aberdeen: Aberdeen University Press, 1982), 97, 99.

⁵⁸ Hamilton, *Healers*, 237.

⁵⁹ Clayson, "Tuberculosis", 389.

⁶⁰ Govan Parish, Applications for Relief, D-HEW 17/752, 164322, 15 September 1914.

⁶¹ Govan Parish, Applications for Relief, D-HEW 17/767, 169441, 10 March 1915.

⁶² Departmental Committee on Tuberculosis, *Final Report of the Departmental Committee on Tuberculosis, Volume 1* (HMSO, 1913), Cd. 6641, 6, 8.

Glasgow had already accepted compulsory notification in 1910 and by 1914 had provided 6 dispensaries and 880 hospital beds.⁶³

Pulmonary tuberculosis mortality rates in Glasgow declined by 4 per cent between 1914 and 1918 compared to an increase of 9 per cent in the four years before the war.⁶⁴ The reduction in Glasgow is contrary to what might be expected given the increased exposure to infection due to the numbers of women entering industrial work-places and the increased pressure on housing and work spaces during the war. War conditions led to an increase in tuberculosis deaths in the later conflict between 1939 and 1945.⁶⁵ Clayson considers that the war had negligible effect on tuberculosis mortality in Glasgow and that the long term retreat of the disease was re-established in 1919.⁶⁶ Helen Dingwall suggests that although progress was limited during the war that isolation, rest and fresh air continued to reduce the mortality rate.⁶⁷ Smith attributes the 'retreat' of tuberculosis to improved living conditions of the poorer classes due to better nutrition, housing, nurture, lessening of fatigue and smaller family sizes.⁶⁸ McKeown agrees that an improvement in diet contributed to decline of the disease.⁶⁹ Neil MacFarlane concurs that an improved diet as a result of higher real wages was the most important factor in the reduction in Glasgow.⁷⁰

Bryder bases her challenge to Winter on the 25 per cent increase in female deaths from pulmonary tuberculosis in England and Wales during the war, also noting the higher increase of 35 per cent among women between 20 and 25 years old.⁷¹ The increase among women suggests that the new industrial workers, who were within the high-risk age-group, were the worst hit by the disease.⁷² Catherine Rollet shows that similar increases occurred in other cities, such as Paris and Berlin.⁷³ However, an increase in female tuberculosis mortality was not evident in Glasgow. The Medical Officer of Health's report for Glasgow for 1914-1919 does not provide details of

⁶³ Clayson, "Tuberculosis", 389, 394.

⁶⁴ Report of the Medical Officer of Health, 1914-19, 75, 124.

⁶⁵ Jenkinson, *Scotland's Health*, 75.

⁶⁶ Clayson, "Tuberculosis," 393.

⁶⁷ H.M. Dingwall, *A History of Scottish Medicine* (Edinburgh: Edinburgh University Press, 2003), 218.

⁶⁸ Smith, *Retreat of Tuberculosis*, 244.

⁶⁹ McKeown, Record & Turner, "Decline of Mortality during the Twentieth Century," 411.

⁷⁰ N.M. McFarlane, "Tuberculosis in Scotland, 1870-1960," Ph.D. diss., University of Glasgow (1990), 347.

⁷¹ Bryder, "Healthy or Hungry?," 145-146.

⁷² Smith, *Retreat of Tuberculosis*, 222, 241.

⁷³ C. Rollet, "The 'Other War': Protecting Public Health and Setbacks in Public Health," in *Capital Cities at War: London, Paris, Berlin, 1914-1919*, eds. J.M. Winter and J.L. Robert (Cambridge: Cambridge University Press, 1997), 469.

tuberculosis deaths by gender and by age. However, details of new cases of pulmonary tuberculosis notified to the health authorities are available. These show a 5 per cent decrease in cases among women between 1914 and 1918 with no evidence of an increase in new cases among young women. There was a 15 per cent increase among men but this was due to more tuberculosis being identified during medical examinations of army recruits.⁷⁴ Female deaths from all causes are provided in the Medical Officer of Health's report. Deaths in 1915 and 1918 reflect the general spike in mortality from infectious disease and inclement weather as already outlined but these factors did not affect 1916 and 1917 to the same extent. Female deaths, overall, in both of these years were 6 per cent lower than in 1914. Deaths among 20 to 25-year-olds increased by 10 per cent but deaths among 25 to 35-year-old females decreased by 14 per cent.⁷⁵ It should be noted that pulmonary tuberculosis accounted for only 6 per cent of female deaths in Glasgow; Bryder does not address the impact of the war on the diseases which caused the remaining 94 per cent of deaths.⁷⁶ Bryder's argument that increased tuberculosis mortality among women indicates a deterioration in public health, and possibly an increase in malnutrition, does not apply to Glasgow since tuberculosis mortality rates decreased in the city.

Furthermore, Bryder uses national statistics for England and Wales to challenge Winter but there were significant variations in tuberculosis mortality in Britain. Mortality rates in Scotland were generally higher than in England and Wales.⁷⁷ Also, the disease in Scotland was retreating at a faster rate with a 27 per cent reduction between 1911 and 1921 compared to 17 per cent in England and Wales.⁷⁸ Mortality in English cities varied; mortality rates in London and Liverpool increased by 24 per cent and 28 per cent respectively; whereas, rates reduced in Birmingham and Manchester by 10 per cent and 2 per cent respectively. Variations were also evident in Scotland. As noted, rates in Glasgow reduced by 4 per cent which compares to an 18 per cent decrease in Edinburgh and a 6 per cent increase in

⁷⁴ Report of the Medical Officer of Health, 1914-19, 75, 78.

⁷⁵ Report of the Medical Officer of Health, 1914-19, Table XI, 134.

⁷⁶ Report of the Medical Officer of Health, 1920, Table IX, 126.

⁷⁷ Jenkinson, *Scotland's Health*, 274-275.

⁷⁸ Smith, *Retreat of Tuberculosis*, Table II, 7.

Aberdeen.⁷⁹ Clearly, local factors had a major impact on tuberculosis during the war and Bryder accepts that using national figures obscures regional variations.⁸⁰

Bryder based her argument on an increase in female tuberculosis mortality which stemmed from a deterioration in social conditions. The evidence with regards to Glasgow suggests the opposite; tuberculosis mortality decreased possibly as a result of improved living standards. It is also evident that there were significant variations between regions and cities and that local factors were a key determinant in tuberculosis mortality during the war which Bryder accepts. Bryder's challenge to Winter may have merit in other contexts but fails in relation to Glasgow given the decrease in tuberculosis mortality in Glasgow during the war.

Bryder cites tuberculosis rates to challenge Winter; Harris does likewise but bases his argument on the incidence of respiratory deaths by noting that female death rates from influenza, bronchitis and pneumonia increased during the war.⁸¹

Respiratory diseases were the most fatal category of disease in Glasgow and it was most prevalent in the poorer districts. It will be shown that mortality from respiratory diseases in Glasgow declined, rather than increased, during the war and that the 1918 influenza epidemic compromises Harris's comparison between 1914 and 1918.

Mortality from respiratory diseases in Glasgow had declined by a third between the 1890s and the late 1910s, albeit at a slower rate of decline than the overall mortality rate. Pneumonia had replaced bronchitis as the major cause of respiratory death after 1900 and whilst mortality rates from bronchitis reduced by 60 per cent between the 1890s and early 1920s, mortality rates from pneumonia reduced by only 20 per cent. With regard to the slower decline of pneumonia, Chalmers suggests that the 'the pneumococcus is more refractory to the generally accepted methods of sanitary improvement than are the other forms of lung diseases'.⁸²

Mortality rates from respiratory disease were significantly higher in poorer districts such as Calton where residents were four times more likely to die from pneumonia or bronchitis than in affluent Langside.⁸³ As with tuberculosis, respiratory disease could have serious consequences for families. Patrick Brady, 59 years of age,

⁷⁹ Report of the Medical Officer of Health, 1914-19, 75; Report of the Medical Officer of Health, 1920, 68.

⁸⁰ L. Bryder, *Below the Magic Mountain: a Social History of Tuberculosis in Twentieth Century Britain* (Oxford: Oxford University Press, 1988), 129.

⁸¹ Harris, "Demographic Impact of the First World War," 347-349.

⁸² Chalmers, *Health of Glasgow*, 143-144, 149.

⁸³ Report of the Medical Officer of Health, 1913, Table XV, 132.

with four children, requested assistance having been unable to work for 12 years due to bronchitis. He died shortly after admission to the Poorhouse Hospital.⁸⁴ The Smith family, with three young children, had to live on 10 shillings a week for four months due to their labourer father succumbing to bronchitis.⁸⁵

Respiratory disease was also particularly prevalent among young children. In 1921, 40 per cent of the deaths from respiratory disease were children under 5 years of age; whereas, they only accounted for 10 per cent of the population. The infant male mortality rate in one-apartment houses was twice the rate in 4-apartment, and larger, houses. Children under 5 years of age in one-apartment houses accounted for 19 per cent of the population but only 4 per cent in 4-apartment houses.⁸⁶ Children were, therefore, more numerous in situations which carried a higher health risk. Chalmers shows that deaths from respiratory diseases were higher among young children when measles and whooping cough was more prevalent, as was the case in 1915. Conversely, when the incidence of childhood infectious diseases were lower, as in 1921, so were deaths from respiratory diseases.⁸⁷

Weather and poor air quality had an impact on the incidence of respiratory deaths. James B. Russell commented in 1895 that:

We live constantly on the edge of catastrophe. Whenever the scavenging of the air is interrupted by calms so that smoke product accumulates the atmosphere of our streets thickens and daylight becomes twilight.⁸⁸

The municipal authorities made progress in reducing industrial emissions; only 2 per cent of chimneys in 1922 were found to be emitting excess smoke compared to 18 per cent in 1900. Domestic fireplaces consumed a third of the coal used in industrial furnaces but emitted five to six times more unconsumed combustible material and were a major pollutant. A smoke-less coal was developed in 1925 but throughout the period between 1914 and 1925 there was no improvement in air quality.⁸⁹ Supplies of

⁸⁴ Govan Parish, Applications for Relief, D-HEW 17/762, 167611, 4 January 1915.

⁸⁵ Govan Parish, Applications for Relief, D-HEW 17/753, 164228, 2 September 1914.

⁸⁶ Chalmers, *Health of Glasgow*, 147-149.

⁸⁷ Chalmers, *Health of Glasgow*, 147.

⁸⁸ J.B. Russell, Medical Officer of Health quoted in S. Wilson, "The Public Services," in *Improving the Common Weal: Aspects of Scottish Health Services, 1900-1984*, ed. G. McLachlan (Edinburgh: Edinburgh University Press, 1987), 289.

⁸⁹ Wilson, "Public Services," 289-290.

coal were curtailed in 1921 when miners were locked out of their pits for thirteen weeks from 1 April.⁹⁰ Dr A. Chalmers, Medical Officer of Health in Glasgow, reported that deaths from respiratory diseases halved in this period due to lower levels of air pollution although it must be recognised that the coal dispute was during a more benign season for air quality.⁹¹ Cold weather and smog led to an increase in respiratory deaths; for example, in 1915, the high mortality rate from respiratory diseases coincided with the period of adverse weather in the early part of the year.⁹²

Respiratory deaths by age and gender were not published for the war period; however, the overall mortality rates are available. Pneumonia mortality rates increased by 39 per cent between 1914 and 1918 but mortality in 1918 included many who had succumbed to secondary complications after contracting influenza during the epidemic. A comparison between 1914 and 1917, which was not affected by the epidemic, shows a reduction of 7 per cent which is more representative of the underlying movement in the disease during the war and compares with the 5 per cent increase in the four years preceding the war.⁹³ Mortality rates from bronchitis, which caused 40 per cent of respiratory deaths, had been static in the four years before the outbreak of war but reduced by 10 per cent during the war.⁹⁴ The reasons for this improvement are not clear since the city was still subject to freezing smog due to poor air quality and inclement weather. Respiratory diseases were most prevalent in the poorer districts and it has been established that poorer families benefited the most from the improvements in the standard of living and the alleviation of poverty.⁹⁵ It is probable that more benign social conditions in the poorer districts contributed to the fall in respiratory mortality.

In conclusion, it has been shown that underlying health in Glasgow improved by 11 per cent during the war and that this was a marked improvement as compared to the immediate pre-war years. All diseases within the 'Underlying' category showed reductions in mortality rates which suggests a general improvement in health. Mortality from pulmonary tuberculosis and respiratory diseases reduced during the

⁹⁰ P. Renshaw, "Black Friday, 1921," *History Today*, 21 (1971), accessed from www.historytoday.com on 13 February 2019: 13,19.

⁹¹ Report of the Medical Officer of Health, 1921, 30.

⁹² Report of the Medical Officer of Health, 1914-19, 90.

⁹³ Report of the Medical Officer of Health, 1914-19, 76; Report of the Medical Officer of Health, 1913, 76.

⁹⁴ Report of the Medical Officer of Health, 1913, 76; Report of the Medical Officer of Health, 1914-19, Table IX, 133.

⁹⁵ See Chapter 3, pages 116-118.

war which runs counter to the evidence presented by Bryder and Harris. The evidence with regard to Glasgow supports Winter's view that improved social conditions led to better civilian health. It is appropriate to now consider Winter's suggestion that the poorest benefited the most from this improvement in health.

Improvement most marked among the Poor?

The third part of the study considers Winter's contention that the improvement in health during the war was most marked among the poorest in the community.⁹⁶

Winter is silent on the impact of the war on the health of the middle classes but does suggest that the health differential between low-paid and better-paid employment narrowed.⁹⁷ Peter Dewey is of the view that the middle classes suffered an erosion in living standards due to higher taxes and the loss of their luxuries which may have also led to an erosion in their health.⁹⁸ It will be argued that there were historic differentials in health between poor and affluent districts in Glasgow but that these differentials were narrowed during the war due to the poorest enjoying significant health gains during the war.

The classification of social classes could take several forms. For example, R.S. Neale suggests a five-class model: upper class, middle class, middling class, working class artisans and labourers.⁹⁹ Asa Briggs suggests that dividing lines were sharper at the base of the social pyramid and that the dividing lines within classes were often more significant than those between classes.¹⁰⁰ This, more nuanced perspective, is echoed by Alastair Reid and Robert Morris who note the wide variations in earnings and regularity of employment within classes, particularly among the working class and the vertical divisions created by craft exclusivity and cultural affiliations.¹⁰¹

Winter's thesis that working-class health improved during the war is based on the mortality information from Prudential, a provider of life insurer, to a customer base which were 'almost certainly working-class men'.¹⁰² Winter compares the life

⁹⁶ Winter, *Great War and the British People*, 116.

⁹⁷ Winter, *Great War and the British People*, 140.

⁹⁸ P. Dewey, *War and Progress; Britain, 1914-1945* (London: Longman, 1997), 37.

⁹⁹ R.S. Neale, *Class and Ideology in the Nineteenth Century* (London: Routledge, 1972), 30.

¹⁰⁰ A. Briggs, "The Language of 'Class' in early Nineteenth Century England," in *History and Class; Essential Readings in Theory and Interpretation*, ed. R.S. Neale (Oxford: Blackwell, 1983), 26, 28.

¹⁰¹ A.J. Reid, *Social classes and social relations in Britain, 1859-1914* (Basingstoke: Cambridge University Press, 1995), 62; R.J. Morris, *Class and Class Consciousness in the Industrial Revolution, 1780-1850* (Basingstoke: Cambridge University Press, 1979), 54-55.

¹⁰² Winter, *Great War and the British People*, 2.

expectancy between 1914 and 1917 of men of an age for military service and men who were too old to serve and calculates that the latter group, who were over 46 years of age, had improved chances of survival during the war which he considers provides confirmation that working-class health improved during the war.¹⁰³ However, the information on workers insured with Prudential is limited to one-half of the civilian male population during the war, comprising semi-skilled and skilled trades in the industrial Midlands, London and the North; women were not insured and it is likely that there were few unskilled or casual workers holding insurance.¹⁰⁴ Winter assumes that the improvement in mortality in the older age group can be interpreted as an indication of an improvement in health for all working-class men. This assumption may be flawed since improved nutrition may have extended life expectancy but not necessarily years of good health.

In addition, Winter provides evidence that the lowest income male occupations in England and Wales benefited the most during the war and that there was no health improvement for the higher income male occupations; for example, the mortality rate for costermongers and hawkers reduced by 13 per cent between 1900-2 and 1921-3; whereas, the mortality rates for tailors, coal miners and engine machine-fitters and millwrights either remained static or increased.¹⁰⁵ However, only three out of the fourteen occupational groups cited by Winter experienced a significant reduction in their mortality rate with the remainder having either a static or an increased mortality rate; furthermore, the range of occupations is limited and no evidence is provided for female workers. Winter's conclusion that working-class health improved during the war, with the poorest gaining the most, is based on incomplete evidence.

Winter's later study of London provides some confirmation that health improvement during the war was social-class-specific for infants and those over sixty years of age. Winter considers that un-quantified migration made the population figures for older children and working-age adults too unreliable to draw any conclusions. There had been a moderate levelling in inequalities in infant mortality during the war; the rates in the poorer, eastern boroughs fell from 12 per cent above the average for London to 9 per cent above the average by the end of the war. Rates in

¹⁰³ J.M Winter, "The Impact of the First World War on Civilian Health in Britain," *The Economic History Review*, 30 (1977): 492.

¹⁰⁴ Winter, "Impact of the First World War on Civilian Health," 490.

¹⁰⁵ Winter, *Great War and the British People*, Table 4.1, 112-3.

the more prosperous, western boroughs that had been 3 per cent below average before the war were only 1 per cent below the average by the end of the war.¹⁰⁶ Mortality rates among those over sixty years of age followed a similar pattern with rates in the poorer districts having declined from 8 per cent above the average for London, between 1911 and 1913, to 2 per cent above the city average between 1914 and 1918. In contrast, mortality rates in the more prosperous districts were no better or worse by the end of the war. Winter also notes that the average death-rate for the elderly rose during the war and suggests that the deterioration in health for this age group would be more marked in the middle-class north and west of the city compared to the working-class east and south. Winter counsels caution in drawing conclusions from his study of London due to the imprecision in population figures but he does suggest that the differential between the poor and prosperous districts ‘had narrowed slightly during the war’.¹⁰⁷

The disparity in health between poor and affluent districts had been highlighted in earlier studies. In 1920, M.L. Hersch showed that mortality in the poorest district in Paris was more than twice that of the most affluent district.¹⁰⁸ Dr T.H.C. Stevenson followed this study by carrying out a similar analysis in London which showed that, in 1911-13, the death-rate in the poorer district of Shoreditch was twice that of affluent Chelsea; infant mortality rates in Shoreditch were double that of affluent Hampstead. Stevenson regarded tuberculosis mortality rates as being particularly significant in the differentiation between poor and affluent districts. The mortality rates in poor districts in London from tuberculosis were three times higher than the richer districts; in Paris the differential was six times.¹⁰⁹

There was similar disparity in health and physique between poor and affluent districts in Glasgow. E.M. Elderton’s study of children showed that, in 1905-6, boys in poorer areas were between one and two inches shorter and up to 8 lbs lighter than boys in more prosperous areas. Girls were between one and a half to three inches shorter and up to 12 lbs lighter.¹¹⁰ Dorothy Lindsay’s study in 1913 showed that the

¹⁰⁶ J. M. Winter and J.L. Robert, eds., *Capital Cities at War: London, Paris, Berlin, 1914-1919* (Cambridge: Cambridge University Press, 1997), 513.

¹⁰⁷ Winter and Robert, *Capital Cities at War*, 515.

¹⁰⁸ M.L. Hersch, “Inequality before Death,” *Revue d’Economie Politique*, 3 and 4 (1920), quoted in T.H.C. Stevenson, “The Incidence of Mortality upon the Rich and Poor Districts of Paris and London,” *Journal of the Royal Statistical Society*, 84 (1921): 92.

¹⁰⁹ Stevenson, “Mortality upon the Rich and Poor Districts of Paris and London,” 91, 96.

¹¹⁰ E. M. Elderton, “Height and Weight of School Children in Glasgow,” *Biometrika*, 10 (1914): Table III, 296.

diet of the ‘poorer labouring classes’ in Glasgow whose earnings were irregular, or were below 20 shillings per week, was ‘quite inadequate for growth and normal activities’.¹¹¹ The Scotch Education Department report in 1907 concluded that ‘the poorest child suffers most in nutrition and growth’ and that there was a clear social graduation in the physique of children between those living in one and four-apartment houses.¹¹²

This disparity in health was also evident in Glasgow and was reflected in the municipal district mortality rates. For example, in 1914, the mortality rate for Calton, one of the poorest districts in Glasgow, was more than twice higher than the rate for residential Kelvinside.¹¹³ The high death-rates in the poorer wards were attributed by contemporary sources to a number of factors with overcrowding in small houses being considered the most injurious to health. In 1888, J.B. Russell, Medical Officer of Health, stated that ‘it is those small houses which produce the high death-rate of Glasgow... which give to that death-rate the striking characteristics of an enormous proportion of deaths in childhood and deaths from diseases of the lungs at all ages’.¹¹⁴ A.K. Chalmers, his successor, calculated that the death-rate in one-apartment houses in 1909-12 was 26 per 1,000 population compared to 12 per 1,000 population in 3-apartment houses.¹¹⁵ Children under 5 years of age were particularly at risk since they accounted for 19 per cent of those living in one-apartment houses and were five to six times more likely to succumb to infectious diseases and pneumonia than children in four-apartment houses.¹¹⁶ The overcrowding in the poorer districts was exacerbated during the war. The population of working-class Cowcaddens and Dalmarnock increased by 11 per cent and 8 per cent respectively; whereas, the population in middle-class suburbs such as Jordanhill and Kelvinside remained static.¹¹⁷ This led to pressure on working-class housing with 20,000 vacant houses being re-occupied, the

¹¹¹ D.E. Lindsay, *Report upon a Study of the Diet of the Labouring Classes in the City of Glasgow carried out during 1911-12* (Glasgow: Corporation of Glasgow, 1913), 27.

¹¹² Scotch Education Department, *The Physical Condition of Children attending the Public Schools of the School Board for Glasgow* (HMSO, 1907), Cd. 3637, 275.

¹¹³ Report of the Medical Officer of Health, 1914-19, Table VIII, 132.

¹¹⁴ E. Robertson, *Glasgow's Doctor: James Burn Russell, 1837-1904* (East Linton: Tuckwell Press, 1998), 205.

¹¹⁵ A.K. Chalmers, “The House as a Contributory Factor in the Death-rate,” *Proceedings of the Royal Society of Medicine*, 6 (1913): 157.

¹¹⁶ A.K. Chalmers, *Census 1911, Report on Glasgow and its Municipal Wards* (Glasgow: Corporation of Glasgow, 1912), 8; Chalmers, “The House as a Contributory Factor in the Death-rate,” 170.

¹¹⁷ Report of the Medical Officer of Health, 1914-19, Table 1, 127.

numbers in the ‘ticketed houses’ being allowed to increase beyond the statutory limit with it being ‘not uncommon for two families to crowd into a room and kitchen’.¹¹⁸

Russell and Chalmers do not distinguish between the health consequences of the small living space, such as the increased risk of transmitting infectious diseases, and the poverty which consigned poorer families to living in overcrowded housing. Poverty, which was the cause of much ill-health, stemmed from a number of factors, of which poor housing was one. Lindsay’s study demonstrates that families with a low or irregular income, below 20 shillings per week, ‘entirely fail to get a supply of food sufficient for the proper development and growth of the body’.¹¹⁹ The poor had larger families than the ‘well-to-do’ with a consequentially higher infant mortality rate.¹²⁰ Irregular incomes due to seasonality or interrupted time affected one in four of male and female workers in unskilled occupations in 1911 which Rodger describes as ‘a short cut to deprivation and poverty’.¹²¹ It is not possible to separate the elements of poverty which led to poorer health; rather, it is more reasonable to assume that poverty involved multiple deprivation and that a combination of factors led to significantly poorer health in the more needy districts as compared to the affluent districts.

Given this background of health disparities between poor and affluent districts in Glasgow before the war, it is now appropriate to consider the mortality by municipal district during the war to establish whether the improvement in health was social-class-specific. Health statistics were not recorded by social class; however, the municipal districts were relatively homogeneous with regard to class. There were 37 municipal wards in Glasgow during the war and these have been arranged into four groups based on the 1914 mortality rates for these wards. Changes in the mortality rates for these groups during the war will show whether health gains were social-class specific.¹²²

¹¹⁸ A. MacGregor, *Public Health in Glasgow* (Edinburgh: Harcourt Brace/Churchill Livingstone, 1967), 48.

¹¹⁹ Lindsay, *Diet of the Labouring Classes*, 27.

¹²⁰ J. Agnew, “Mortality Rates in Glasgow Families,” *Glasgow Medical Journal*, (September 1922): 26-27.

¹²¹ R. Rodger, “Employment, Wages and Poverty in the Scottish Cities 1841-1914,” in *Perspectives of the Scottish City*, ed. G. Gordon (Aberdeen: Aberdeen University Press, 1985), Table 9, 46.

¹²² See Appendices A and B, pages 250-257, for the detailed workings of mortality by municipal district for mortality rates (all causes) and infant mortality rates between 1914 and 1918 together with the average mortality for each of the four Groups of districts.

Each group includes between seven to nine wards with 210,000 to 240,000 persons in the group; together, the four groups represent 90 per cent of the population of Glasgow in 1914. Each group loosely represents a social class. The 'High Mortality' group consists of the poorest districts of mainly unskilled workers in poor districts; the 'Average Mortality' group were working-class districts with mainly skilled workers; the 'Lower than Average' group were mixed districts of lower middle-class and skilled workers; and the 'Low Mortality' group was the most affluent consisting of professional occupations. There is a distinct geographical locus for these groups. The poorer municipal districts with high mortality rates were mostly in the older central and eastern parts of the city and on the south side of the river adjacent to the Govan shipyards. The affluent districts with low mortality rates were on the periphery of the industrial areas in two clusters to the west and south of the city. Artisan and lower-middle class districts were interspersed between the poor and affluent districts.¹²³

The 'High Mortality' group had a mortality rate of 20 deaths per 1,000 population in 1914. There is a distinctive pattern to the mortality profile by the cause of death. A small number of diseases were particularly fatal. Respiratory diseases, including pneumonia, bronchitis and pulmonary tuberculosis, and childhood infectious diseases accounted for almost half of all deaths. One in five died of pneumonia; one in ten died of pulmonary tuberculosis and one in ten died of a childhood infectious disease. It was more hazardous to be a child in a poor district, young adults were much more likely to contract tuberculosis and the elderly were more likely to die from a respiratory ailment. These communities were mostly in the old inner-city districts with overcrowded and poor quality housing. Calton is representative of this category; a weaving village on the eastern perimeter of the city which had expanded in the last quarter of the 19th century but by 1914 was in decline. The population had fallen by 10 per cent between 1901 and 1911 but it was still one of the most overcrowded wards with a population density of 114 persons per acre, compared to the average of 60 persons per acre for Glasgow. A high proportion lived in one and two-roomed houses; 20 per cent and 50 per cent respectively. Children, in particular, suffered from these poor housing conditions; 30 per cent of those living in one-roomed houses and 35 per cent in two roomed houses were under 15 years of

¹²³ Appendix C, pages 258-260, provides information on the boundaries of each municipal district together with a visual indication of the location of districts with high to low mortality.

age.¹²⁴ Calton had a high birth rate, one in ten of whom were illegitimate, with an infant mortality rate in 1914 of 165 deaths per thousand births which was one of the highest rates of infant mortality in the city.¹²⁵ Calton was typical of the multiple deprivations of the poorer districts; overcrowding, small homes, large families and high adult and infant mortality rates.

The 'Average Mortality' group had a mortality rate of 17 per 1,000 in 1914 which was similar to the average mortality for Glasgow. This group includes a mixture of inner-city wards and some on the periphery such as Springburn which was an industrial area to the north of the city whose principal industry was the manufacture of locomotives which employed 8,000 persons.¹²⁶ Springburn was an expanding community with its population having increased by a quarter between 1901 and 1911. Almost two-thirds of families lived in two-roomed houses in Springburn compared to only half of the families in Calton. The population density per acre was much lower than Calton at 32 persons per acre. Springburn had a higher proportion of children under 15 years of age than Calton which may reflect the growth in the working-age population in the district.¹²⁷ The illegitimacy rate was half that of Calton and infant mortality was also lower than Calton at 142 deaths per thousand births.¹²⁸ Springburn is typical of the 'Average Mortality' group; a less densely populated district but a growing community, drawn by local industry, with more skilled workers and a health record that was similar to the city as a whole.

The 'Lower than Average Mortality' group, had a better health record than the previous groups with a mortality rate of 14 per 1,000 in 1914. Maryhill is typical of this group; one of the larger suburbs to the north-west of the city with a mix of brewing, timber, glass and rubber industries which had benefited from proximity to the Forth and Clyde canal.¹²⁹ Maryhill was an expanding community, the population having increased by 17 per cent between 1901 and 1911 Only one in ten lived in a one-roomed house compared to one in five in Calton and Springburn. There were four times as many living in houses of five apartments in Maryhill compared to Springburn. Maryhill had less than half the number of children in a one roomed house

¹²⁴ A.K. Chalmers, *Census 1911, Report on Glasgow and its Municipal Wards* (Glasgow: Corporation of Glasgow, 1912), Table 1, ii-iii; Table VI, ix; Table IX(2), xvi-xvii.

¹²⁵ Report of the Medical Officer of Health, 1914-19, Table VI, 130; Table VII, 131; Table XV, 137.

¹²⁶ A. Smart, *Villages of Glasgow: North of the Clyde*, (Edinburgh: John Donald, 1988), 163.

¹²⁷ Chalmers, *Census 1911*, Table 1, ii-iii; Table IV, vi-vii; Table VI, ix.

¹²⁸ Report of the Medical Officer of Health, 1914-19, Table VI, 130; Table VII, 131; Table XV, 137.

¹²⁹ Smart, *Villages of Glasgow, North*, 90-94.

compared to Springburn.¹³⁰ The birth and illegitimacy rates in Maryhill were similar to Springburn; however, infant mortality was significantly lower at 111 deaths per thousand births.¹³¹ Although Maryhill was an industrial district it had a different mix of housing with some larger houses and fewer one-apartment houses than Springburn which suggests that it was a more affluent community. Maryhill is typical of the ‘Lower Than Average Mortality’ group; an artisan and lower middle-class community with more larger, and fewer small houses, and a better health record.

The ‘Low Mortality’ group had a mortality rate of 11 deaths per 1,000 in 1914 which was almost half that of the High Mortality group. The mortality profile by disease for this group is quite different from that of the poor districts. Deaths were spread over a wider number of diseases and included heart disease and cancer – perhaps more indicative of the ailments of relative affluence and longevity. Childhood infectious diseases and pulmonary tuberculosis were much less prevalent. This group lived in residential districts such as Langside, to the south of the city, which had been a rural weaving village around which Glasgow merchants built villas in the 19th century with tenements being added in the early 1900s which led to a fifty per cent increase in the population between 1901 and 1911.¹³² Langside had almost no one-roomed houses and only one in five of the population lived in two-roomed houses. As might be expected, most of the population lived in houses with three or more rooms.¹³³ The birth rate was half that of Calton with infant mortality of 53 deaths per thousand births which was a third of the mortality rate in Calton.¹³⁴ Langside was typical of the ‘Low Mortality’ group; a middle-class and privileged community of smaller families in larger houses with mortality rates half that of the poorest districts.

The mortality rates for the four groups of municipal wards between 1914 and 1918, which include deaths from the influenza epidemic, are shown in Table 4.2.

¹³⁰ Chalmers, *Census 1911*, Table 1, ii-iii; Table VI, ix; Table IX(25), lxii-lxiii.

¹³¹ Report of the Medical Officer of Health, 1914-19, Table VI, 130; Table VII, 131; Table XV, 137.

¹³² A. Smart, *Villages of Glasgow: South of the Clyde*, (Edinburgh, John Donald, 1996), 145; Chalmers, *Census 1911*, Table I, ii-iii.

¹³³ Chalmers, *Census 1911*, Table VI, ix.

¹³⁴ Report of the Medical Officer of Health, 1914-19, Table VI, 130; Table VII, 131; Table XV, 137.

Table 4.2. Mortality Rates for Municipal Ward Groups, 1914 and 1918.

Municipal District Groups:	1914	1918	+/-
High Mortality	19.73	17.84	-9.6%
Average Mortality	16.61	16.34	-1.6%
Lower than Average	13.99	13.97	0.0%
Low Mortality	10.74	11.26	+4.8%
Glasgow (all wards)	16.59	16.50	-0.5%

Source: Report of the Medical Officer of Health, 1914-1918.

Note: Figures are deaths per 1,000 population

The improvement in death-rates was most marked in the 'High Mortality' group with a reduction of some 10 per cent which was uniform throughout the seven municipal districts in this group. In contrast, the 'Low Mortality' group experienced a 5 per cent increase in mortality rates. The middle two groups show a gradation between the 'High' and 'Low Mortality' groups which confirms the pattern: improving health during the war was inversely proportional to wealth.

The 1918 figures include deaths from the influenza epidemic which was an exceptional occurrence and should be excluded to assess whether the improvement in underlying health was social-class-specific. Deaths from influenza by municipal district are not available. This could be a material factor if influenza disproportionately affected one section of the community. A comparison between 1914 and 1917 shows a reduction of 16 per cent in the 'High Mortality' group and no change for the 'Low Mortality' group. This suggests that the underlying health in the poorest districts improved by between 10 and 16 per cent during the war but that there was no change in health in the middle-class districts. Winter's contention that the poorest benefited the most has been confirmed with regard to Glasgow. The change was most evident in the very poorest districts. Prior to the war, the residents of Calton were twice as likely to die as those in affluent Langside; by the end of the war, the health disadvantage of being poor in Calton had been halved.

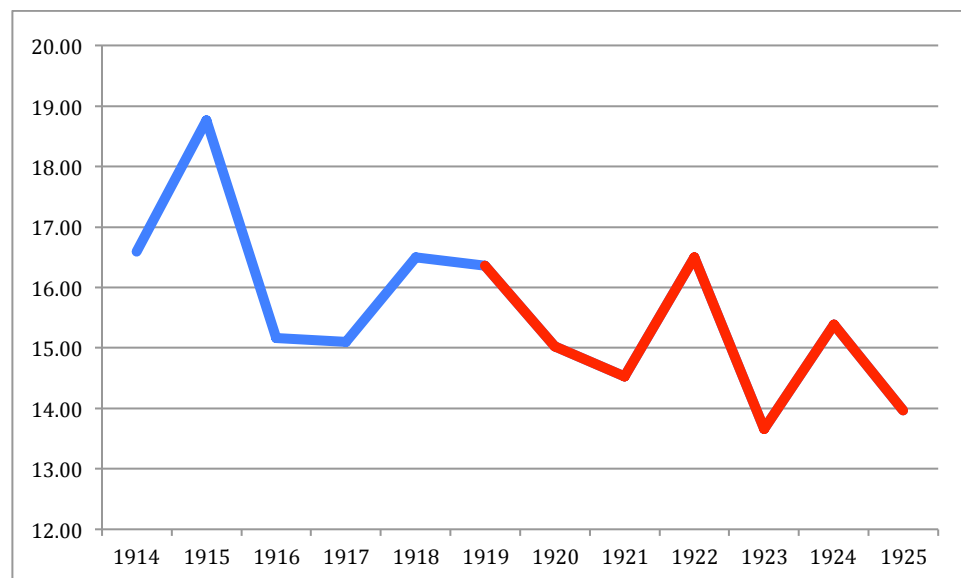
Health in the Immediate Post-war Years.

This part of the study compares the changes in civilian health during the war with the health trends during the post-war period up to 1925. Winter commented that the

improvement in civilian health during the war was a paradox; this could also describe the immediate post-war period.¹³⁵ Mortality rates continued to reduce in the period up to 1925 despite a significant deterioration in social conditions in Glasgow. This was a period of economic dislocation and decline in Glasgow's staple industries. It has been established that poor relief applications started to increase after the end of the war and that the levels of poverty between 1918 and 1925 were significantly higher than during, or before, the war.¹³⁶ Whereas the war had been a time of full employment, the post-war years were a time of unemployment; therefore, it might have been expected that hardship would have led to increased mortality but this was not so.

The mortality rates for the immediate post-war period are shown in Figure 4.3 and shown in context with the rates for the period of the war. The trend shows not only a continuation of the war-time improvement in health but an acceleration in the reduction of mortality rates; hence, the paradox of improving health during a period of challenging social conditions.

Figure 4.4. Mortality Rates in Glasgow, 1914-1925.



Source: Reports of the Medical Officer of Health, 1914-1925.

The variation in mortality rates was also evident in the annual death-toll. There were 18,362 deaths in 1918 that reduced to 16,000 by 1921 followed by a sharp increase to 18,000 deaths in 1922. However, by 1925, the annual death toll was some 3,000 lower

¹³⁵ Winter, *Great War and the British People*, 116.

¹³⁶ See Chapter 2, pages 71-76.

than 1918 at 15,336 deaths, a decrease of 15 per cent. There are several reasons for the peaks in mortality: influenza deaths in 1918 and 1919 and high unemployment in 1922 when one in three schoolchildren were in receipt of free meals, clothing or boots and poor relief applications were 22 times the level at the end of the war.¹³⁷ There was also an outbreak of measles and many deaths from pneumonia in the first quarter of 1922.¹³⁸ As during 1915, a combination of hardship, inclement weather and outbreaks of infectious disease resulted in a sharp increase in mortality. This pattern was repeated to a lesser extent in 1924 when whooping cough and pneumonia led to a fifty per cent increase in mortality in the first quarter.¹³⁹ There were also variations in mortality between 1918 and 1925 by age and gender. Female mortality reduced by 19 per cent compared to a 14 per cent reduction among males. Older citizens did not share in this improvement with 11 per cent more persons over 65 years of age having died in 1925 than in 1918; whereas, 23 per cent fewer children under 5 years died compared to the overall reduction of 15 per cent.¹⁴⁰ The period was kinder to women and children but less so for the elderly.

As was the case during the period of the war, it is necessary to exclude the more volatile infectious and respiratory diseases to identify the underlying changes in civilian health in this period. Table 4.3 shows the same categories of disease as used earlier in this chapter to assess changes in underlying health. When the volatility of infectious and respiratory diseases is excluded, a more modest improvement in underlying health is evident. The reduction of 6 per cent between 1918 and 1925 is a third of the annual rate of improvement during the war. Whilst this is a statistically small annual improvement, higher mortality rates might have been expected given the deterioration in social conditions.

¹³⁷ Glasgow City Archives, D-ED 9/1/33, *Education Authority of Glasgow, Annual Report, 1920/21*, 10; Parish of Govan, Applications for Relief, D-HEW 17/873 – 907.

¹³⁸ Report of the Medical Officer of Health, 1922, 58, 65, 69.

¹³⁹ Report of the Medical Officer of Health, 1924, 16, 18, 21.

¹⁴⁰ Report of the Medical Officer of Health, 1914-19, Table XI, 134; Report of the Medical Officer of Health, 1925, Table IX, 280-281.

Table 4.3. Underlying Mortality Rates, 1918-1925.

	1918	1919	1920	1921	1922	1923	1924	1925
Tuberculosis	1.80	1.51	1.46	1.40	1.44	1.43	1.40	1.28
Nervous system	1.61	1.56	1.59	1.64	1.67	1.62	1.60	1.45
Circulatory diseases	1.50	1.59	1.62	1.68	1.73	1.78	1.90	2.02
Digestion	1.03	0.98	0.63	0.57	0.54	0.55	0.49	0.52
Congenital defects	0.88	0.96	1.19	1.07	0.97	0.81	0.85	0.78
Other	4.07	4.22	4.37	4.12	4.66	3.84	4.26	4.16
Total	10.89	10.82	10.86	10.48	11.10	10.03	10.50	10.27

Source: *Reports of the Medical Officer of Health, City of Glasgow, 1914-1919, 1922 and 1925.*

Note: Figures are deaths per 1,000 population

Three trends should be noted. Firstly, digestive disorders were particularly prevalent among very young children and the reduction in the period suggests an improvement in their health which is borne out by the above-average reduction in deaths already noted among young children.

Secondly, the reduction of 29 per cent in tuberculosis deaths is particularly striking given that the association between pulmonary tuberculosis and poverty. Half of this reduction occurred in 1919. Other cities experienced a similar reduction in 1919; for example, mortality rates came down in Liverpool from 208 to 145 per 1,000 population, Birmingham from 135 to 116, and London from 178 to 122 deaths per thousand.¹⁴¹ Demobilisation in 1919 returned tubercular soldiers to Glasgow and legislation required local authorities to take responsibility for their treatment and to give them priority.¹⁴² In the first four months of 1919, 60 per cent of the male applicants for treatment in Glasgow were discharged servicemen.¹⁴³ This should have led to an increase, rather than a decrease, in deaths from this disease.

A study of tuberculosis deaths in the United States and England and Wales suggests that this reduction was due to many tubercular persons dying during the

¹⁴¹ Winter, *Great War and the British People*, 68.

¹⁴² Inter-Departmental Committee on Tuberculosis, *Report of the Inter-Departmental Committee on Tuberculosis (Sanatoria for Soldiers)* (HMSO, 1919), Cmd. 317, 6.

¹⁴³ Report of the Medical Officer of Health, 1914-19, 87-88.

influenza epidemic.¹⁴⁴ Noyer and Garenne suggest that the interaction between influenza and tuberculosis made the individual more susceptible to the secondary pneumonia which followed infection from the influenza virus.¹⁴⁵ Smith concurs that many influenza victims were consumptives and notes that the reduction in tuberculosis mortality rates in 1919 was also evident in Western and Central Europe.¹⁴⁶ The reduction in 1919 was, therefore, a consequence of the influenza epidemic and was not linked to social conditions.

Other factors must have contributed to the decline since deaths continued to decline after 1919. It may be that the removal of tubercular individuals during the epidemic reduced the likelihood of transmission of disease in later years.¹⁴⁷ It should be noted that not all deaths were the result of pulmonary tuberculosis. Non-pulmonary deaths declined faster albeit that they accounted for only a third of tuberculosis deaths. The reasons for this are not apparent but may be linked to a more hygienic supply of milk.¹⁴⁸ The reduction in tuberculosis deaths between 1918 and 1925 reflects the long-term decline in this disease which was facilitated by the virulence of the influenza epidemic.

Thirdly, there was an increase in deaths from circulatory and malignant disease, the reasons for which are not evident. Jenkinson suggests that this was due to an ageing population but since the increase was marked in the immediate post-war years then it may be that conditions during the war for combatants and civilians in the munitions industries led to this increase.¹⁴⁹ Overall, the mortality rates by cause of death show that underlying health continued to improve after the war despite the deterioration in social conditions but that the rate of reduction was significantly less than experienced during the war.

A distinctive feature of the health gains during the war was that these gains were most evident in the poorer districts. A return to poverty after 1918 may have

¹⁴⁴ United States Public Health Service, "A Note on the Course of Pulmonary Tuberculosis Mortality since 1914," *Public Health Reports*, 36 (May, 1921): 1181.

¹⁴⁵ A. Noymer, and M. Garenne, "The 1918 Influenza Epidemic's effect on Sex Differentials in Mortality in the United States," *Population and Development Review*, 26 (2000): 574.

¹⁴⁶ Smith, *Retreat of Tuberculosis*, 222.

¹⁴⁷ A. Noymer, "The 1918 Influenza Pandemic hastened the Decline of Tuberculosis in the United States: An Age, Period, Cohort analysis," *Vaccine*, 295 (2011): 838.

¹⁴⁸ P.J. Atkins, "White Poison? The Social Consequences of Milk Consumption, 1850-1930," *Social History of Medicine*, 5/2 (1992): 224; C. Clayson, "Tuberculosis," in *Improving the Common Weal: Aspects of Scottish Health Services, 1900-1984*, ed. G. McLachlan (Edinburgh: Edinburgh University Press), 404-405.

¹⁴⁹ Jenkinson, *Scotland's Health*, 41.

reversed these gains. Boundary changes in 1921 made municipal districts less socially homogeneous and reduced the differentials between poor and affluent districts.

However, the mortality statistics for groups of municipal districts, which were used for the period of the war, are still of some value. A comparison of the poorest and most affluent groups is shown in Table 4.4.

Table 4.4 Mortality Rates for Municipal Ward Groups, 1918 and 1925.

Municipal districts	1918	1925	
High mortality	17.84	15.03	-16%
Low mortality	11.26	10.44	-7%
Glasgow (all wards)	16.50	13.97	-15%

Source: *Reports of the Medical Officer of Health, 1914-19, 1925.*

Note: Figures are deaths per 1,000 population

The High Mortality Group continued to show improved health after the war with a 16 per cent reduction which may be skewed by the high mortality from influenza in 1918; however, comparison between 1917 and 1925 still shows a 10 per cent improvement. Mortality rates in Calton, a poorer district, reduced by 7 per cent between 1918 and 1925; whereas, rates in Cathcart, a more affluent district remained static.¹⁵⁰ Both districts were unaffected by the boundary changes. This supports the conclusion that health in the poorer districts continued to improve after the war; whereas, health in the affluent districts remained static.

The post-war improvement in health casts a new perspective on the Winter/Bryder debate. Bryder argues that war-time malnutrition led to more deaths from pulmonary tuberculosis during the war in England and Wales - yet poverty, and associated malnutrition, in the immediate post-war years did not lead to higher mortality in Glasgow from tuberculosis. Winter draws a correlation between higher living standards during the war and improved civilian health – yet the marked reduction in living standards in Glasgow did not result in deteriorating health. There is a similar unresolved debate on health in the inter-war years. Charles Webster discounts any meaningful improvement in health for the economically disadvantaged in the inter-war years and suggests that the economic depression of the period

¹⁵⁰ Report of the Medical Officer of Health, 1914-19, Table VIII, 132; Report of the Medical Officer of Health, 1925, Table VI, 277.

exacerbated the prevailing low levels of health.¹⁵¹ Jenkinson identifies improvements in health in Scotland but at a slower rate than in England and Wales.¹⁵² Surveys in the inter-war years of national diet show that the diet of the lowest income groups was still below the ‘adequate’ nutritional value requirement in every respect and that bread, potatoes and margarine continued to be the mainstays of their diet.¹⁵³ A local general practitioner, Alec Glen, describes how difficult it was for families to live on unemployment benefit of twenty five shillings a week, paid for the first five weeks, and that unemployment and semi-starvation persisted in Govan throughout the 1920s.¹⁵⁴ In the immediate post-war years, the poor in Glasgow did not conform to the argued correlation between poverty and health.

It may be that welfare support to needy families in this period helped to mitigate the effect of high levels of unemployment. The post-war change in attitudes towards supporting families and the able-bodied unemployed has already been identified.¹⁵⁵ The provision of free milk, meals and clothing was on a much greater scale than would have been contemplated before the war.¹⁵⁶ The key changes were that the able-bodied unemployed received benefits that would have been unacceptable before the war and there was a greater emphasis on maternal and child welfare. These post-war changes would not have insulated families against hardship but may have ameliorated their plight and prevented an increase in poverty-related mortality. Winter describes the improvement in health during the war in terms of ‘survival chances’ of the civilian population.¹⁵⁷ The continuing but slower improvement in health in the immediate post-war years suggests that the health gains of the war survived, at least, up to 1925. It may be that these health gains did not survive the inter-war years as Glasgow moved towards the depression of the 1930s.

Conclusion

This study is a clear affirmation of Winter’s thesis of the paradoxical improvement in working-class health during a period of conflict, with the greatest gains being in the

¹⁵¹ C. Webster, “Healthy or Hungry Thirties?,” *History Workshop Journal*, 13 (1982): 125.

¹⁵² Jenkinson, *Scotland’s Health*, 38-41.

¹⁵³ E.A. Winslow, “Changes in Food Consumption among Working-Class Families,” *Economica*, 6 (1922): Table VII, 266; J. Boyd Orr, *Food Health and Income* (London: Macmillan, 1936), 49-50.

¹⁵⁴ Glen, *In the Front Line*, 137.

¹⁵⁵ See Chapter 2, pages 72-75.

¹⁵⁶ See Chapter 5, pages 169-170, for additional information on improvements in maternal and infant welfare.

¹⁵⁷ Winter, *Great War and the British People*, 140.

poorest districts. Underlying health in Glasgow improved by 11 per cent between 1914 and 1918 which contrasts with the static mortality profile of the previous four years and the period of more modest improvement after the Armistice. Mortality by principal cause of death shows that no single group of diseases accounted for the decline in mortality during the war but that there was a general reduction over all the major groups of diseases. The continuing reduction in tuberculosis, the scourge of the labouring poor, provides some evidence that social conditions improved in the city.

The improvement in health was social-class-specific and was inversely proportional to wealth. There was a marginal deterioration in health in middle-class districts with no change in the mortality rates in artisan communities. However, the poorest districts showed an improvement of between 16 and 18 per cent that confirms Winter's contention that the poorest benefited the most. The improvement in civilian health in Glasgow during the war was more significant than Winter's tentative view in his later works that that the differential between the poor and prosperous districts 'had narrowed slightly during the war'.¹⁵⁸ This study shows that the health penalty of being poor in Glasgow was halved during the war.

Bryder challenges Winter on the basis that female mortality from pulmonary tuberculosis in England and Wales had increased and cited malnutrition as the most likely cause. Her argument that tuberculosis and malnutrition are linked is persuasive. However, poverty involves multiple deprivations, of which malnutrition is one, and it is difficult to separate the effects of an inadequate diet from, say, overcrowded and insanitary housing. In the context of Glasgow, Bryder's argument fails in that there was no increase in female respiratory deaths despite the entry of many women into the munitions industries. Harris argues that the increase in female respiratory deaths negated Winter's thesis but there is no evidence of an increase in female deaths in Glasgow from these diseases. Furthermore, respiratory diseases are much more virulent during periods of cold weather, poor air quality and outbreaks of infectious diseases and the consequent variability in respiratory mortality makes this category an inappropriate choice to challenge Winter.

There are, however, caveats to this affirmation of Winter's thesis. Higher living standards, with an improved diet, may have been central to this improvement but this did not eliminate the risk from harsh winters, with associated high respiratory

¹⁵⁸ Winter, *Great War and the British People*, 515.

fatalities, and outbreaks of childhood infectious diseases. There is some evidence that more benign social conditions made this combination of inclement weather and disease less fatal. Nevertheless, these spikes in mortality still occurred despite an improvement in living standards. Furthermore, the improvement in health did not apply to the working class as a whole, as suggested by Winter. The improvement was limited to the poorest communities; other working-class districts, such as the artisan districts, showed little improvement. The focus of Winter's study was the health of the working class but he leaves an unresolved question as to why affluent districts did not share in the general improvement in health during the war.

A final comment on Winter is that the war is treated as a single and uniform period. The earlier work on poverty and living standards in this thesis has shown that that the war consisted of quite different phases of hardship and relative affluence with the greatest gains being evident towards the end of the war. This is also reflected to some extent in the health statistics. Clearly, 1915 was a year of exceptionally high mortality and was followed by two years of low mortality and the last year of the war being blighted by influenza. The war was not a homogeneous period as far as health gains are concerned.

It could be argued that although Winter's thesis is validated, in the context of Glasgow, that the quantum of the improvements in health were not significant. This would be a misrepresentation. Between 1914 and 1925, the underlying improvement in health reduced mortality by some 9,000 persons. It is a moot point whether this was material in a demographic context in a city with a population of 1.1 million. However, from a social perspective, it was significant since the health improvements were concentrated among the poorest districts which had a long standing record of poor health. The saving of 9,000 lives in the poorest districts, with a population of some 220,000 persons, should be regarded as significant from a demographical and social perspective. The paradox of improved health continued in the period up to 1925 albeit at a much lower annual rate. This occurred despite a change from full employment during the war to persistently high levels of unemployment in the 1920s with associated hardship. The poorest districts, which were the most vulnerable, still showed a modest improvement in health up to 1925.

In summary, civilian health in Glasgow, based on the mortality levels, did improve during the war with the poorest in the community being the principal beneficiaries. Winter may have understated his paradox; the war reduced the health

penalty of being poor by half and this continued in peace-time up to 1925. The beneficiaries of Winter's paradox were the families in districts such as Calton and Mile-end, whose poverty had been profound and debilitating.

Children at War

The singularly disheartening and depressing reverses suffered by the British army during the first years of the Great War engendered a renewed sense of urgency for the establishment of a comprehensive infant and child welfare system.¹

The overall impression is that the war had relatively little effect on the average standard of child health between 1914 and 1918.²

Children were silent observers of a war that changed their lives.³ Fathers, brothers and uncles enlisted with many families suffering hardship in the early months of the war. There was tension in the home as news emerged from the Front and casualty lists were issued. As the war progressed, family members worked long hours in the war industries and were absent from home. School life changed as teachers enlisted and talk of the war pervaded the classroom. Drill became more common in schools and children were encouraged to do good works for wounded soldiers. Home circumstances for soldiers' children became more difficult and they had to make do with old clothes and boots. Life changed for children, for good or ill, as it had done for adults.

The previous three chapters set out many of the changes the conflict made to the health and well-being of adults in Glasgow. A clear pattern has emerged from these chapters: poverty became less prevalent during the war and living standards and adult health improved, particularly among the poorest in the community. The improvement in social conditions was most evident towards the end of the war

¹ D. Dwork, *War is Good for Babies & Other Young Children: A History of the Infant and Child Welfare Movement in England, 1898-1918* (London: Tavistock Publications, 1987), 208.

² B. Harris, *The Health of the Schoolchild: A History of the School Medical Service in England and Wales* (Buckingham: Open University Press, 1995), 87.

³ This study defines children as being those in the population who were of school age or younger. The school leaving age in this period was 14 years of age - see A. McPherson, "Schooling," in *People and Society in Scotland: Volume III, 1914-1990*, eds., A. Dickson and J.H. Treble, (Edinburgh: John Donald, 1992), 85.

although there had also been periods of hardship during the conflict. The war brought relative prosperity to those working in the war industries and hardship to soldiers' families. These conclusions were derived from research that focused on adult health and living standards. This study would be incomplete without a more detailed consideration of how the war changed the lives of children. Children comprised a significant proportion of the population in Glasgow, thirty-two per cent in the 1911 census were under fifteen years of age, and they were more populous in the poorer working-class districts.⁴ Children were, therefore, a key section of the community being numerous demographically and reflective of the health of the poorer sections of the city. This chapter will assess the impact of the war on the lives of children with reference to their health, home circumstances, education and their involvement in the war effort.

The historiography of the impact of the war on children debates whether the conflict had a beneficial or detrimental effect on children's lives. In the previous chapter, Jay Winter was quoted as claiming that adult health improved during the war with the poorest benefiting the most; he makes similar claims for children's health.⁵ Winter bases this claim on the thirteen per cent reduction in infant mortality in England and Wales between 1911-13 and 1918 with the most significant reductions being in the poorest county boroughs. Winter attributes this to an improved standard of living which led to better survival chances for mothers and young children.⁶ However, Winter bases his claim solely on infant health and is silent on the health of school children.

Deborah Dwork also presents a positive view of the health benefits gained during the war and suggests that 'war was good for babies and other young children'.⁷ Dwork suggests that war casualties and a falling birth rate had led to increased concern for infant welfare and cites the increase in the number of health visitors in England from 600 in 1914 to 2,577 in 1918 with local authorities taking responsibility

⁴ A.K. Chalmers, *Census 1911, Report on Glasgow and its Municipal Wards* (Glasgow: Corporation of Glasgow, 1912), Table IV, vii; Table IV, vi; 28. The census only provides population numbers in five-year bands. The numbers under 15 years of age accounted for 32 per cent of the population and those under 10 years of age accounted for 22 per cent.

⁵ J.M. Winter, *The Great War and the British People*, (London: Macmillan, 1985), 116, 153; J.M. Winter, "Aspects of the Impact of the First World War on Infant Mortality in Britain," *Journal of European Economic History*, XI (1982): 718-720.

⁶ Winter, *The Great War and the British People*, Table 4, 10; 147, 148, 153, 245; J. M. Winter, "Surviving the War," in *Capital Cities at War: London, Paris, Berlin, 1914-1919*, eds. J. M. Winter and J.L. Robert, (Cambridge: Cambridge University Press, 1997), 497-511.

⁷ Dwork, *War is Good for Babies & Other Young Children*, 208-220.

for more maternal and infant welfare programmes which hitherto had been provided by voluntary agencies. Legislation such as the compulsory notification of births introduced by the 1915 Notification of Births Extension Act and the 1915 Midwives (Scotland) Act underpinned these infant welfare initiatives.⁸ Dwork's thesis on the beneficial impact of the war is less persuasive for children of school age since the two principal welfare initiatives of school medical inspections and the feeding of necessitous children at school had been introduced before 1914.⁹ It could be argued that these welfare initiatives were due to the debate on physical deterioration that followed the Boer War.¹⁰ Nevertheless, Dwork provides no evidence of significant changes in the structure or scope of health provision for schoolchildren between 1914 and 1918 or an improvement in their health.

Bernard Harris counters Winter's claim that children's health improved and suggests that the war had little effect on the health of school children based on his research on changes in the average heights of school children in twenty-four local authority areas in Britain. Harris suggests that height is a useful indicator of an individual's growth and health. There was little improvement in the average height of school children during the war in the sampled local authority areas although Harris does accept that children born at the end of the war did grow to be taller at 12 years of age than those born at the beginning of the war.¹¹ Based on this evidence, Harris dismisses Winter's claim that children's health improved during the war.¹² It should be noted that Harris relies solely on height as an indicator and ignores other information such as children's weights and the reports from the school medical inspectors.

Richard Wall provides a more positive view than Harris based on the medical reports and the provision of free meals to necessitous children in schools in London. The medical reports showed that the number of children classified as having subnormal nutrition halved during the war. The number of necessitous children receiving free meals had increased from 35,000 children before the war to 75,000

⁸ Dwork, *War is Good for Babies & Other Young Children*, 212-213; L. Reid, "The 1915 Midwives (Scotland) Act: Whys and Wherefores," *History Scotland*, 15 (2015): 32.

⁹ Dwork, *War is Good for Babies & Other Young Children*, 184.

¹⁰ Dwork, *War is Good for Babies & Other Young Children*, 11-13; J. Jenkinson, "One of the Most Urgent Public Health Problems of the Day: Infant and Maternal Welfare in Scotland, 1900-48," (Unpublished paper, University of Stirling, 1995), 1-2.

¹¹ B. Harris, "The Demographic Impact of the First World War: An Anthropometric Perspective," *Social History of Medicine*, 06/03 (1991): 364, 366.

¹² Harris, *The Health of the Schoolchild*, 87.

children in September 1914 with the number of meals provided reducing steadily thereafter. By September 1915, the number of necessitous children receiving free meals was almost half of the meals provided in September 1913. Wall concludes that there was an improvement in the health of schoolchildren during the war and in the ability of parents to provide for them.¹³

The disruption to children's education is presented as a detrimental consequence of the war. Arthur Marwick suggests that the war delayed the progress in education due to the cancellation of the planned increases in education grants and the premature entry of children into the workplace which shortened their education. Schools were expected to release children of school age for 'national work' and for families whose main wage-earner had enlisted and were in need of additional income. Marwick also notes the disruption caused by the loss of teachers who had enlisted and were not replaced by younger males since they had either been lost in action or had their studies interrupted by the war. Finally, Marwick cites the deterioration in the school medical services due to staff shortages with a 28 per cent reduction in the number of children being examined between 1916 and 1918 compared to the early years of the war.¹⁴

Irene Andrews concurs that there was an increase in juvenile employment since they could earn as much in munitions work as a skilled worker before the war. The number of juveniles in employment increased from 1.94 million in July 1914 to 2.28 million in January 1918, an increase of 18 per cent. The increase was most marked among girls who left domestic service or home duties to work in the munitions factories.¹⁵ In August 1917, H.A.L. Fisher, President of the Board of Education, stated that 600,000 children had been put prematurely into work in the first three years of the war.¹⁶ Andrews qualified this by noting that the Board of Trade suggested a lower figure of 90,000 children and that many exemptions from school

¹³ R. Wall, "English and German Families and the First World War, 1914-18," in *The Upheaval of War; Family, Work and Welfare in Europe, 1914-18*, eds. R. Wall and J. Winter (Cambridge: Cambridge University Press, 1988), 46-51.

¹⁴ A. Marwick, *Britain in the Century of Total War: War, Peace and Social Change, 1900-1967* (London: Bodley Head, 1968), 64-65.

¹⁵ Andrews, I.O., and Hobbs, M.A., *The Economic Effects of the World War upon Women and Children in Great Britain* (London: Oxford University Press, 1921), 168-169, 177.

¹⁶ *House of Commons Debates*, 19 April 1917 quoted in Marwick, *Britain in the Century of Total War*, 64.

were in rural areas and that the granting of exemptions varied between local authorities.¹⁷

A more positive argument is presented by Rosie Kennedy who suggests that schools protected their pupils both physically and psychologically from the dangers of war. This was not entirely altruistic. Kennedy notes that schools prepared children for their future responsibilities: war-related topics were included in the curriculum and children were encouraged to be good citizens and to be willing to fight and work for the Empire's survival. School boards, such as the School Board of Glasgow, were responsible for ensuring that schools continued to function during the war despite the shortages of teachers and buildings.¹⁸ The 1908 Education Act in Scotland had placed new welfare responsibilities on school boards - the provision of meals for necessitous children and the provision of a school medical service.¹⁹ Robert Anderson considers that the large number of small school boards in Scotland were unable to fulfil these new responsibilities and that the structure of parish school boards had become obsolete.²⁰ Roman Catholic schools had more pressing problems: large classes, untrained assistants, lower salaries than in public schools and insufficient grants to support an improvement in academic standards and to absorb increasing costs.²¹ However, Kennedy concludes that schools in Britain worked hard to maintain a high standard of education during the war and to enthuse children to take an active part in the home front war effort.²²

The long working hours of married women and older girls in the war industries had consequences for life at home. Andrews describes how children suffered as a result of their mother and female siblings' long periods of absence, fatigue and neglect of duty.²³ Marwick suggests that the social upheaval and disruption to family life led to a rise in juvenile delinquency which was most evident

¹⁷ Andrews and Hobbs, *Economic Effects of the World War upon Women and Children*, 170-171.

¹⁸ R. Kennedy, *The Children's War: Britain, 1914-1918* (Basingstoke: Springer, 2014), 120-121, 145, 153.

¹⁹ Jenkinson, "One of the Most Urgent Public Health Problems of the Day," 1.

²⁰ R.D. Anderson, *Education and the Scottish People, 1750-1918* (Oxford: Oxford University Press, 1995), Oxford Scholarship Online, Chapter 'The Twentieth Century', accessed 12 November 2014, 1-3.

²¹ M. Skinnider, "Catholic Elementary Education in Glasgow, 1818-1918," in *Studies in the History of Scottish Education, 1872-1939*, ed. T.R. Bone (London: University of London Press, 1967), 38-39.

²² Kennedy, *The Children's War*, 154.

²³ Andrews and Hobbs, *Economic Effects upon Women and Children*, 199, 200.

among children between eleven and thirteen years of age.²⁴ Contemporary accounts in Glasgow had noted this issue. Scott and Cunnison commented that the absence of fathers and the employment of mothers had led a weakening in parental control with a consequential increase in juvenile crime. However, they considered that employment helped to keep juveniles from mischief during the war and that juvenile crime only became more evident in 1920-1.²⁵

The final theme in the historiography is the extent to which children were drawn into the war effort with Kennedy suggesting that children had an active, rather than a passive, role during the war. The mobilisation of the Home Front included children since it was thought that they could contribute to the successful prosecution of the war. The involvement of children was thought to be a lesson in citizenship and service to the nation and essential for the regeneration of Britain. Children were willing participants in charitable activities and joined uniformed youth organisations that instilled obedience and discipline.²⁶ Children also raised funds for the war effort; Peter Grant shows that schools raised very substantial sums for the Exchequer by persuading parents to invest in war bonds.²⁷ Both Kennedy and Grant subscribe to the view that children were participants in the war effort rather than simply passive observers.

Having examined the key themes in the debate, the rest of this chapter will address these themes by considering the impact of the war on children's lives in Glasgow. The study will be in four parts: children's health with reference to infant mortality and the health of school children, the home environment and parental control, schooling and educational achievement and finally, how children were drawn into the war effort. It will be evident that the study of the impact on children reaches similar conclusions as in the previous chapters on poverty, living standards and health in relation to adults. It will be shown that infant mortality declined at a significantly greater rate than before the war and that the health of school children improved, although the gains were not as significant as for infants. Home life became more fractured due to the absence of parents on military service or working long hours in

²⁴ A. Marwick, *The Deluge: British Society and the First World War* (Harmondsworth: Bodley Head, 1965), 6, 125.

²⁵ W.R. Scott and J. Cunnison, *The Industries of the Clyde Valley during the War* (Oxford: Humphrey Milford, 1924), 177.

²⁶ Andrews and Hobbs, *Economic Effects upon Women and Children*, 88, 144-145, 155.

²⁷ P. Grant, *Philanthropy and Voluntary Action in the First World War: Mobilising Charity* (Abingdon: Routledge, 2014), 171-172.

the war industries; however, loosening of parental control did not result in an increase in truancy and only a minor increase in juvenile crime. Despite shortages in staffing and resources, schools continued to provide a similar education as in peace-time with an increase in educational attainment and more children carrying on into secondary education. Also, School Boards were key agencies in providing welfare during times of hardship and responded to the pressing need for after-school supervision of children who had been orphaned or whose relatives worked long hours in the war industries. It will be argued that Anderson's comment that Parish School Boards had become obsolete is misplaced in relation to the Glasgow Boards. Finally, it will be shown that children were encouraged to identify with the war effort and were inculcated with a sense of duty and service in preparation for adulthood. They were encouraged to do good works and give assistance to the military authorities. Towards the end of the war, schoolchildren were used to promote the government's campaign to raise funds for the war effort through the purchase of war bonds. In some respects, the most important outcome from the war for children came afterwards. It will be shown that reconstruction after the war led to important changes with local authorities taking greater responsibility for maternal and child welfare and setting out a more comprehensive plan for the education of all children in their area.

Children's Health

The first part of this chapter evaluates the changes in children's health during the war by reference to changes in infant mortality and in the health of school children.

Winter suggests that infant mortality rates provide a key social indicator of the health of the civilian population and that the steepest drop in infant mortality in Britain during the first thirty years of the twentieth-century was during the war years.²⁸

During this period, Winter computes that infant mortality in England and Wales declined by 7 per cent before, 22 per cent during, and 18 per cent after the war.²⁹

Bernard Harris challenges this conclusion and suggests that the reduction during the war was a continuation of a well-established trend of declining infant mortality rates and that the pattern of decline which had been established before 1914 continued during the war years.³⁰

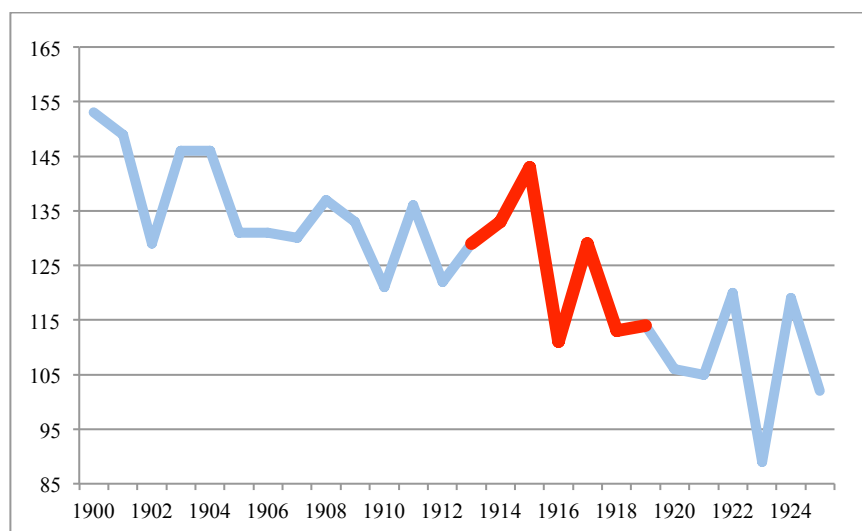
²⁸ Winter, *Great War and the British People*, 105, 142.

²⁹ Winter, "Aspects of the Impact of the First World War on Infant Mortality in Britain," 716.

³⁰ Harris, "The Demographic Impact of the First World War," 350, 358.

The ‘well-established trend’ in Glasgow was one of slow improvement. Over the last four decades of the 19th century, infant mortality rates reduced by only 10 per cent whilst the general death rate reduced by 27 per cent during this period.³¹

Figure 5.1. Infant Mortality Rates, 1900-1925.



Source: *Reports of the Medical Officer of Health, City of Glasgow, 1911-1925*. Mortality rates are per 1,000 births

Between 1900 and 1914, mortality rates reduced by a further 13 per cent; however, it should be noted that the long-term reduction in mortality rates had stalled in the nine years preceding the war.³² The infant mortality rates from 1900 to 1925 are shown in Figure 5.1 with the war years highlighted in red. The annual fluctuations in the mortality rates were due to the cyclical incidence of infectious diseases and intermittent harsh winters with abnormally high numbers of respiratory deaths. However, long-term trends can be discerned from these figures. During the war, infant mortality rates reduced by 15 per cent which was three to four times higher than the annual rate of decline in any period in the previous fifty years. Other cities recorded similar reductions; 22 per cent in Liverpool and 25 per cent in Birmingham and Manchester.³³ Between 1918 and 1925, rates in Glasgow declined by a further 9 per cent but the annual rate of reduction of just over one per cent per annum was a reversion to the ‘well-established’ trend of slow improvement in the pre-war years. The higher rate of decline during the war represents a marked improvement in infant

³¹ A.K. Chalmers, *The Health of Glasgow, 1818-1925*, (Glasgow: Corporation of Glasgow, 1930), 189-190.

³² Glasgow City Archives, D-HE 1/1/20, Report of the Medical Officer of Health, 1912, 12; D-HE 1/1/21, Report of the Medical Officer of Health, 1914-1919, 5.

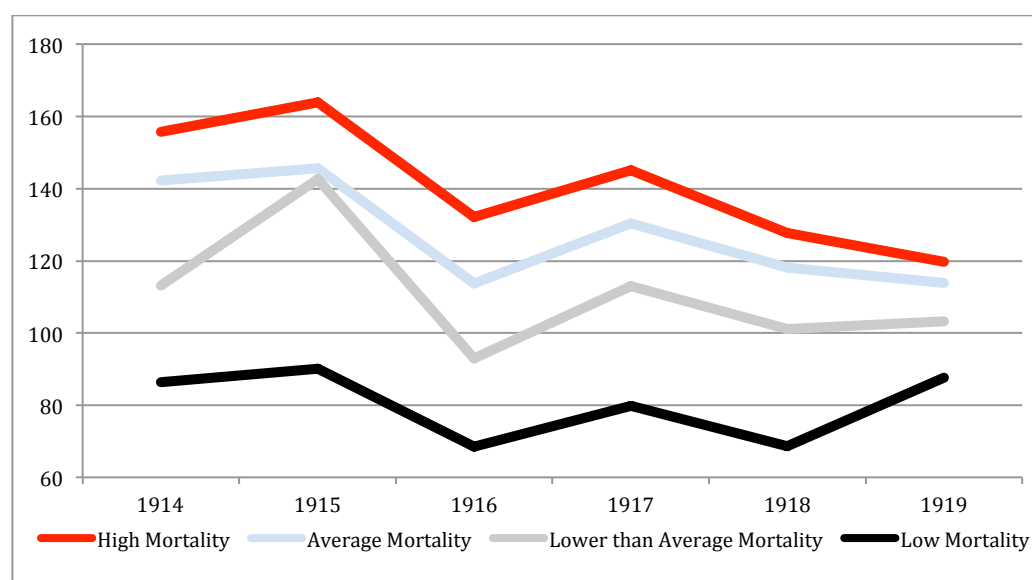
³³ Report of the Medical Officer of Health, 1914-19, 33.

health, as suggested by Winter, rather than a continuation of past trends, as argued by Harris.

Winter also suggests that this improvement in infant health during the war was most marked in the poorest districts – as he has suggested in relation to adult health. Winter draws the comparison between the poorer London borough of Shoreditch where rates reduced by a third during the war and the more affluent borough of Chelsea where rates only fell by only 6 per cent.³⁴ Harris challenges Winter’s argument by showing that cities with high mortality rates did not experience disproportionately high declines in mortality rates during the war.³⁵ However, Harris does not consider whether there were variations in infant health improvements between poor and affluent areas within a city.

It has already been shown that the most significant reductions in mortality rates for adults were in the poorest districts.³⁶ This was based on groups of municipal districts which reflected the social spectrum between poor and affluent communities. The comparable information for infant mortality rates, using the same groups, is shown in Figure 5.2

Figure 5.2. Infant Mortality by Municipal District Groups



Source: *Reports of the Medical Officer of Health, City of Glasgow, 1914-1921*.
Mortality rates are per 1,000 births.

³⁴ Winter, *The Great War and the British People*, Table 4.11, 150-151.

³⁵ Harris, "Demographic Impact of the First World War," 358.

³⁶ See Chapter 4, pages 147-148.

The infant death rates in the poor districts show a marked and consistent decline; whereas, rates in the affluent districts do not show a consistent improvement. Some of the poorer districts had quite significant reductions in infant mortality rates during the war; for example, a 31 per cent reduction in Whitevale and 24 per cent in Mile-end.³⁷ By 1919, the differential between infant death rates in the poor and affluent districts had narrowed with the penalty of being born poor being halved. This compares to the improvement in adult health in poor districts where the penalty of being poor had been halved by 1918. The infant mortality data for Glasgow supports Winter's view that the war led to a step-change improvement in infant health with the greatest gains being in the poorest districts.

There are a number of factors which could have contributed to the war-time improvement in infant health: the falling birth rate, improvements in infant welfare, better housing conditions or an improvement in maternal health. By 1918, the number of births in Glasgow had fallen from 30,000 to 24,000 per annum with a 24 per cent reduction in the birth rate.³⁸ Before the war, the birth rate in the poorer areas was almost double that of more affluent areas with mortality rates which were three times higher.³⁹ J. Agnew identified that large families led to high rates of infant deaths; hence, fewer war-time births in the poor areas may have contributed to the decline in mortality rates.⁴⁰ Births and deaths in the poorest districts fell by 21 per cent and 36 per cent respectively during the war. However, in 1920, infant mortality rates in the poorer districts were 10 per cent lower than in 1918 despite an increase of 46 per cent in the number of babies being born between the two years.⁴¹ This casts doubt on the correlation between the number of births and infant mortality rates. The evidence suggests that lower infant mortality rates during the war were not simply due to fewer births.

Before the war, poor housing was thought to contribute to high levels of infant deaths. In 1913, Chalmers noted that twice as many infants died in one-apartment homes than in four-apartment homes.⁴² However, Chalmers qualified this by stating

³⁷ Report of the Medical Officer of Health, 1914-19, Table VI, 30; Table XV, 137.

³⁸ Report of the Medical Officer of Health, 1914-19, 5.

³⁹ Report of the Medical Officer of Health, 1912, Table VI, 10; Table XV, 115.

⁴⁰ J. Agnew, "Mortality Rates in Glasgow Families," *Glasgow Medical Journal*, (September 1922): 24-25.

⁴¹ Report of the Medical Officer of Health, 1914-19, Table VI, 130; Report of the Medical Officer of Health, 1920, Table IV, 121.

⁴² A.K. Chalmers, "The House as a Contributory Factor in the Death-rate," *Proceedings of the Royal Society of Medicine*, 6 (1913): 159.

that it was not the house that caused this but a deficiency in diet and rest during the ante-natal period which led to children in these houses being small and light in weight as shown in Dorothy Lindsay's study.⁴³ Later, Robert Cage developed this theme by suggesting that it was the high number of occupants per room rather than the size of the home that was the principal reason for high infant mortality rates.⁴⁴ The earlier work on living standards has shown that housing conditions did not improve during the war and probably deteriorated yet there was a significant improvement in infant health. It is unlikely that housing was a factor in this improvement.

Deborah Dwork suggests that war was good for babies and young children in that concern on the quantum of battlefield casualties led to improvements in infant and maternal welfare to reduce the wastage of infant lives.⁴⁵ The Notification of Births (Extension) Act 1915 gave local authorities new powers with regard to care of mothers and children but did not provide for supervision of midwives, ante-natal care or provision for children over one year old.⁴⁶ Before the war, Glasgow's maternity and child welfare centres were staffed by two doctors and ten health visitors; a low level of staffing for a city with 29,000 births each year. By 1919, this had only increased to four doctors and twenty health nurses.⁴⁷ Three-quarters of the births in poor districts before 1914 were born with no medical presence other than a midwife or 'handy woman'; this did not improve during the war. Visits by health visitors decreased during the war with almost two thirds of infants not being visited.⁴⁸ There may have been rhetoric during the war about preserving infant life but it did not translate into sufficient medical and welfare resources to have an impact on infant mortality.

Chalmers' reference to small and light-weight children born to malnourished and over-worked mothers suggests that maternal health was a key factor. Chalmers noted that not all children were born with equal chances; a third of infant deaths were due to 'immaturity' which occurred mainly in the first week of life - a condition for

⁴³ Report of the Medical Officer of Health, 1914-19, 166-167, 171; D.E. Lindsay, *Report upon a Study of the Diet of the Labouring Classes in the City of Glasgow carried out during 1911-12* (Glasgow: Corporation of Glasgow, 1913), 19-21.

⁴⁴ Cage, R.A., "Infant Mortality Rates and Housing: Twentieth Century Glasgow," *Scottish Economic and Social History*, 14 (1994): 89.

⁴⁵ Dwork, *War is Good for Babies & Other Young Children*, 208-211.

⁴⁶ Report of the Medical Officer of Health, 1914-19, 15; Jenkinson, "One of the Most Urgent Public Health Problems of the Day," 2.

⁴⁷ Chalmers, *Health of Glasgow*, 243.

⁴⁸ Report of the Medical Officer of Health, 1912, 120; Report of the Medical Officer of Health, 1914-19, 38, 139.

which Chalmers stated that after-care can do little to remedy.⁴⁹ There are no records of birth-weights but nurses commented that on the whole babies were larger at birth during the war than in the pre-war days. This is corroborated by health visitors' reports which recorded 88 per cent of babies being 'well' on their first visit in 1918 compared to 52 per cent in 1914.⁵⁰ It has been shown that adult health improved significantly particularly in the poorest areas which had the highest rates of infant deaths. It is probable that improved maternal health was the main contributing factor in infants being born healthy and thereby reducing the war-time incidence of infant deaths.

Peace was good for babies and young children due to the expansion of maternal and infant welfare. By 1920, the number of visits by health visitors to infants had increased almost three-fold.⁵¹ By 1925, the extended network of welfare centres recorded 146,000 infant consultations compared to the 17,000 health nurse visits in 1918.⁵² Ante-natal consultations at the Glasgow Royal Maternity Hospital increased by 75 per cent between 1919 and 1921. Only registered midwives were now allowed to practice with a 20 per cent increase in the number of midwives between 1918 and 1920.⁵³ It is evident that a more comprehensive system of maternal and infant care was developed in the immediate post-war period. However, the most important initiative was to assist mothers and young children during a period of great hardship on a scale that would not have been contemplated before the war.⁵⁴ In 1922, one million meals and two million pints of milk were provided, free of charge, to mothers and children under the age of 5 years at a present-day cost of £4.2m. Welfare assistance continued to be given each year up to 1925 when 1.6 million pints of milk were distributed and dried milk given to 8,000 families with some 60,000 mothers and young children, in total, receiving assistance.⁵⁵ This ongoing assistance indicates that

⁴⁹ Report of the Medical Officer of Health, 1912, 13, 16, 166.

⁵⁰ Report of the Medical Officer of Health, 1914-19, 27, 39.

⁵¹ Report of the Medical Officer of Health, 1914-19, 39; Report of the Medical Officer of Health, 1920, 32.

⁵² Report of the Medical Officer of Health, 1925, 49; Report of the Medical Officer of Health, 1914-19, 38.

⁵³ Report of the Medical Officer of Health, 1920, 42; Report of the Medical Officer of Health, 1921, 37.

⁵⁴ C. Rowan, "Child Welfare and the Working-class Family," in *Crises in the British State, 1880-1930*, eds. M. Langan and B. Schwartz (London: Hutchinson, 1985), 227-230.

⁵⁵ Report of the Medical Officer of Health, 1922, 35-37; Report of the Medical Officer of Health, 1925, 55-57.

the hardship of the post-war years was deeper and longer than identified in the earlier studies on poverty and living standards.

In summary, infant mortality did reduce at a greater rate during the war than before or after the war. There is clear evidence that the poorest benefited most, as has also been shown with regard to adult health. It is probable that healthier mothers led to healthier babies being born with a more equal chance of survival than before. The investment in maternal and child welfare was modest during the war but the foundations of a more comprehensive maternal and child welfare system emerged after the war and the authorities took greater responsibility for necessitous mothers and children in times of hardship. War had indeed been good for babies and young children but only after peace had been secured.

The changes in the health of school children will now be considered in the context of Harris's statement that the war had no impact on their health.⁵⁶ Winter and Dwork comment on the positive impact of the war on children's health but their research focuses on infants and young children rather than children of school age. It will be shown that the health of schoolchildren did improve but that the evidence is less compelling and the quantum of improvement is less striking than for the improvement in infant health. Furthermore, there is some evidence that the health gains began to erode in 1917 and 1918 perhaps as a consequence of food shortages and a deterioration in diet.

The growth rate of a child, reflected in their height and weight, provides a measure of their well-being since growth is determined by a number of factors, including diet and resistance to disease.⁵⁷ Harris suggests that changes in the height of schoolchildren is the most accurate measure of their net nutritional status and health.⁵⁸ Harris shows that the average heights of schoolchildren increased in some local authority areas during the war; however, other areas showed no improvement or, indeed, some deterioration. For example, the average height of children between 1914 and 1918 increased by 5 per cent in Govan and 10 per cent in Dumbartonshire but heights in Aberdeen decreased by 16 per cent. In the absence of a clear pattern, Harris

⁵⁶ Harris, *The Health of the Schoolchild*, 87.

⁵⁷ P. Eveleth and J. Tanner quoted in Harris, *Health of the Schoolchild*, 85.

⁵⁸ B. Harris, "Health, Height and History: An Overview of Recent Developments in Anthropometric History," *Social History of Medicine*, 07/02 (1994): 301; B. Harris, "Height of Schoolchildren in Britain, 1900-1950," in *Stature, Living Standards, and Economic Development: Essays in Anthropometric History*, ed. J. Komlos (London: University of Chicago Press, 1994), 35-38.

concludes that the war had relatively little effect on child health.⁵⁹ This runs counter to the general views of Winter and Dwork who espouse the positive impact of the war on child health.⁶⁰

Harris does not comment on differences in stature between poor and affluent districts within a city. The Glasgow School Board data published in 1907 shows that boys aged 6 years of age in the poorest social class were 1.8 inches shorter and 2.4 pounds lighter than those in the most affluent social class and, by 13 years of age, they were 2.2 inches shorter and 5.5 lbs lighter. There were similar differences in girls' stature between social classes.⁶¹ The height differential between social classes appears to originate in the pre-school years and then remained constant; whereas, the differential in weight increases with age. Harris cites Phyllis Eveleth and James Tanner in support of his use of height as an indicator of child health but Eveleth and Tanner state that both height and weight are indicators of a child's development.⁶² It may be that weight, rather than height, is more sensitive to changes in nutrition during school years. Heights and weights during the war years are available only for the Govan Parish School Board – the Glasgow School Board did not publish this information. The heights and weights recorded are only for the children seen by the school medical staff and do not provide a comprehensive record of all children on the school roll. However, a substantial proportion of the school roll was examined. For example, in the 1916/17 school year, some 18,000 children were examined which was almost half of the Board's roll. The Govan Board information is shown in Table 5.1.

⁵⁹ Harris, *Health of the Schoolchild*, 87-89.

⁶⁰ Winter, *The Great War and the British People*, 153; Dwork, *War is Good for Babies & Other Young Children*, 167-207.

⁶¹ A. Greenwood, *The Health and Physique of School Children*, (London: King & Son, 1913), 82-83.

⁶² Harris, "Health, Height and History," 301.

Table 5.1: Govan Parish School Board: Average Heights and Weights

	Boys 6 years old		Boys 11 years old			Girls 6 years old		Girls 11 years old	
	Height (inch)	Weight (lbs)	Height (inch)	Weight (lbs)		Height (inch)	Weight (lbs)	Height (inch)	Weight (lbs)
1913/14	41.7	41.4	50.5	65.5		41.3	40.5	50.7	60.6
1914/15	42.0	42.7	52.3	68.1		41.7	41.6	52.2	66.1
1915/16	42.1	42.9	51.8	70.0		41.6	41.3	51.7	66.0
1916/17	41.6	42.4	52.2	66.9		41.5	41.4	56.4	65.2
1917/18	39.4	42.7	52.4	67.3		41.7	41.6	52.7	61.8

Source: Glasgow City Archives, D-ED 9/1/33, *Govan Parish School Board, Annual Reports: Medical Inspection of Children*, years ending 30 June 1914, 14-15: 1915, 14-15: 1916, 12: 1917, 11-12: 1918, 14.

There is no discernible pattern in the changes in the heights of boys or girls which is consistent with the findings of Harris. There is, however, a consistent but modest gain of between two and three per cent in body weight of one to two pounds per child as compared to the last full academic year before the war. The Govan School Board noted the progressive increase in the stature of their pupils during the war in its 1917/18 annual report and attributed this to better nutrition.⁶³ There is also some evidence that the weight gain for older children was being eroded after mid 1916. Earlier research has shown that 1917 and early 1918 constituted a period of food shortages.⁶⁴ This may have contributed to the decrease in average weights of older children.

The gains in the stature of school children were perhaps less striking than might be expected from the tenor of Winter and Dwork's thesis on war-time improvements in civilian health. The data does not distinguish between social classes so it is not possible to assess whether the gains were social-class-specific as was the case with infant and adult mortality. It does suggest that Harris was correct in concluding that height gains were modest and somewhat inconsistent but the increase in weight suggests an improvement in stature and child health albeit of a modest nature.

The school medical reports support the view that child health improved during the war. Rickets was prevalent in the poorer communities. James Maxton, Independent Labour Party Member of Parliament and former teacher, recalled that

⁶³ Glasgow City Archives, D-ED 9/1/33, *Govan Parish School Board, Annual Reports: Medical Inspection of Children*, year ending 30 June 1918, 16.

⁶⁴ See Chapter 3, pages 90-91.

when he took his Bridgeton class for drill that ‘thirty out of the sixty youngsters could not bring their heels and knees together because of rickety malformations’.⁶⁵ The Glasgow School Board reported a halving in the incidence of rickets during the war from 8 per cent of children examined to 4 per cent, which the Board noted had been achieved despite a decrease in the consumption of milk, beef-fat, butter and eggs due to the war.⁶⁶ The proportion of children regarded as having below average nutrition decreased from 11 per cent in 1914-15 to 4 per cent in 1916-17 but increased again to 8 per cent in 1917-18 with the Board noting a slight increase in underfed children.⁶⁷ The increase in underfed children is reflected in the erosion in average weights of older children in Table 1. In the Govan Board schools, the number of children regarded as having above-average nutrition almost doubled during the war and by 1917/18 accounted for 42 per cent of those examined whilst the number of ‘necessitous cases’ granted free dinners by the Govan School Board decreased from 927 children to 32 children. At the end of the war, the Govan School Board commented that children were cleaner and better clothed and that their nutrition had been well maintained during the war with a progressive increase in average weight and height.⁶⁸

In summary, the reduction in infant mortality and the improvement in the weight of schoolchildren suggest that the war had a beneficial impact on their health. The reduction in infant mortality in the poorer districts is particularly striking; whereas, the changes in the health of schoolchildren were less so. The recurring theme is that improved nutrition, albeit with less fat consumed, was key to the improvement in child health as was the case in the earlier studies on adult well-being which identified the importance of improved living standards and diet.

⁶⁵ Speech by J. Maxton to the ILP Conference in 1927 quoted in G. Brown, *Maxton* (Edinburgh: Mainstream, 1986), 43.

⁶⁶ Glasgow City Archives, *School Board of Glasgow*, D-ED 9/1/33, *Annual Reports: Medical Inspection of Children*, year ending 30 June 1915, 8; year ending 30 June 1918, 5; Glasgow City Archives, *Education Authority of Glasgow (Previous School Board of Glasgow area)*, *Annual Reports: Medical Inspection of Children*, year ending 31 July 1919, 11.

⁶⁷ *School Board of Glasgow*, *Annual Reports: Medical Inspection of Children*, year ending 30 June 1918, 7.

⁶⁸ *Govan Parish School Board*, *Annual Reports: Medical Inspection of Children*, year ending 30 June 1915, p. 15; year ending 30 June 1918, 23, 28.

The Home Environment

The second part of the chapter evaluates the impact of the war on children's home environment. Marwick highlights the social 'losses' of the war in the halting of progress in housing, health and education which stemmed from the disruptive nature of the conflict on civilian life.⁶⁹ Maggie Andrews extends this theme to the home environment and suggests that the conflict interfered with daily life in the home in ways unimaginable to previous generations causing disruption and destruction.⁷⁰ The most significant disruption to home life for soldiers' children was the departure of fathers for up to four years. For those with parents in civilian employment in the war industries, the consequence for children was long periods without a parental presence at home. Military and civilian families became fragmented which had negative, and few positive, consequences for children.

Fathers absent on military service may have led to an erosion in parental control. In October 1914, the Headmaster of Harmony Row School, Govan, had already raised the concern that the absence of fathers on military service had relaxed family discipline which contributed to low attendance.⁷¹ The Glasgow School Board reported that, during 1914-15, the accommodation at their Short Term Industrial School for defaulting children had been taxed to the utmost capacity due to the unrest caused by the war and fathers being absent on military service.⁷² However, in Govan, the numbers of defaulters was low with no more than 400 children in the Govan Board industrial schools at any time during the war.⁷³ Overall, absent parents did not result in absconding children. Attendance at the Glasgow Board, Govan Parish Board and Roman Catholic schools remained close to 1914 levels of between 84 and 88 per cent throughout the war.⁷⁴ School Boards did not rely solely on parental control as the Livingstone family found out when the Attendance Officer arrived to check up on

⁶⁹ Marwick, *Britain in the Century of Total War*, 64.

⁷⁰ M. Andrews and J. Lomas, eds., *The Home Front in Britain: Images, Myths and Forgotten Experiences since 1914* (Basingstoke: Palgrave Macmillan, 2014), 7.

⁷¹ Glasgow City Archives, SR10/3/667/4/2, School Board of Glasgow, Harmony Row Public School, Log Book, 1914-18, 16 October 1914.

⁷² Glasgow City Archives, D-ED 9/1/33, *School Board of Glasgow, Annual Report, 1914-15*, 7.

⁷³ Glasgow City Archives, D-ED 1/4/4/6, *Govan Parish School Board, Fifteenth Report of the Proceedings of the Board for the Five Years ended 15 May 1919*, 13.

⁷⁴ *Govan Parish School Board, Report for the Five Years ended 15 May 1919*, Table VI, 15; GCA, *School Board of Glasgow, Annual Report, 1917-18*, 7, 10; Glasgow City Archives, D-ED 9/1/33, *School Board of Glasgow, Annual Report, 1914-15*, 6; Annual Report of the School Board of Glasgow for 1917-18 as reported in the *Glasgow Herald*, 31 March 1919.

Tommy's absence.⁷⁵ School Boards called in parents to account for their absent children but again the numbers were relatively low with only 514 parents being summoned to meetings with the Govan Board in 1918.⁷⁶ On this evidence, school attendance did not suffer as a result of fathers being on military service.

Juvenile crime became a pressing concern to contemporary commentators. In 1916, the Committee of Council on Education in Scotland noted that juvenile morals and manners had deteriorated due to the war conditions of 'absent parents, darkened streets and the high wages of juveniles'.⁷⁷ In 1916, J.V. Stevenson, Chief Constable of Glasgow, commented on the increase in housebreaking by gangs of boys stating that 'there is much danger of boys going wrong between 14 and 16 years of age; they leave school and are freed from the restraint of school discipline'.⁷⁸ In September 1917, Lord Scott Dickson, Lord Justice Clerk of the High Court of Glasgow, commented on juvenile crime 'that it had grown to such an extent it demanded energetic handling; the war and the consequences of it could only be accepted as aggravating a conditions of things which existed before the outbreak of hostilities'.⁷⁹ The *Glasgow Herald* reported in August 1917 on the perceived indiscipline of juveniles stating that: 'there was no alarming increase in depravity but an increase in crimes against property aggravated by the ease with which young people at present can obtain casual employment at relatively high rates'.⁸⁰

School Boards monitored juvenile offences in their areas. The Glasgow Board recorded an increase from 119 offences in 1915 to 1,932 offences in 1917 with school children accounting for three-quarters of the offences.⁸¹ The Govan Parish Board reported on the very serious increase in juvenile offenders in 1918 due to the relaxation of parental control resulting from fathers being on military service but the numbers were modest at only 394 offenders.⁸² Clearly, the war had led to an increase in theft and housebreaking but the number of offenders was relatively low, some

⁷⁵ T.C. Livingstone and R. Scott, ed., *Tommy's War: A First World War Diary, 1913-18*, (London: Harper, 2008), 16 January 1917, 203.

⁷⁶ *Govan Parish School Board, Report for the Five Years ended 15 May 1919*, Table IV, 13.

⁷⁷ Munro Fraser, Chief Inspector of the Western Division, Committee on the Council of Education, Scotland as reported in the *Glasgow Herald*, 20 July 1917.

⁷⁸ *Glasgow Herald*, 7 September 1917.

⁷⁹ *Glasgow Herald*, 6 September 1917.

⁸⁰ *Glasgow Herald*, 29 August 1917.

⁸¹ Glasgow City Archives, D-ED 1/1/18-22, *School Board of Glasgow, Minutes of Meetings*, 12 February 1918.

⁸² *Govan Parish School Board, Report for the Five Years ended 15 May 1919*, 12-13.

1,500 offenders, out of a combined school roll of 180,000 children within the Glasgow and Govan School Boards.

Soldiers' wives had to live as one-parent families for an extended period of time. Children became more dependent on their mothers and were at risk if their mother became incapacitated or negligent. Some women used their war dependant's allowance to indulge in excessive drinking although this was not confined to Glasgow. Richard Wall is ambivalent on whether this was a widespread practice in London and suggests that it was more apparent in certain localities.⁸³ Gail Braybon and Penny Summerfield question whether the morals of married women in Britain had deteriorated whilst their husbands were on active service and conclude that this was over-stated.⁸⁴

Evidence from a children's home suggests that some children did suffer as a result of their father being on military service. The Orphan Homes of Scotland, Bridge of Weir, (hereinafter referred to as Quarriers), cared for children from troubled homes; many of these children were from Glasgow. After the outbreak of war, admissions to Quarriers increased with a high proportion being soldiers' children taken in due to hardship or the death, illness or neglect of the mother or the enlistment of the father. Quarriers attributed most cases of neglect to excessive drinking by soldiers' wives.⁸⁵ For example, five Keenan children were admitted in October 1915 after their mother 'of drunken habits' had been sentenced for breach of the peace. The father had been wounded in France and was in Stobhill Hospital. However, alcohol was not the only temptation during their husband's absence. The father of the Waugh family of five children, living in Broomielaw, returned on furlough to find his wife co-habiting and pregnant. Both the Keenan and Waugh children were sent to Quarriers for the duration of the war.⁸⁶

If a soldier's wife became incapacitated or died then this could have serious consequences for their children. Two children were transferred from the Govan Poorhouse when their father, a widower, enlisted. Quarriers noted that 'the usual

⁸³ Wall, "English and German Families and the First World War, 1914-18," 95-96.

⁸⁴ G. Braybon and P. Summerfield, *Out of the Cage: Women's Experiences in Two World Wars* (London: Pandora, 1987), 107-113.

⁸⁵ The Orphan Homes of Scotland, *A Narrative of Facts relative to the Work Done for Christ in connection with the Orphan Homes of Scotland, Consumption Sanatoria of Scotland and Colony of Mercy for Epileptics, Bridge of Weir, Glasgow and Brockville, Ontario, founded by William Quarrier*, year ending 31 October 1915, 38.

⁸⁶ The Orphan Homes of Scotland, History Books, *HB 36*, 1914-15, 146, 198; *HB 39*, 1917-18, 18.

government allowance will be paid whilst in the home' which was perhaps the incentive for the father to enlist.⁸⁷ Two children of the McCormack family went to Quarriers in November 1917 shortly after their mother died of consumption aged 28 years. Their father had been given leave of absence to see his wife before she died and arranged for the children to be moved from their grandmother in Maryhill to Quarriers. The influenza epidemic in 1918 led to more admissions following the death of mothers whose husbands had died or were still in the armed services.⁸⁸ Soldiers' children became more dependent on the remaining parent as a result of their father's enlistment and were at risk if their mother was incapacitated or negligent.

Quarriers records show that the growing hardship of soldiers' families also led to children being taken into care. By October 1916, Quarriers had admitted 407 children of servicemen due to family budgets being stretched by price inflation and the government 'showing the keenest economy in providing for the children of her soldiers'.⁸⁹ A widows' pension was paid if her husband had been killed on active service but many women did not qualify and the amount paid was so low that they had to work to supplement their pension.⁹⁰ If the widow could not work then the family were in difficulty. Three children were admitted to Quarriers in September 1915 due to their mother 'suffering from mental trouble' and excessive drinking following the death of the children's father in the Dardanelles in July 1915.⁹¹ Once admitted, relatives were reluctant to take children back due to the increase in the cost of living. As the war progressed, the number of children from soldiers' families increased and those from civilian families reduced although Quarriers do not provide an analysis of the annual admissions to support this statement. It is recorded that, during the last year of the war, Quarriers gave temporary assistance or residential admission to 903 soldiers' children compared to 600 children in the previous year. Quarriers admitted some 400 additional children each year and had 1,771 children in residence at October 1918.⁹²

The Quarriers records show the difficulties faced by some children whose fathers were on active service. The number of soldiers' children admitted was low relative to the number of children in Glasgow; however, the records show that the

⁸⁷ Orphan Homes, History Books, *HB 36*, 1914-1915, 146.

⁸⁸ Orphan Homes, History Books, *HB 39*, 1917-18, 24.

⁸⁹ Orphan Homes, *Narrative of Facts*, 1916, 1.

⁹⁰ Andrews and Lomas, *The Home Front in Britain*, 49.

⁹¹ Orphan Homes of Scotland, History Books, *HB 36*, 1914-1915, 164.

⁹² Orphan Homes, *Narrative of Facts*, 1914, 42; 1917, 2; 1918, 1-2.

absence of fathers during the war could have consequences for children if the remaining parent was incapacitated or negligent and the extended family could not provide support. It is also significant that the referrals of children from civilian families fell significantly during the war which may indicate that the ability of these families to support children improved during the war although such an analysis is beyond the scope of this study.

Disruption to home life was not confined to children whose fathers had enlisted. Employment in the war industries resulted in parents being absent from home for long periods of time. Many mothers and older daughters undertook well-paid munitions work that enhanced the family's income but resulted in long periods away from home. In April 1917, the Sub Committee on Child Welfare of the Glasgow Corporation Health Committee reported that there was a need for crèche accommodation for children of married women working in the munitions factories, especially in the Springburn and Tollcross areas, so that children 'would not be taken into unsuitable quarter' and that the Ministry of Munitions had offered to pay 75 per cent of the cost of creating these crèche facilities.⁹³ The Glasgow School Board estimated that, at June 1917, there were 2,300 children who had been orphaned by the war and a further 4,300 children had been deprived of home supervision due to parents or guardians being out at work.

The Glasgow Board decided that 6 schools, Dalmarnock, Eastport, Hayfield, Keppochhill, Rosemount and Strathclyde, should provide School Hostels at which children could be kept at school during the whole of the mother's working hours during the week and on Saturdays and holidays. Nursery schools for children aged three to five years of age would also be provided at four of these Hostels. The disruption to family life is evident from the number of meals provided by the hostels with 410,979 meals being supplied during 1917-18, of which only 19,396 were for necessitous children. By May 1918, Glasgow Board had also created 6 play centres and 8 kindergartens for soldiers' orphans and noted that 'further accommodation is likely in the near future'.⁹⁴

In summary, there was widespread disruption to the home environment during the war. It has already been estimated that one in three households in Glasgow had a father in military service with the attendant difficulties of an extended period as a

⁹³ *Glasgow Herald*, 11 April 1917

⁹⁴ *School Board of Glasgow, Annual Report, 1916-17*, 25-26; *Annual Report, 1917-18*, 10, 26.

one-parent family. Not only did these families suffer greater hardship than civilian families, soldiers' children were more at risk if the remaining parent was incapacitated or negligent. A further one in three of households had parents or elder siblings who worked long hours in the war industries which led to hostels and play centres being required. Although more affluent, their children had to adjust to a home environment with parental support missing for long periods of time. Whilst the home environment suffered, it did not lead to a significant increase in anti-social behaviour and school attendance levels were maintained. Marwick's 'social losses' stemming from the disruptive nature of the conflict were not evident in this area of family life.⁹⁵

The School Environment

The third part of the chapter considers the impact of the war on children's education. Following an exploration of the war's challenges to education, it will be suggested that educational standards were maintained during the war, despite a shortage in staffing and resources, and that schools provided children with stability in a changing world. This is a more positive view of education during the war than suggested by contemporary commentators such as Irene Andrews who highlighted, in 1921, that children had entered the work place before the normal school leaving age. The number of children in employment in Britain under fourteen years of age increased from 148,000 in 1911 to 600,000 in 1917. Andrews considers the 1917 figure an over-statement and that many exemptions from school were for agricultural work.⁹⁶

Social historians of the war follow the theme of war-time disruption to education although some identify positive outcomes from the war. Marwick describes the halting of all progress in education as one of the 'social losses' of the war; these included the moratorium on increases in education grants, children being allowed to enter the work place prematurely, school medical services having to be curtailed and the departure of many young male teachers to the military. Marwick cites Herbert Fisher, President of the Board of Education, who commented on the 'intellectual wastage caused by the war' due to the 'industrial pressure upon child life in this country'.⁹⁷ Alan Simmonds also notes the pull of war-work on children of school age

⁹⁵ Marwick, *Britain in the Century of Total War*, 64.

⁹⁶ Andrews and Hobbs, *Economic Effects upon Women and Children*, 170-171.

⁹⁷ Marwick, *Britain in the Century of Total War*, 64-66.

and the high proportion of children ‘half-timing’ between school and work.⁹⁸ Most recently, Gary McCulloch reiterates the view that the war disrupted schooling but adds that the Lewis Report of 1917 exposed the limitations of the education system which led to the reforms included in the Education Act of 1918. McCulloch describes this as the most important educational legislation ever passed in the United Kingdom.⁹⁹ In the Scottish context, Robert Anderson describes the school board structure as increasingly obsolete given their responsibilities for child welfare that had been expanded before the war and that they lacked a proper connection with secondary education committees and other local agencies of social policy.¹⁰⁰ The 1918 Act replaced 987 parish school boards with 38 local education authorities with expanded powers.¹⁰¹ A further positive outcome was the war-time increase in secondary school rolls in England and Wales which continued thereafter; by 1921 there were twice as many working-class children in secondary schools as in 1913.¹⁰²

Andrews, in 1921, and subsequently Marwick in 1968, and McCulloch in 2017, make pertinent comments on the detrimental impact of the war on education. There were many war-related issues in Glasgow which made the provision of education more difficult during the war. These issues will be explored and will include resource limitations with regard to school buildings, teaching staff, teaching materials and coal; disruption to school routines due to food shortages and the introduction of staggered holidays in munitions works. Furthermore, the demand for children to work outwith school hours affected their efficiency in the classroom. Whilst these challenges have been correctly identified by historians, such as Marwick and McCulloch, it will be shown that the detrimental impact of these factors has been over-stated and that educational standards were maintained during the war and, in some respects, were improved.

An immediate challenge was the cessation of the construction of new schools with maintenance work being limited to essential works. In 1914, the Glasgow and

⁹⁸ A.G.V. Simmonds, *Britain and World War One* (Abingdon: Routledge, 2012), 292.

⁹⁹ G. McCulloch, “The Great War and Education,” *Telegraph*, (2017) accessed from www.telegraph.co.uk/education/educationopinion/11005281/The-Great-War-and-education.html on 1 September 2017, 1-4.

¹⁰⁰ Anderson, *Education and the Scottish People*, “The Twentieth Century,” 1, accessed from www.oxfordscholarship.com on 11 November 2014.

¹⁰¹ McPherson, “Schooling,” 87.

¹⁰² G.J. DeGroot, *Blighty: British Society in the Era of the Great War* (Harlow: Longman, 1996), 219; B. Waites, *A Class Society at War: England 1914-1918* (Leamington Spa: Berg, 1987), 266.

Govan Parish School Boards had 143 and 34 schools respectively.¹⁰³ Between 1900 and 1914, Glasgow had built 17 new schools and Govan had built 10 new schools.¹⁰⁴ Following the outbreak of hostilities, government finance was withdrawn, new building ceased and only essential maintenance was undertaken.¹⁰⁵ School buildings were requisitioned for military barracks and accommodation for key workers. Shortly after the outbreak of war, six schools in Maryhill were requisitioned by the military with 3,500 children displaced to other schools.¹⁰⁶ In January 1915, Gairbraid Public School, close to Maryhill barracks, was requisitioned with 1,033 pupils transferred to Garrioch Public School where infants and juniors were taught in the morning and senior classes in the afternoon.¹⁰⁷ Anderson Street School was requisitioned in December 1917 to accommodate shipyard and engineering workers. School facilities were also used for adult classes on war-related matters. For example, Elder Park, Greenfield and Kinning Park Schools were used to teach military cooks and included billeting where practicable.¹⁰⁸

Staffing resources were stretched as male teachers left for military service. In a typical public elementary school, there would have been three or four graduate male teachers who would hold the senior positions within the school. The male teachers were replaced with relatively inexperienced female certified teachers. For example, Govan School Board had 806 teaching staff in June 1914 with 163 teachers enlisting by the end of the war. By late 1916, Govan Board employed 135 temporary teachers who were mainly single female certified teachers; only eight of the temporary teachers were male, while nine others were married female teachers.¹⁰⁹ However, the ratio of teachers to pupils was maintained at 42 pupils per teacher which was similar to pre-war levels.¹¹⁰ There is a suggestion the quality of teaching was affected; the

¹⁰³ *School Board of Glasgow, Annual Report, 1914-15*, 5; GCA, *Govan Parish School Board, Report for the Five Years ended 15 May 1919*, 4-5.

¹⁰⁴ *Govan Parish School Board, Report for the Five Years ended 15 May 1919*, 4-5; J. M. Roxburgh, *The School Board of Glasgow, 1873-1919*, (Edinburgh: University of London Press, 1971), 236.

¹⁰⁵ Glasgow City Archives, D-ED 1/4/4/6, *Govan Parish School Board, Fifteenth Report of the Proceedings of the Board for the Five Years ended 15 May 1919*, Table 1, pp. 4-5; *Govan Parish School Board, Minutes of meetings*, 20 April 1915; *School Board of Glasgow, Annual Report, 1915-16*, 5.

¹⁰⁶ *School Board of Glasgow, Minutes of Meetings*, 24 December 1914, 28 January 1915, 25 February 1915.

¹⁰⁷ Glasgow City Archives, D-ED 7/76/1/22, *School Board of Glasgow, Gairbraid Public School, Log Book*, 1899-1921, 6 November 1914, 8 January 1915.

¹⁰⁸ *Govan Parish School Board, Minutes of Meetings*, 27 December 1917, 9 September 1915.

¹⁰⁹ *Govan Parish School Board, Minutes of Meetings*, 14 September 1914, 20 October 1914, 23 October 1916, 21 November 1916, 17 September 1918.

¹¹⁰ *Govan Parish School Board, Report for the Five Years ended 15 May 1919*, 19.

headmaster of Maryhill School commented in January 1916 that ‘the great influx of new teachers has materially affected the work of this school, particularly in the Junior Division’.¹¹¹ The Committee of Council on Education in Scotland reported in 1916 that due to half of the eligible teachers being on active service, there had been a readjustment of class sizes, retirement of teachers had been delayed, persons of good education had been used as teachers alongside the temporary return of married women. The report also noted that there had been an increased number of women at training centres.¹¹² School Boards were reluctant to recruit married women. It was not until March 1916, that the Glasgow Board, ‘in view of the present abnormal circumstances, approved the temporary employment of married women teachers on a purely temporary basis and not beyond the duration of the war’.¹¹³

Secondary schools were given priority with the more highly qualified elementary teachers being transferred to fill vacancies in higher grade schools. For example, Gorbals lost its science teacher in September 1916 to Albert Road Higher Grade School and had to drop science from its Supplementary classes.¹¹⁴ The transfer of these teachers to the higher grade schools and the replacement of male graduates with less experienced female teachers diluted the pool of experience and academic qualifications in public elementary schools. The Committee of Council on Education in Scotland reported pessimistically in 1916 on ‘some thousands of pupils leaving school at present with an education equipment, the defects of which will never be made good’.¹¹⁵

There were shortages of teaching materials and coal for heating systems which had an impact on children’s education. Parkhead School noted in September 1914 that, owing to the war, a good many applications had been made for free books by children whose fathers on active service and that a great many were without books.¹¹⁶ Due to the scarcity and price of jotters, Fairfield School, in February 1916, reverted to the use of slates throughout the school.¹¹⁷ The shortage of coal led to the early closure

¹¹¹ Glasgow City Archives, D-ED 7/139/3/1, Maryhill Public School, Log Book, 18 October 1915, 18 January 1916.

¹¹² *Glasgow Herald*, 20 July 1917.

¹¹³ *School Board of Glasgow, Minutes of Meetings*, 21 March 1916.

¹¹⁴ Glasgow City Archives, D-ED 7/86/1/3, Gorbals School, Log Book, 1906-1923, 5 September 1916.

¹¹⁵ *Glasgow Herald*, 20 July 1917

¹¹⁶ GCA, D-ED 7/163B/1/2, Parkhead Public School, Log Book, 1901-1921, 4 September 1914, 11 September 1914.

¹¹⁷ Glasgow City Archives, D-ED 7/73/1/4, Fairfield Public School, Log Book, 1910-1933, 2 February 1916.

of schools during cold weather. In November 1915, Govan High School reported that ‘work was performed under difficult conditions due to the extreme cold and the want of coal to keep up the heat’.¹¹⁸ In early 1918, Broomloan and Balshagray Schools reported that a diminishing coal supply had resulted in frozen pipes during periods of severe weather leading to school closures.¹¹⁹

War-related issues affected school attendance. In early 1918, food shortages led to a fall in school attendance due to children being sent to wait in queues for food for the family. Harmony Row School reported that food shortages and the time taken by children to get food stuffs led to the marking of morning school registers to be delayed from 10.00am to 10.30am.¹²⁰ The change to staggered holidays in the war industries also disrupted school life. In June 1916, Parkhead School noted that the munitions factories were granting their employees holidays in relays which together with money being more plentiful than usual among operatives had resulted in an abnormal number of pupils being on holiday before the end of the school year. When school re-opened in August 1916, only 489 pupils were present out of a roll of 1,018 children.¹²¹

The wartime demand for school children to work outwith school hours placed additional pressures on children. In March 1916, the Fleshers and Grocers Associations requested that boys be permitted to make morning deliveries due to the shortage of shop assistants; the Glasgow School Board approved.¹²² Sydney MacEwan recalls the importance of his earnings as a boy delivering milk for the Co-operative: ‘I told my mother that the wage was three shillings a week which was a fortune; remember teachers in Catholic Schools were paid very little before the 1918 Education Act. I gave the three bob to my mother intact’.¹²³ However, it was a tiring way to start a school day as Joe MacKay describes: ‘I was out at a quarter to six every morning for the Dairy opening. I ran with milk to about eight o’clock, three big heavy

¹¹⁸ Glasgow City Archives, D-ED 7/87/1/1, Govan High School, Log Book, 1904-1923, 19 November 1915.

¹¹⁹ Glasgow City Archives, D-ED 7/29/1/3, Broomloan School, Log Book, 1907-1937, 18 January 1918; Glasgow City Archives, D-ED 7/92/1/1, Balshagray Public School, Log Book, 1906-1924, 18 January 1918.

¹²⁰ Glasgow City Archives, SR 10/3/667/4/2, Harmony Row Public School, Log Book, 1914-18, 8 February 1918.

¹²¹ Parkhead Public School, Log Book, 4 September 1914, 23 August 1916, 23 June 1916.

¹²² *School Board of Glasgow, Minutes of Meetings*, 23 March 1916.

¹²³ Sydney MacEwan quoted in G. Hutchison and M. O’Neill, *The Springburn Experience: An Oral History of Work in a Railway Community from 1840 to the Present Day* (Edinburgh: Polygon, 1989), 42.

rakes of milk down Wellfield Street and up three floors in bare feet. When finished, delivered papers and into school for nine o'clock'.¹²⁴

There were constant reminders of the war at school. Teachers on active service visited their school whilst on leave; for example, Parkhead School had visits from enlisted teachers on 14 September 1916, 9 October 1916 and 24 April 1917.¹²⁵ Teachers were absent due to family bereavements; Miss Anderson was absent from Broomloan School on 13 January 1915 following the news that her brother had been killed in action.¹²⁶ A teacher could not return to Harmony Row School in April 1917 from Arran due to the steamboat service being suspended by the presence of an enemy submarine in the Clyde.¹²⁷ Belgian refugee children were admitted to the High School for Girls in December 1915 and March 1916.¹²⁸ Serbian children were admitted to the High School for Boys, Allan Glens and Kent Road School in November 1916.¹²⁹ In February 1916, the Secretary of State for Scotland issued a lighting order requiring schools to darken all lights to guard against Zeppelin raids. In February 1918, Parkhead School prepared for possible air raids by practising evacuation drills and making arrangements for the use of water buckets.¹³⁰

There is clear evidence of shortages, difficulties and challenges which made the provision of education during the war more difficult and supports the contention of Marwick and McCulloch that the war had a detrimental impact on schooling. The evidence from Glasgow however, suggests that this has been overstated. School rolls increased and academic standards improved during the war. The Glasgow School Board roll increased by 5 per cent from 127,972 pupils in 1914 to 134,735 pupils in October 1918. Enrolments to secondary schools increased by 70 per cent with 4,111 pupils in secondary education by the end of the war. The Board reported in their 1917-18 report that the demand for places at the two High Schools had largely exceeded the supply and many pupils had to be refused admission. In 1916-17, Glasgow Board reported that 83 per cent of eligible pupils passed the qualifying examination compared to 79 per cent in the previous year.¹³¹ The number of Leaving

¹²⁴ Joe MacKay quoted in Hutchison and O'Neill, *The Springburn Experience*, 43.

¹²⁵ Parkhead Public School, Log Book, 14 September 1916, 9 October 1916, 24 April 1917.

¹²⁶ Broomloan School, Log Book, 1907-1937, 13 January 1915.

¹²⁷ Harmony Row Public School, Log Book, 1914-18, 11 April 1917.

¹²⁸ *School Board of Glasgow, Minutes of Meetings*, 14 December 1915, 28 March 1916.

¹²⁹ *School Board of Glasgow, Minutes of Meetings*, 28 November 1916.

¹³⁰ Parkhead Public School, Log Book, 15 February 1918.

¹³¹ *School Board of Glasgow, Annual Report, 1914-15*, p. 5, *Annual Report, 1916-17*, 10-11; *Annual Report, 1917-18*, 6, 15, 17.

and Intermediate Certificates awarded in 1918 by the Govan Board was a third higher than in 1914. The Govan School Board concluded that during the war ‘in some respects the work of the schools has suffered somewhat but this was inevitable...but there was no serious falling off in efficiency’.¹³²

Andrews, in 1921, and Marwick, at a later date, made much of the premature entry of children into the work place. Despite various exemptions for part-time war work, the Glasgow and Govan School Boards resisted the demand for juvenile labour and did not allow children to leave before their elementary schooling had been completed. The Govan Board exempted 219 children in 1913-14 and only 169 in 1917-18. The Board stated that only in very exceptional circumstances would exemption be granted to a child who was under 13 years of age.¹³³ In 1914-15, Glasgow School Board exempted 177 pupils and 364 pupils in 1917-18.¹³⁴ The total of 563 pupils exempted towards the end of the war was a tiny proportion of the combined roll of 170,000 pupils.

In summary, educational standards in Glasgow were maintained during the war, despite many challenges. The ‘social losses’ of the degradation in education has been over-stated by Marwick and McCulloch. Although Anderson somewhat unfairly described the Parish School Board structure as obsolete, reconstruction after the Armistice led to a new organisation, the Education Authority of Glasgow, which was formed under the 1918 Education (Scotland) Act. The new authority was responsible for the education of all children between two and eighteen years of age with voluntary schools, which included Roman Catholic schools, being brought under its direction.¹³⁵ The new authority had as its objective to ‘see that neither at home nor at school nor at work shall the child or adolescent be subject to conditions that will not devitalise and impair the body but also starve the mind’.¹³⁶ These ambitious plans, which included raising the school leaving age to fifteen years of age and the extension of schooling for fifteen to eighteen-year-olds not in school, did not survive the austerity measures

¹³² *Govan Parish School Board, Report for the Five Years ended 15 May 1919*, Table XII, 23; 21.

¹³³ *Govan Parish School Board, Report for the Five Years ended 15 May 1919*, 34.

¹³⁴ *School Board of Glasgow, Annual Report, 1914-15*, 7, *Annual Report, 1917-18*, 7.

¹³⁵ M. Skinnider, “Catholic Elementary Education in Glasgow, 1818-1918,” 63-64.

¹³⁶ Glasgow City Archives, D-ED 9/1/4, J. Clark, Director of Education, “*Report on the Educational Requirements of Glasgow with a view to the preparation of the Scheme of Education required by the Education (Scotland) Act 1918*,” (Glasgow: Education Authority of Glasgow, 1920), 2-4.

introduced in 1921.¹³⁷ The war had led to a change in attitudes towards education with an intention to move towards a more comprehensive and inclusive education system. The economic and industrial problems on the inter-war years delayed implementation. This objective was only realised, in part, after the Second World War and in full by the Education and Skills Act of 2008.¹³⁸

Children and the War Effort

This fourth, and final, part of the study of the impact of the war on children focuses on the mobilisation of children to support the war effort. Children were drawn into supporting the war effort in a manner considered appropriate for their gender - girls were encouraged to do charitable works whilst boys were prepared for military service. As the war progressed, there was a change in the attitudes towards children with paternalistic protection being replaced by a more calculated use of children to further the war effort.

Marwick poses the rhetorical question as to what was the involvement of children in the war.¹³⁹ Rosie Kennedy responds by showing that the war pervaded every aspect of a child's life and that children were deliberately drawn into the war effort. This participation was regarded, at the time, as a lesson in citizenship and service to the nation that was essential to the future regeneration of Britain.¹⁴⁰

Stephanie Audoin-Rouzeau and Annette Becker suggest that this was indicative of the social culture that underpinned the war and demonstrated the extent to which the war was regarded as a crusade.¹⁴¹ As part of this involvement, children were drawn into fund raising for the war effort which Peter Grant places in the context of a nationwide profusion of philanthropic giving to support the war.¹⁴²

The mobilisation of children will be examined with regard to their charitable works, service in uniformed organisations and involvement in the national campaign

¹³⁷ A. McPherson, "Schooling," in *People and Society in Scotland: Volume III, 1914-1990*, eds., A. Dickson and J.H. Treble (Edinburgh: John Donald, 1992), 84-85; R.D. Anderson, *Scottish Education since the Reformation* (The Economic and Social History Society of Scotland, 1997), 50-51.

¹³⁸ G. McCulloch, "The Great War and Education," *Telegraph*, (2017) accessed from www.telegraph.co.uk/education/educationopinion/11005281/The-Great-War-and-education.html on 1 September 2017, 3.

¹³⁹ A. Marwick, *The Deluge: British Society and the First World War*, 2nd. edition (Palgrave Macmillan: Houndsmill, 2006), 43.

¹⁴⁰ R. Kennedy, *The Children's War: Britain, 1914-1918* (Basingstoke: Springer, 2014), 8, 19, 155.

¹⁴¹ S. Audoin-Rouzeau and A. Becker, *1914-18, Understanding the Great War*, quoted in Kennedy, *The Children's War*, 3.

¹⁴² P. Grant, *Philanthropy and Voluntary Action in the First World War: Mobilising Charity* (Abingdon: Routledge, 2014), 171-2.

to raise funds for the war effort. It will be shown that children in Glasgow followed the national norm as outlined by Kennedy and Grant and were drawn into the war effort as children were throughout Britain. Their involvement in good works started immediately on the declaration of war. In September 1914, the Headmasters' Association agreed to respond to the Red Cross Society's request for assistance as long as it did not interfere with the ordinary work of the schools.¹⁴³ By December 1914, pupils at Abbotsford Public School, Gorbals, had sent several parcels of knitting to the Highland Light Infantry and had raised £16 for the wounded soldiers at Stobhill Hospital, Glasgow.¹⁴⁴ In the same month, Miss Cuthbertson of the Glasgow School Board visited London Road School to compliment senior girls on their work for the Red Cross.¹⁴⁵ These charitable works continued throughout the conflict. Govan High School's concert in May 1917 raised £70 for the Red Cross and in December 1918 Harmony Row School sent large parcels of mufflers, helmets and socks to the Red Cross.¹⁴⁶ These activities crossed the social spectrum; Govan High School had a relatively affluent catchment area, whereas Harmony Row and Abbotsford were in poorer districts.

As the war progressed, charitable activities became orientated towards the casualties of the war. In May 1915, The High School for Girls suggested to their older pupils that they take an interest in Belgian refugee families, meanwhile pupils donated their prize moneys towards funding a bed at the Scottish Hospital at Rouen.¹⁴⁷ Sixth form girls gave a concert in December 1915 for wounded soldiers at Woodside Hospital. In March 1917, pupils at the High School for Girls were given permission to send parcels on a regular basis to Glasgow prisoners of war in Germany. Calder Street School raised £68 from a concert in May 1916 towards the endowment of a bed in Bellahouston Hospital, as did Whitehill School in October 1917.¹⁴⁸

¹⁴³ *School Board of Glasgow, Minutes of Meetings*, 24 September 1914.

¹⁴⁴ *School Board of Glasgow*, Abbotsford Public School, Log Book, 24 December 1914.

¹⁴⁵ Glasgow City Archives, D-ED 7/134/1/1, London Road Public School, Log Book, 1907-1925, 23 December 1914.

¹⁴⁶ Govan High School, Log Book, 1904-1923, 11 May 1917; Harmony Row Public School, Log Book, 17 December 1918.

¹⁴⁷ Glasgow City Archives, D-ED 1/1/1/18-22, *School Board of Glasgow, Minutes of Meetings, High School and Secondary Education Sub-Committee*, 25 May 1915; *School Board of Glasgow, Minutes of Meetings*, 13 May 1915.

¹⁴⁸ *School Board of Glasgow, Minutes of Meetings*, 7 December 1915, 27 March 1917, 23 October 1917; Glasgow City Archives, D-ED 1/4/1/30-34, *Govan Parish School Board, Minutes of Meetings*, 13 May 1916.

Boys were encouraged to join uniformed organisations that fostered discipline, comradeship and patriotism which would imbue in them the wish to serve when they were of military age. The Boys' Brigade was particularly strong in Glasgow with 9,499 officers and boys in 1914. This organisation had a military flavour perhaps influenced by many Boys' Brigade officers also being officers in the Territorial Army. The Glasgow Boys' Brigade formed close links with the 16th Battalion of the Highland Light Infantry Regiment, which became known as the 'BB Battalion' and was led by David Laidlaw, the Glasgow Boys' Brigade Treasurer. The 16th Battalion of some 800 men fought at the Somme in July 1916 with 500 being killed in action.¹⁴⁹ At home, retired BB officers returned to fill the gaps created by BB officers who had enlisted and 'to preserve the traditions and each year there were a new group of 12 year olds eager to learn drill and to handle a rifle'.¹⁵⁰

During the war, some 80,000 Scouts in Britain were awarded the War Service badge for service with the army or police as orderlies, dispatch riders and motorists; Scouts were also used to guard bridges, reservoirs and telephone wires.¹⁵¹ In August 1914, the Officer Commanding Recruits in Glasgow requested that some Boy Scouts be released during school hours to act as orderlies and the British Red Cross also made a similar request.¹⁵² Whilst School Boards were reluctant to release children into the work place, they looked favourably on temporary absences and agreed, in late 1914 and early 1915, that pupils could assist the military authorities for two-week assignments.¹⁵³ This may have been preparation for military service, as suggested by John Springhall, or simply training as good and resourceful citizens, as considered by Allen Warren. However, Robert Baden-Powell, founder of the Scout movement, was clear that the aim of Scouting was to give boys *esprit de corps* for brave deeds which suggests a military intent.¹⁵⁴

¹⁴⁹ J. Springhall, B. Fraser, and M. Hoare, *Sure and Stedfast: A History of the Boys' Brigade, 1883-1983* (London: Collins, 1983), 114.

¹⁵⁰ J.B. Shaw, *The Glasgow Battalion of the Boys' Brigade, 1883-1983* (Edinburgh: St Andrews Press, 1983), 38-40.

¹⁵¹ D. Bilton, *The Home Front in the Great War: Aspects of the Conflict, 1914-1918* (Barnsley: Pen & Sword, 2003), 401, 404; M. Brown, *Children in the First World War* (Stroud: Amberley, 2017), 23-24.

¹⁵² *School Board of Glasgow, Minutes of Meetings*, 27 August 1914.

¹⁵³ *Govan Parish School Board, Minutes of meetings*, 14 September, 14 October 1914, 12 January 1915.

¹⁵⁴ J. Springhall, "Baden-Powell and the Scout Movement before 1920: Citizen Training or Soldiers of the Future?," *The English Historical Review*, 102 (1987): 942, A. Warren, "Sir Robert Baden-Powell, The Scout Movement and Citizen Training in Great Britain, 1900-1920," *The Historical Review*, 101 (1986): 392-393; Comments from Robert Baden-Powell in the foreword to F.H. Dimmock, *The Scouts' Book of Heroes* (London: Arthur Pearson, 1919), 4.

There was also an increase in cadet forces in Glasgow which were affiliated to the Territorial Army. Allan Glen's School made a request in December 1914 to form an Officer Training Corps although the War office indicated that it would not be formed before the cessation of present hostilities. This hesitation was short-lived. In March 1915, the Glasgow School Board received a request from the Territorial Force Association to raise a cadet corps among boys in the Calton District.¹⁵⁵ In October 1915, Govan High School, Bellahouston Academy and Hyndland School were given permission to form a cadet corps.¹⁵⁶ In 1917, one-third of the companies in the Glasgow Battalion of the Boys' Brigade became cadet forces affiliated to the Territorial Army with a similar proportion affiliating in the national organisation, an arrangement that continued up to 1924.¹⁵⁷ The cadet corps of Hutchesons' Grammar had the motto 'if youth prevents us fighting it does not prevent us from preparing ourselves for the fray'.¹⁵⁸ The Boy Scouts, Boys' Brigade and the cadet forces inculcated a sense of duty in boys and prepared them for military service.

Girls also joined uniformed organisations albeit in lesser numbers than boys. The membership of the Girl Guides in Britain increased from 40,000 in 1914 to 70,000 in 1918.¹⁵⁹ War Service badges were awarded for service in hospitals, knitting comforts or work in the government's war work for women scheme. Guides also worked with the Volunteer Aid Detachments as orderlies, messengers and laundresses.¹⁶⁰ Richard Voeltz considers that the Guides movement was a middle-class agent of social control which prepared girls to be useful and efficient citizens and mothers.¹⁶¹ The charitable works undertaken by girls and their involvement in uniformed organisations prepared girls to be caring, considerate and industrious as might be required of them in later life as mothers.

In addition to good works and being members of uniformed organisations, children also became involved in fund raising. In the early years of the war, school boards protected children from outside agencies who wished to use them for fund

¹⁵⁵ *School Board of Glasgow, Minutes of Meetings, 22 December 1914, 23 February 1915, 25 March 1915.*

¹⁵⁶ *Govan Parish School Board, Minutes of meetings, 11 October 1915, 19 October 1915.*

¹⁵⁷ Shaw, *The Glasgow Battalion of the Boys' Brigade*, 41; Springhall, *et al, Sure and Stedfast*, 115-116, 122.

¹⁵⁸ A.D. Dunlop, *Hutchesons' Grammar: The History of a Glasgow School* (Glasgow: Hutchesons' Educational Trust, 1992), 90.

¹⁵⁹ R.A. Voeltz, "The Antidote to 'Khaki Fever'? The Expansion of the British Girl Guides during the First World War," *Journal of Contemporary History*, 27 (1992): 627.

¹⁶⁰ Brown, *Children in the First World War*, 24-25.

¹⁶¹ Voeltz, "The Antidote to 'Khaki Fever'?", 629-630, 635.

raising. Govan Parish School Board declined to participate in the appeal in March 1915 for Belgian refugees although they reluctantly conceded that the Belgian Relief Committee could make a direct appeal to individual schools.¹⁶² After some debate, the Glasgow School Board agreed to circulate pupils of 10 years and over in all schools with a collecting card. Within a month of the issue of the cards, the Board had collected £1,734, with a current value of £155,179, for Belgian refugees. Only Mile-End School, in a particularly poor area, declined to collect from their pupils.¹⁶³ In May 1915, the Govan School Board refused a request from the YMCA to ask children for subscriptions for recreation huts for the men in the Expeditionary Force.¹⁶⁴ Other requests for funds from the Victoria Infirmary Dorcas Society and the British Red Cross were also refused.¹⁶⁵

Attitudes towards children's involvement in fund raising changed significantly in 1917 when schools were drawn into the national campaign to raise funds for the war effort. Reginald McKenna, Chancellor of the Exchequer between 1915 and 1916, promoted private savings in government bonds and securities to increase the inflow of funds to the Exchequer.¹⁶⁶ Citizens were encouraged to buy war bonds which were interest-bearing loans repayable at some date by the government. Investing in them was presented to the public as a patriotic duty and it was a means by which the government could recoup some of the civilian war-time earnings to fund the war effort.¹⁶⁷ In March 1916, McKenna stated that 'the National Organising Committee for War Savings is inviting the co-operation (so far as possible on a voluntary basis) of all classes and all existing organisations in the work of bringing before every member of the community the national need for saving'.¹⁶⁸ Grant states that the war provided a focus for philanthropic giving and the techniques for raising funds became more innovative and professional.¹⁶⁹ It proved to be a highly successful campaign.

The nation-wide campaign raised very large sums for the Exchequer. In January 1918, the tank 'Julian' came to Glasgow, to raise funds for war savings. The

¹⁶² *Govan Parish School Board, Minutes of meetings*, 10 May 1915, 15 June 1915.

¹⁶³ *School Board of Glasgow, Minutes of Meetings*, 25 March, 29 March 1915, 27 May 1915.

¹⁶⁴ *Govan Parish School Board, Minutes of meetings*, 10 May 1915.

¹⁶⁵ *School Board of Glasgow, Minutes of Meetings*, 23 December 1915, 24 February 1916.

¹⁶⁶ D. Stevenson, *With Our Backs to the Wall: Victory and Defeat in 1918* (London: Allen Lane, 2011), 371-2.

¹⁶⁷ B.P. Blackett, *War Savings in Great Britain: An Address by Basil P. Blackett of the British Treasury to the American Bankers Association, New Jersey on 25th September 1917* (New York: Liberty Loan Committee, 1917), 9-11.

¹⁶⁸ House of Commons Debates, Hansard, 9 March 1916.

¹⁶⁹ Grant, *Philanthropy and Voluntary Action*, 171-172.

Glasgow Herald reported that £14 million, with a current value of £637 million, had been donated which exceeded the combined total of the sums donated by Edinburgh, Liverpool, Manchester and Birmingham. Grant's study of philanthropy calculates that £1 billion was raised between October 1917 and September 1918, equivalent to a current-day value of £49.5 billion.¹⁷⁰ The emotional stimulus of wartime and promotion by the well-to-do and religious leaders converted the campaign into a mass voluntary activity with patriotic connotations.¹⁷¹ Schools played their part in the campaign.

In May 1915, the Scotch Education Department asked school boards to direct the attention of all teachers and scholars to the importance of war savings.¹⁷² However, it was not until late 1916 and early 1917 that schools formed war savings associations. These associations were staffed by teachers and sought to raise moneys directly from children and to reward them with time off school when significant sums had been raised. The intent was clear: using children as conduits to pressurise their parents to invest in war bonds.

School Boards pushed schools to form war savings associations. In February 1917, the Glasgow Board asked headmasters to give the matter of war savings associations 'earnest and immediate consideration'. By March 1917, there were eighty war savings associations in the Glasgow Board schools with only six schools having been unable to form an association.¹⁷³ The Govan Board contacted schools which had been slow to form savings associations to indicate that 'the Board would be glad if they would consider the propriety of doing so'.¹⁷⁴

Within schools, headmasters promoted the savings initiative and teachers would collect money on a set day each week towards buying a war certificate which cost 15s. 6d. (circa £50 today).¹⁷⁵ In December 1916, Broomloan School was dismissed early so that the headmaster could advise senior pupils and staff on the school's proposed war savings association. Children at the school were subsequently given rewards such as a skating holiday and time off for raising funds.¹⁷⁶ Broomloan raised war savings totalling £855, with a current value of £43,800, from a school roll

¹⁷⁰ Grant, *Philanthropy and Voluntary Action*, 175.

¹⁷¹ Grant, *Philanthropy and Voluntary Action*, 177.

¹⁷² Govan Parish School Board, *Minutes of Meetings*, 21 September 1915.

¹⁷³ *School Board of Glasgow, Minutes of Meetings*, 8 February 1917, 8 March 1917.

¹⁷⁴ *Govan Parish School Board, Minutes of meetings*, 12 February 1917.

¹⁷⁵ Brown, *Children in the First World War*, 19

¹⁷⁶ Broomloan School, Log Book, 1 December 1916, 23 January 1917, 16 February 1917.

of 993 children which was a remarkable achievement. The pattern of regular rewards, such as holidays and time off, to encourage further giving was replicated in many schools.¹⁷⁷ Abbotsford School in Gorbals had by February 1917 raised deposits of £954 with a current value of £57,600. The roll of Abbotsford was 1,600 pupils of whom a quarter were Jewish children of immigrant families.¹⁷⁸ Harmony Row School, also in a poor area, saved £665, with a current value of £40,000.¹⁷⁹ By the end of the war, the Govan Board schools had subscribed £89,000, with a current value £5.4 million, to war savings with all sections of the community contributing.¹⁸⁰

It is evident that children in Glasgow became mobilised to support the war effort, as suggested by Kennedy and Grant, with their involvement evolving from charitable works to raising funds for war weapons. They were also groomed to be useful resource for future service in the defence of the Empire either on the domestic front or in the trenches. Children were no different from other war materials that had to be mobilised to pursue total war.

Conclusion

The key question to be addressed is whether the war had a positive influence on the lives of children in Glasgow as suggested by Winter, Dwork and Wall or a negative influence as indicated by Marwick or no impact as stated by Harris. In many respects, the conclusion is similar to that for adults as shown in the previous chapters on poverty, living standards and health. The impact of the war was broadly beneficial, but not for all children. It is appropriate to summarise the findings on children's health, home life, schooling and involvement in the war effort.

The evidence with regard to Glasgow supports the argument set out by Winter, Wall and Dwork that infant and child health improved in the period, particularly in the poorer districts. The reduction in infant mortality was particularly striking with clear evidence that the poorest districts had the greatest decrease. It is probable that this improvement was due to healthier mothers giving birth to healthier infants rather than war-time welfare initiatives. Dwork may have been correct to state that war was

¹⁷⁷ Fairfield Public School, Log Book, 16 February 1917, 7 May 1917; Govan High School, Log Book, 7 January 1918, 27 September 1918.

¹⁷⁸ Glasgow City Archives, D-ED 7/1/1/2, Abbotsford Public School, Log Book, 21 September 1914, 12 October 1916, 6 December 1916, 19 February 1917.

¹⁷⁹ *Govan Parish School Board, Fifteenth Report*, p. 25; *Govan Parish School Board, Minutes of Meetings*, 13 January 1919.

¹⁸⁰ *Govan Parish School Board, Minutes of Meetings*, 13 January 1919, 10 December 1919.

good for babies but there was more progress on maternal and infant welfare after the war than during the war. The increase in the average weight of school children was modest and it is not possible to identify whether poorer school children gained more than the city average. There was no increase in height, as noted by Harris, but the increase in weight and the evidence provided by the school medical inspection reports suggests that school children's health did improve, albeit not as dramatically as infant health.

The war pervaded the home environment for most children. One in three households in Glasgow had a father absent on military service. Children in these homes suffered progressive hardship and were at risk if the remaining parent became incapacitated or negligent. A further one in three of households had a parent who was employed in the war industries and who was absent for long periods of time. Many children, therefore, suffered disruption to their home environment although there is no evidence of that this led to a significant increase in misbehaviour or a deterioration in school attendance.

Marwick and Andrews focus on the disruptive impact of the war on education; however, there was only limited disruption within the Glasgow schools. Children were not drawn into work prematurely although some provided ancillary military support for short periods of time. In spite of the shortages and challenges, the staff to pupil ratios were maintained and attendance levels did not deteriorate although there was some summer absenteeism due to the changed pattern of holidays for munitions workers. The numbers passing leaving certificates increased and the number of children entering secondary education also increased. Schools may have been more reliant on young temporary female teachers but the evidence suggests that this had a beneficial, rather than negative, effect. School boards fulfilled an important function in providing continuity in a time of change and support during parental absences. Anderson's comment that Parish School Boards had become obsolete is misplaced in relation to the Glasgow Boards. There is much to suggest that children's education, as supervised by the Glasgow and Govan School Boards, was protected and educational standards maintained during the war.

The involvement of children in Glasgow in the war effort followed the national pattern as described by Kennedy and Grant. The use of children to promote war savings marked a change in attitudes towards children. They were subsumed into the philanthropic fervour as outlined by Grant. School boards had initially protected

their pupils from fund-raising requests but later promoted the war savings initiative. This would have been unthinkable in the early years of the war - children were not protected from the pursuit of total war.

Before concluding it would be useful to highlight some findings from this study of the impact of the war on children which complement the earlier research on poverty, living standards and health and provide new perspectives. Clearly, the pattern of improving health during the war, particularly in the poorer areas, is again confirmed. There is some evidence that the health gains started to erode in the last year of the war as evidenced by the reducing average weight of 11-year-old boys and girls which coincided with a period of food shortages and hardship for families whose income was not protected from price inflation.¹⁸¹ The quantum of the free milk and meals to needy mothers and young children suggest that the poverty during the 1920s was much deeper and lasted for longer than was evident in the previous studies into poverty and living standards. The significant increase in children continuing their education after elementary school suggests that the improvement in living standards during the war was across a wider social spectrum than originally thought.

Finally, there is an important change in post-war society which shows the extent to which the war was a catalyst for change, a theme which Marwick espouses generally and, more recently, McCulloch in the context of education. The welfare initiatives after the war demonstrate the extent to which municipal authorities took a much wider and inclusive responsibility for the well-being of their citizens after the war. Charitable giving and voluntary welfare assistance had been institutionalised with local government assuming these responsibilities after the war. This is evident in the extensive, and expensive, provision of milk and meals and also the expansion of maternal and infant welfare facilities. This was supported by Boyd Orr's studies which demonstrated that milk, provided at school, could result in a 20 per cent improvement in the stature of school children.¹⁸² The ambitious plans for education after the war is another indication of a change towards a more inclusive and comprehensive provision of public services by local authorities. This was a national initiative based on the 1918 Education Act but these changes were embraced by Glasgow with an objective to provide education to all children between 2 and 18

¹⁸¹ See Table 5.1 on page 172.

¹⁸² J. Boyd Orr, "Influence of Amount of Milk Consumption on the Rate of Growth of School Children," *The British Medical Journal*, v.1 3499 (1928): 140-141.

years of age, irrespective of religious affiliation. This contrasts with the pre-war provision of basic elementary education and limited secondary education for the minority who were able to continue with their education and the initiative articulated the new sense of municipal responsibility for children's education. However, these ambitious plans foundered during the 1920s economic crisis when sweeping budgetary cuts were implemented, the so called 'Geddes axe.' As Gerald De Groot observed, the war revealed many problems worthy of attention but their solutions were often incompatible with tradition or fiscal prudence.¹⁸³

In reaching a conclusion on the impact of the war on children, it would be simplistic to offer a general view that the war had a positive effect on the lives of children. The outcomes for children varied by social class and family circumstances. The penalty of being born into a poor home reduced dramatically during the war. School children gained weight but it is not possible to form a view on whether these changes varied by social class. Soldiers' children suffered much more hardship than those with a father working in the war industries. Most children experienced disruption to their home life due to parents being absent on military service or civilian employment. Soldier's children were more vulnerable if the remaining parent was incapacitated or negligent and the extended family network could not provide assistance.

However, in other respects, life for children was not disturbed. The levels of school attendance were maintained and schools rolls increased with an improvement in academic attainment. Children were encouraged to identify with the war effort through charitable activities and membership of uniformed organisations which fostered the ideals of service. They may have been used in a somewhat exploitative manner to encourage parents to buy war bonds but there is no evidence that children were not willing participants in any of the activities which supported the war effort.

In conclusion, this study has shown that, during the war, infants in Glasgow were less at risk of an early death and that most children in Glasgow enjoyed an improvement in health with an undisturbed education. Some children suffered more hardship than others and most children experienced disruption at home due to parental absence, although this did not result in misbehaviour. The war was an important catalyst for change with respect to children. Maternal and infant welfare facilities

¹⁸³ G.D. DeGroot, *Back in Blighty: the British at Home in World War 1* (London: Vintage, 2014), 383-384, 414.

improved after the war with the care of the expectant mother and the infant becoming a social responsibility of the local authority. Education was key element of reconstruction after the war and plans were made, albeit subsequently deferred, for education for all from an early age to 18 years of age, irrespective of means or religious denomination. The provision of inclusive and comprehensive education was accepted as a social responsibility of local government after the war. The impact of the war on children's lives was, on balance, beneficial and led to important changes in maternal and child health care and education in the post-war years.

Influenza: A Consequence of War?

The conjunction of soldiers, gas, pigs, ducks, geese and horses in Northern France during the Great War provided the conditions for the emergence of the ‘Spanish’ influenza pandemic of 1918-1919.¹

In the summer of 1918, the first of the great influenza epidemics struck hard at a tired and neglected civil population.²

The preceding chapters have provided evidence that the well-being of the civilian population in Glasgow improved during the war, particularly in the poorer districts towards the end of the war. This was reflected in less poverty, higher living standards and significant health gains for adults, infants and, to a lesser extent, school-age children.³ The evidence gathered clearly supports the view that the war had a positive impact on the well-being of the civilian population. However, an event took place at the end of the war which could negate these gains and lead to a different conclusion on the impact of the war on the well-being of the population of Glasgow. This event was the virulent influenza epidemic of 1918-1919. This study would be incomplete without considering the death toll of the epidemic and the extent to which its occurrence should be attributed to the war. Previous chapters have shown that the war was a catalyst for change in social care, infant and maternal welfare, and education.⁴ The response to the epidemic also provides an insight into contemporary attitudes to public health and the extent to which the high death-toll during the epidemic led to a change towards a more inclusive system of public health care.

¹ J.S. Oxford, *et al.*, “A Hypothesis: The Conjunction of Soldiers, Gas, Pigs, Ducks, Geese and Horses in Northern France during the Great War provided the conditions for the emergence of the ‘Spanish’ Influenza Pandemic of 1918-1919,” *Vaccine*, 23 (2005): 940.

² B. Abel-Smith, *The Hospitals, 1800-1948: A study in social administration in England and Wales* (Cambridge: Harvard University Press, 1964), 280.

³ For reduced poverty see Chapter 2, page 76-78; for higher living standards see Chapter 3, 116-118; for adult health gains see Chapter 4, page 154-157; for infant and child health see Chapter 5, page 173.

⁴ For changes in social care see Chapter 2, pages 74-75; for improvements in infant and maternal welfare see Chapter 5, page 169; for developments in education see Chapter 5, page 194-195.

The influenza pandemic of 1918-19 was the most fatal event in recorded human history, responsible for the deaths of some 40 to 50 million persons worldwide.⁵ In Glasgow, it was also the most significant event which affected civilian health between 1914 and 1919. If these deaths were a consequence of war-time conditions then this would invalidate Jay Winter's thesis that the war was a period of significant gains in civilian health.⁶ John Oxford argues that the war conditions in Northern France facilitated the emergence of the influenza virus which was then transmitted to the civilian population by demobilised soldiers.⁷ It is also argued that the social privations of war contributed to the high civilian death toll. Brian Abel-Smith suggests that influenza attacked a tired and neglected populace and Jack Drummond and Anne Wilbraham consider that war-time diets, which were deficient in vitamins, lowered resistance to infection.⁸ These arguments support the view that the deaths during the influenza epidemic should be attributed to the war.

This chapter will test my hypothesis that, in the context of Glasgow, the epidemic did not originate as a consequence of the war and that the high death-toll was not a consequence of war-time social conditions. This is a key issue since, if the arguments that the epidemic deaths were a consequence of the war are proven, then this would largely offset the civilian war-time gains in health. Winter holds the view that the epidemic virus emerged as a result of the unknown processes of viral morphology and that it was not a product of the war. Winter also discounts the privations of war argument since neutral countries suffered as much as the combatant nations.⁹ Winter does not provide supporting evidence for his view on viral morphology nor does he provide sufficient detail on the impact of social conditions on British influenza mortality. This chapter will use primary evidence relating to Glasgow to inform the debate on the origin and virulence of the epidemic.

⁵ J.K. Taubenberger, "The Origin and Virulence of the 1918 'Spanish' Influenza Virus," *Proceedings of the American Philosophical Society*, 150 (2006): 3; J.K. Taubenberger, *et al*, "Reconstruction of the 1918 Influenza Virus: Unexpected Rewards from the Past," *mBio*, Open Access Journal, The American Society for Microbiology, 3 (2012): 1; N.P.A.S. Johnson and J. Mueller, "Updating the Accounts: Global Mortality of the 1918-1920 'Spanish' Influenza Pandemic," *Bulletin of the History of Medicine*, 76 (2002): 105.

⁶ J.M. Winter, *The Great War and the British People*, (London: Macmillan, 1985), 153.

⁷ Oxford, *et al*, "A Hypothesis: The Conjunction of Soldiers, Gas, Pigs, Ducks, Geese and Horses in Northern France," 944-945.

⁸ Abel-Smith, *The Hospitals*, 280; J.C. Drummond and A. Wilbraham, *The Englishman's Food: A History of Five Centuries of English Diet* (London: Pimlico, 1991), 529.

⁹ J. M. Winter and J-L. Robert, eds., *Capital Cities at War: London, Paris, Berlin, 1914-1919* (Cambridge: Cambridge University Press, 1997), 489; Winter, *The Great War and the British People*, 121.

This chapter will be in four parts. The first part will review the reported death-toll in Glasgow to establish a more realistic estimate of the mortality during the epidemic. The records for the epidemic in Glasgow are incomplete and it is possible that A.K. Chalmers, Chief Medical Officer of Health, under-estimated the death toll since many victims died of secondary respiratory complications and their deaths were not attributed to the epidemic. The second part will consider the possible origins of the 1918 virus to establish whether this due to conditions during the war. Clearly, Oxford's hypothesis that the virus emerged in Northern France as a result of the conditions in the military base areas is of particular relevance. Alternative geographical sources have been mooted. For example, Christopher Langford suggests that the virus originated in China; whereas, Alfred Crosby considers that it emerged in Kansas, United States of America.¹⁰ The timing and location of the first signs of infection in Glasgow will be identified and compared to the three suggested geographical sources. Recent research on the genomic sequence of the virus and the evolutionary process by which the 1918 virus emerged provides useful information on when the virus emerged. The third part will address the argument that the high epidemic death toll was a consequence of the privations of war on the civilian population. Mortality information for Glasgow will be considered with regard to gender, age and social class to determine whether the epidemic attacked the weakest and most vulnerable in society. The fourth, and final part, of the chapter will investigate contemporary responses in Glasgow to the epidemic. This will focus on the actions taken, or not taken, by the municipal health authority and the public attitudes to the high death-toll as indicated by local newspaper coverage. These responses could be characterised as surprisingly passive given the severity of the epidemic. The fourth part will conclude by assessing whether the epidemic was a catalyst for changes in public health care after the war. This was a national rather than a local issue.

Mortality in Glasgow

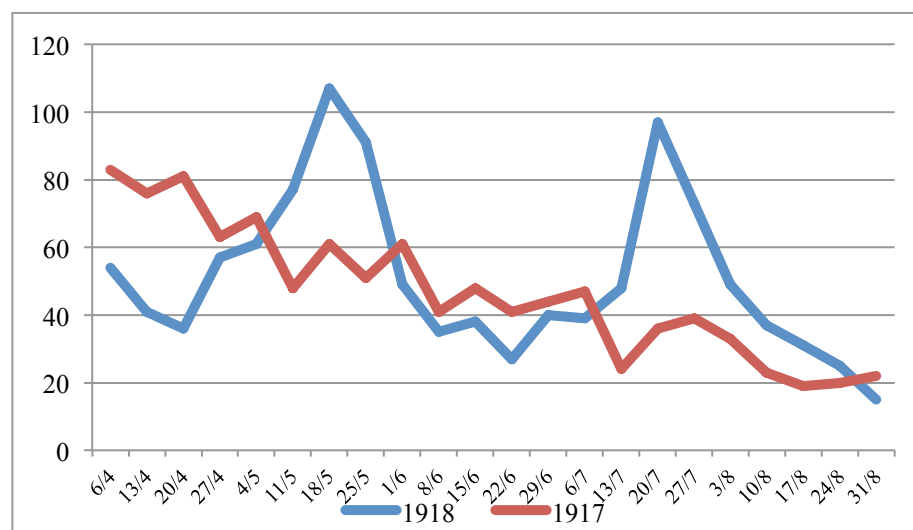
The first part sets out to review and, if appropriate, revise the epidemic death-toll in Glasgow. A.K. Chalmers, Medical Officer of Health in Glasgow, estimated that 4,000

¹⁰ C. Langford, "Did the 1918-19 Influenza Pandemic Originate in China?," *Population and Development Review*, 31 (2005): 475; J.M. Barry, *The Great Influenza: The Story of the Deadliest Pandemic in History* (London: Penguin, 2009), 91.

persons died in Glasgow as a result of the epidemic but the death toll was probably higher.¹¹ Many died from secondary complications, such as bacterial pneumonia, and their deaths were not recorded as influenza-related deaths. Niall Johnson notes that the Registrar General for England and Wales had identified an underestimation in the reported death toll of 151,446 deaths and had suggested 200,000 deaths was a more realistic figure. This was based on a comparison of historic mortality figures for other diseases, such as pneumonia, bronchitis and respiratory tuberculosis, against the death toll of these diseases during the epidemic. The higher death toll from these diseases during the epidemic was considered by the Registrar General to be due to the epidemic but not recorded as such. Johnson completed a similar analysis for Scotland and concludes that reported death toll in Scotland was also understated by some 75 per cent.¹²

A similar analysis in relation to Glasgow will show that the reported death toll was understated by at least 50 per cent. The mortality during each wave of the epidemic in Glasgow can be estimated from the incidence of overall respiratory deaths compared to the previous year which is shown in Figure 6.1.

Figure 6.1. Deaths from Respiratory Diseases



Source: Tables of Vital Statistics of Weekly Mortality provided by the Sanitary Department, Glasgow Corporation published in the *Glasgow Medical Journal*, May-August, 1917 and 1918.

¹¹ A.K. Chalmers, *The Health of Glasgow, 1818-1925*, (Glasgow: Corporation of Glasgow, 1930), 363.

¹² N.P.A.S. Johnson, "'Scottish' Flu – The Scottish Experience of 'Spanish Flu,'" *The Scottish Historical Review*, 2 (2004): 224-226.

The first wave started in Glasgow during May 1918, was relatively mild, and had started to abate by the end of July 1918.¹³ Chalmers noted that influenza deaths were higher during May and July but provided contradictory information on the number of deaths during the first wave.¹⁴ The weekly figures show an increase in respiratory deaths in May and July 1918 which would not have been expected in the summer months. This suggests that there were 212 influenza-related deaths during the first wave of infection which was no greater than mortality during winter outbreaks of influenza in Glasgow. Chalmers commented: ‘The first wave in Glasgow was confined to isolated pockets of infection rather than a general outbreak of disease with the spread of infection not always recorded since the disease was transient, usually with a rapid recovery’.¹⁵

The first wave became more infectious and virulent as it spread into Lanarkshire. In July 1918, the *Motherwell Times* recorded that strong, able-bodied miners and steelworkers were dying after a week’s illness.¹⁶ Mining communities in Ayrshire also experienced high rates of infection with 300 coal miners in Galston, 30 per cent of the work force, and 200 miners in New Cumnock contracting influenza. Edinburgh schools closed early for their summer holidays which affected 13,000 children.¹⁷ By the end of June 1918, 4,000 shipyard workers in Belfast were absent and schools were closed two weeks before the summer holidays.¹⁸ Influenza emerged in Birmingham, Leeds, Manchester and Sheffield in July 1918 with mortality rates two to three times that in Glasgow.¹⁹ London was not affected until the third week in June 1918 with 10,000 contracting influenza across the social spectrum.²⁰ The developing wave of infection affected industrial output. In July 1918, coal production in Britain was 3.3 million tons lower, and ship completions 3.2 million tons lower,

¹³ *Glasgow Herald*, 9 July 1918, 1 August 1918.

¹⁴ Chalmers, *The Health of Glasgow*, 364; *Glasgow Herald*, 9 July 1918, 1 August 1918; A.K. Chalmers, “On Some Unusual Forms of Nervous Disease,” *Glasgow Medical Journal*, 11 (1918): 79.

¹⁵ Chalmers, *The Health of Glasgow*, 364.

¹⁶ A. MacLean, “Outbreak of Acute Febrile Disease in Three Factories and an Industrial School in Glasgow,” *Glasgow Medical Journal*, 11 (1918): 84; *Hamilton Advertiser*, 25 May 1918; *Motherwell Times*, 19 July 1918.

¹⁷ *Sunday Post*, 7 July 1918, 21 July 1918.

¹⁸ C. Foley, *The Last Irish Plague: The Great Flu Epidemic in Ireland, 1918-19* (Dublin: Irish Academic Press, 2011), 15; *Sunday Post*, 23 June 1918.

¹⁹ Registrar-General for England and Wales, *Report on the Mortality from Influenza in England and Wales during the Epidemic of 1918-19*, (HMSO, 1920), Cmd. 700, Table XX, 51-52; Census Office, *Census of England and Wales for 1911: General Report with Appendices*, Cd. 8491 (HMSO, 1917), Table IX, 39.

²⁰ *The Daily Mirror*, 22 June 1918, 24 June 1918.

than the previous year due to influenza.²¹ It is evident that Glasgow was one of the first cities to contract influenza and had lower rates of infection and mortality than many other communities that contracted the infection at a later date.

The second wave started in Glasgow during the second week of September 1918 after a respite of only six weeks from the end of the first wave of infection.²² Influenza appeared in schools in Shettleston, east of the city centre, and Govanhill, to the south. Within three weeks, the epidemic was prevalent in every district and the death rate in the city had doubled.²³ By the third week in October the weekly death rate had trebled.²⁴ Burial authorities could not cope and some relatives had to dig the graves themselves with cabdrivers and horses being withdrawn from railway stations to transport the coffins.²⁵ The acting superintendent and three nurses at the Royal Infirmary died and an average of forty nurses were absent due to illness and the hospital had to be closed both to visitors and new cases from the armed services.²⁶

School log books show that influenza was much more wide-spread among school children during the second wave. Most schools had at least a third of their pupils absent. By mid-October 1918, London Road School had 47 per cent of their school roll absent and the headmaster commented that ‘no action that I know of has been taken by the Board to stop the ravages of the epidemic’.²⁷ On 16 October 1918, Balshagray School with 855 pupils absent out of a roll of 1,500 pupils, was closed until 4 November 1918, at which date 400 pupils were still absent.²⁸ A conservative estimate is that a quarter of the Glasgow and Govan school rolls, some 45,000 pupils, were absent during the four weeks to 25 October 1918.²⁹ An experimental closure of the Shettleston schools was not thought effective so the Glasgow and Govan Board

²¹ *The Times*, 21 August 1918, 5 September 1918, 7 September 1918.

²² Glasgow City Archives, D-TC 7/11/3/14.22, Report of the Medical Officer of Health, 1914-1919, 56.

²³ *Glasgow Medical Journal*, Volume V, November 1918, “Current Topics,” 310.

²⁴ Report of the Medical Officer of Health, 1914-1919, 59; *Glasgow Medical Journal*, Volume V, November 1918, “Current Topics,” 320.

²⁵ *Evening Times*, 11 October 1918.

²⁶ J. Jenkinson, M. Moss and I. Russell, *The Royal: The History of the Glasgow Royal Infirmary, 1794-1994* (Glasgow: Bicentenary Committee on behalf of Glasgow Royal Infirmary NHS Trust, 1994), 169.

²⁷ Glasgow City Archives, D-ED 7/134/1/1, School Board of Glasgow, London Road Public School, Log Book, 1907-1925, 4 October 1918, 11 October 1918.

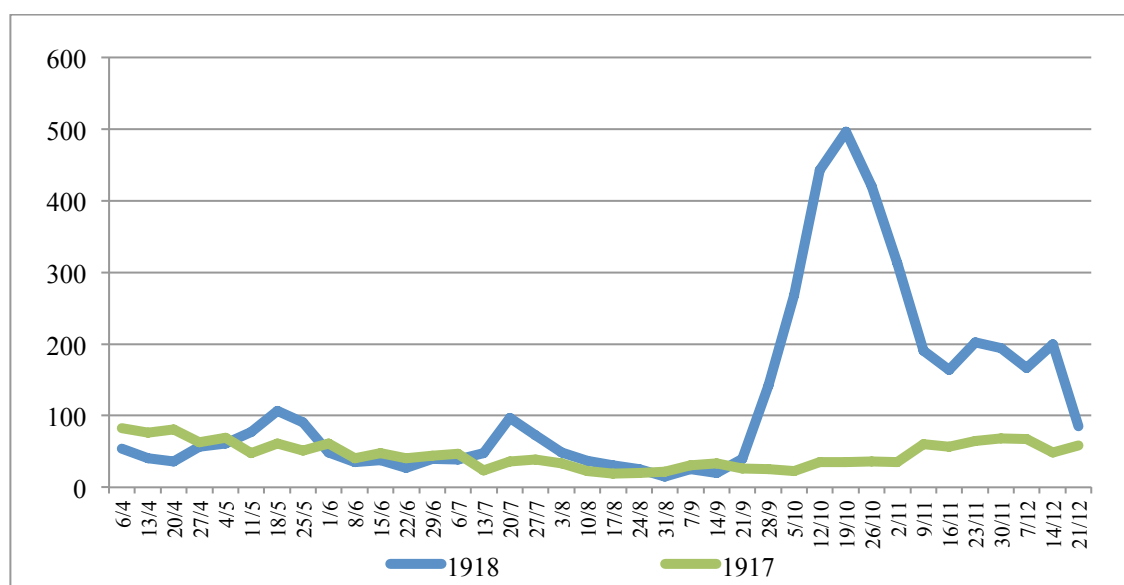
²⁸ Glasgow City Archives, D-ED/7/92/1/1, Govan Parish School Board, Balshagray Public School, Log Book, 1906-1924, 24 September 1918, 27 September 1918, 4 October 1918, 11 October 1918, 16 October 1918, 4 November 1918.

²⁹ Glasgow City Archives, D-ED 1/4/1/30-34, *Govan Parish School Board, Minutes of Meetings*, 7 November 1918.

schools remained open during the second wave, Balshagray being the exception. However, 32 non-Board schools, mainly Roman Catholic schools, were closed.³⁰

More Glaswegians died during the second wave. The annualised death rate during the second wave was 41 deaths per 1,000 population which was similar to the mortality rate during the typhus epidemics 60 years previously.³¹ Chalmers did not provide an estimate of the deaths during the second wave but this can be estimated from the increase in overall respiratory deaths. Figure 6.2 shows this information for the period of the first and second waves.

Figure 6.2. Respiratory Deaths during the First and Second Waves



Source: Tables of Vital Statistics of Weekly Mortality provided by the Sanitary Department, Glasgow Corporation published in the Glasgow Medical Journal, April-December, 1918 and 1917.

Respiratory deaths during the second wave were 2,667 higher than in the previous year. Non-respiratory deaths were also 555 higher compared to the previous year and influenza may have been a contributory factor. This suggests that mortality during the second wave of influenza was between 2,667 and 3,222 deaths, compared to just over 200 deaths in the first wave. The second wave was significantly more infectious, more virulent and more disruptive than the first wave.

The third wave of influenza started in Glasgow at the beginning of February 1919 after a respite of six weeks following the second wave. It soon became evident that this was more serious than the previous outbreaks of infection. The *Evening*

³⁰ *Glasgow Medical Journal*, Volume V, November 1918, "Current Topics," 310.

³¹ *Glasgow Medical Journal*, Volume VI, December 1919, "Current Topics," 367.

Times reported in mid-February 1919 that ‘the malady is apparently of a more virulent type than formerly and a large number of severe cases are at present under treatment in hospital and home’. Within a few days, the *Evening Times* added that funeral undertakers were experiencing an ‘alarming increase in the amount of work and that the pressure on their resources was greater than when the disease was at its worst in October last’. Such was the pressure on hospital resources that Belvidere opened an additional ward, Ruchill Hospital added a large pavilion, and nursing staff in the city were augmented by volunteers, the transfer of visiting nurses and the return of retired nurses.³² By the third week in February, the number dying from influenza and pneumonia had increased to 525 in the week, a higher mortality rate than at any time during the autumn epidemic. On 26 February, the acting Medical Officer of Health, Dr W. Wright, reported that the death-rate was now the highest since 1895, which had been a period of severe frosts, and that 60 per cent of deaths in the city in the previous week were due to the influenza epidemic.³³ The third wave peaked in the first week of March with 1,037 deaths compared to the maximum of 820 deaths during the second wave and normal levels of 350 deaths per week. The epidemic began to recede in the first week of March with 493 deaths in the week, marginally down on the previous week.³⁴

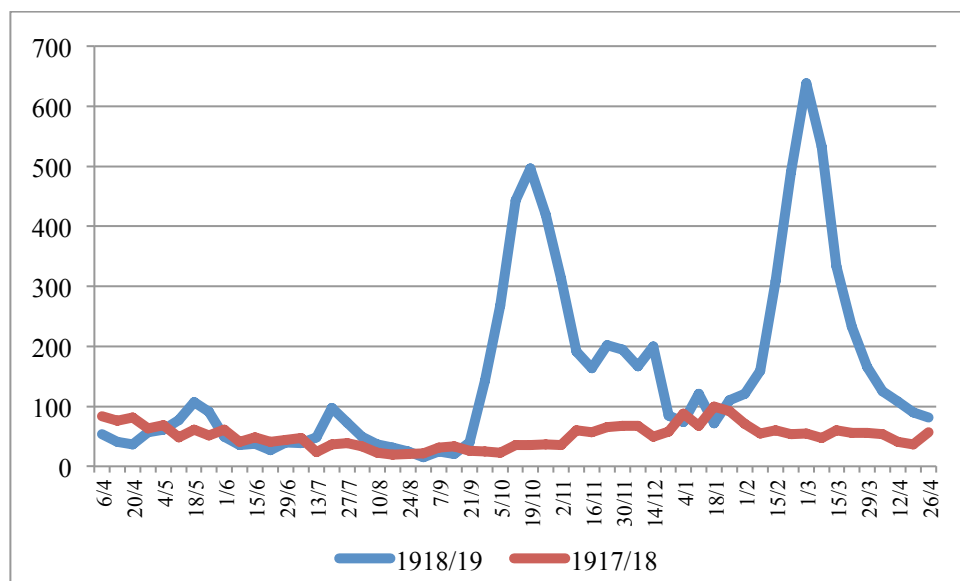
Chalmers did not provide mortality information for the third wave but this can be deduced from the weekly deaths from all respiratory diseases which are shown in Figure 6.3 which is shown on the following page. The third wave lasted some six to seven weeks, as did the second wave, but it was more aggressive at its peak. Between January and April 1919, deaths from respiratory diseases were 2,714 higher than in the previous year and non-respiratory deaths were 960 higher. Other than an outbreak of measles in April 1919, there are no factors that would explain the 22 per cent increase in non-respiratory deaths in this period. It is, therefore, likely that influenza-related deaths during the third wave were in the range of 2,714 to 3,674. Overall, more died during the third wave with the maximum rate of mortality in the last week of February 1919 being 30 per cent higher than in October 1918.

³² *Evening Times*, 17 February 1919, 19 February 1919, 26 February, 1919.

³³ *Evening Times*, 26 February 1919. It was reported that Dr A.K. Chalmers, Medical Officer of Health was absent due to illness.

³⁴ *Evening Times*, 10 March 1919.

Figure 6.3. Respiratory Deaths during the Three Waves



Source: Tables of Vital Statistics of Weekly Mortality provided by the Sanitary Department, Glasgow Corporation published in the *Glasgow Medical Journal*, April 1918-April 1919.

In addition to the higher mortality, the third wave differed from the second wave in other respects. Wright noted that 81 per cent of the deaths were among those over 15 years of age compared to 63 per cent in the last outbreak; children under 5 years of age, who comprised 21 per cent of the population, had only accounted for 3 per cent of deaths and that there had been no abnormal prevalence of absenteeism of school children.³⁵

School log books confirm that school children were less affected by the third, and more virulent, outbreak of infection. In March 1919, Rockvilla School recorded poor attendance due to whooping cough and ‘some cases of influenza persisting’ but attendance at 83 per cent of the school roll was higher than during the second wave of the influenza epidemic.³⁶ In contrast, influenza returned to Broomloan School towards the end of February 1919 through to mid-March 1919 with a third of the pupils absent.³⁷ However, many other schools did not record any disruption and affected schools had lower levels of absenteeism than during the second wave.

This analysis indicates that between 5,600 and 7,100 persons died in Glasgow over the course of the epidemic. Chalmers’ estimate of 4,000 deaths appears to have

³⁵ *Evening Times*, 26 February 1919.

³⁶ Glasgow City Archives, D-ED 7/176a/1/3, School Board of Glasgow, Rockvilla Public School, Log Book, 1894-1919, 28 March 1919.

³⁷ Glasgow City Archives, D-ED 7/29/1/3, Govan Parish School Board, Broomloan School, Log Book, 1907-1937, 21 February 1919, 28 February 1919, 14 March 1919.

understated mortality by between 50 and 78 per cent which is similar to the underestimate identified by Johnson in official estimates for mortality in Scotland.³⁸ The underestimation in the death toll has been shown to be widespread throughout Britain that makes comparisons difficult. However, with this caveat, the official estimates still provide some indication as to whether the death toll was significantly different in other cities in Britain. The impact of the epidemic in Glasgow was similar to elsewhere, albeit that comparisons are based on official estimates. The epidemic accounted for 4.1 deaths per thousand population in Glasgow; 5.3 deaths per thousand in Edinburgh, 4.1 deaths per thousand in Dundee and 3.2 deaths per thousand in Aberdeen.³⁹ In England, mortality rates were 4.9 deaths per thousand in London, 4.1 deaths per thousand in Birmingham, 5.2 deaths per thousand in Manchester and 4.3 deaths per thousand in Liverpool.⁴⁰ Although overall mortality in Glasgow was similar to other cities, there were differences in the severity of each wave of infection.

The first wave was relatively mild in Glasgow and accounted for only three per cent of influenza-related deaths in Glasgow compared to six per cent in London and some ten per cent in Liverpool and Manchester confirming that the first wave became less benign as it spread.⁴¹ In England and Wales, the second wave was the most virulent for almost all county boroughs and caused almost three-quarters of the epidemic deaths in London, Southampton, Plymouth and Reading.⁴² The third wave in Glasgow was the most virulent.⁴³ It is evident that there was a change in balance with the second wave being more virulent in the south and the third wave in the north.

In summary, the influenza epidemic caused some 6,350 deaths in Glasgow between 1918 and 1919 which was 60 per cent higher than estimated by Chalmers.⁴⁴ The first and second waves in 1918 together accounted for 3,156 of these deaths; the third wave in 1919 led to 3,194 deaths. The importance of the influenza epidemic to an assessment of underlying health is evident. A comparison of overall mortality rates for Glasgow between 1914 and 1918 shows no improvement. However, if epidemic

³⁸ Chalmers, *Health of Glasgow*, 363; Johnson, "Scottish Flu," 226.

³⁹ Registrar-General for Scotland, *Report on the Mortality from Influenza in Scotland during the Epidemic of 1918-19*, Cmd. 282 (HMSO, 1919), Table IV, 16.

⁴⁰ Registrar-General for England and Wales, *Influenza in England and Wales*, Table XX, 48, 51-52.

⁴¹ Registrar-General for England and Wales, *Influenza in England and Wales*, Table XX, pp. 48, 51-52.

⁴² M. Smallman-Raynor, N. Johnson, and A.D. Cliff, "The Spatial Anatomy of an Epidemic Influenza in London and the County Boroughs of England and Wales, 1918-19," *Transactions of the Institute of British Geographers*, 27 (2002): Table 1, 456.

⁴³ Registrar-General for England and Wales, *Influenza in England and Wales*, Table XX, 48, 51-52.

⁴⁴ Represents the mid point between the upper and lower estimates.

deaths are excluded then underlying mortality rates show a 16 per cent improvement. The comparison of overall mortality rates between 1914 and 1919 also shows no improvement but shows a 19 per cent improvement if epidemic deaths are excluded. This is a key issue in evaluating if the war had positive consequences for civilian health. Whether the epidemic deaths were a direct consequence of the war, therefore, is crucial for an overall assessment of the state of civilian health in wartime Glasgow.

Origin of the Virus

The second part of the chapter considers whether the virus emerged as a result of the conditions created by the war. The suggestion by Oxford that the virus emerged as a result of the conditions on the Western Front is particularly relevant.⁴⁵ If Oxford's argument is proven, then civilian deaths from influenza should be attributed to the war and set against the health gains identified by Winter and earlier research in this study.⁴⁶ Winter takes the view that the 1918 virus arose as a result of viral morphology which was not connected to the war.⁴⁷ Three possible sources will be considered and compared to the most likely source of infection in Glasgow. It will be suggested that the emergence of the 1918 virus was not a consequence of the war. The location of the first instance of infection in Glasgow suggests that influenza arrived on a ship from North America. It will also be shown that the 1918 virus evolved over a period of years and that this process had started some time before the outbreak of hostilities.

Oxford suggests that the virus was present on the Western Front several years before the epidemic and cites the outbreak of 'purulent bronchitis' in the British army base at Étaples, Northern France between December 1916 and March 1917 which had similar symptoms to the later influenza epidemic. Oxford argues that the conditions at Étaples had the necessary conditions for the emergence of a pandemic virus: overcrowding with 100,000 soldiers changing daily, live pigs, fowls and horses, and

⁴⁵ Oxford, *et al*, "A Hypothesis: The Conjunction of Soldiers, Gas, Pigs, Ducks, Geese and Horses in Northern France," 944-945; C. Langford, "Did the 1918-19 Influenza Pandemic Originate in China," *Population and Development Review*, 31 (2005): 475; J.M. Barry, *The Great Influenza: The Story of the Deadliest Pandemic in History* (London: Penguin, 2009), 91.

⁴⁶ Winter, *The Great War and the British People*, 103-153; For reference to Winter's view on health gains see Winter, *The Great War and the British People*, 213 and for health gains identified in this study see Chapter 2, page 145.

⁴⁷ Winter, *The Great War and the British People*, 121; Winter and Robert, *Capital Cities at War*, 489.

the presence of mutagenic gases used by the military in trench warfare.⁴⁸ Oxford presents a strong argument that war-conditions in Northern France allowed human and avian viruses to mutate thus creating the 1918 virus which then spread among a closely confined body of men. However, Oxford does not satisfactorily account for the two-year delay between the initial manifestation of purulent bronchitis and the emergence of the epidemic virus in April 1918.⁴⁹ Also, Oxford's comment that demobilisation was the final trigger for the epidemic is flawed since most British civilian epidemic deaths occurred before demobilisation of the military.

Alfred Crosby and John Barry suggest that the virus first appeared in Kansas in the United States of America where farmers lived in close proximity to pigs and poultry.⁵⁰ They suggest that the virus originated in Haskell County, Kansas, between late January and early February 1918 and then passed in March 1918 to Camp Funston in Kansas, an army base that held 56,000 troops. The infection then passed through numerous army camps in March and April at a time when large numbers of troops were being shipped to Europe. By April 1918, influenza was established among the troops in France.⁵¹ Oxford would argue that the virus was circulating in Northern France, by reference to the 'purulent bronchitis' in 1916/17, before the arrival of American troops in April 1918. However, a major respiratory epidemic in the United States of America had led to a sharp rise in deaths from influenza and pneumonia in late 1915 and 1916 and subsided thereafter.⁵²

China is the third possible source of the virus. Christopher Langford suggests that agricultural practices in China, where humans also lived in close contact with birds and pigs, are thought to have facilitated the transmission of avian viruses to humans via pigs.⁵³ There had been an epidemic of respiratory disease in Shansi

⁴⁸ Oxford, *et al*, "A Hypothesis: The Conjunction of Soldiers, Gas, Pigs, Ducks, Geese and Horses in Northern France," 940-943; Influenza Committee of the Advisory Board to the Director General Medical Services, France, "The Influenza Epidemic in the British Armies in France, 1918," *British Medical Journal*: 9 November 1918, 505.

⁴⁹ Date quoted in G. Tsoucalas, A. Kousoulis, and M. Sgantzios, "The 1918 Spanish Flu Pandemic, The Origins of the H1N1-virus Strain, A Glance at History," *European Journal of Clinical and Biomedical Sciences*, 2 (2016): 24.

⁵⁰ Barry, *The Great Influenza*, 91.

⁵¹ A.W. Crosby, *America's Forgotten Pandemic: Influenza of 1918* (Cambridge: Cambridge University Press, 2003), 19, 25; Barry, *The Great Influenza*, 92, 148-150; P. Zylberman, "A Holocaust in a Holocaust: The Great War and the 1918 Spanish Influenza Epidemic in France," in *The Spanish Influenza Pandemic of 1918-19: New Perspectives*, eds. H. Philips and D. Killingray (Abingdon: Routledge, 2003), 192.

⁵² J.K. Taubenberger and D.M. Morens, "1918 Influenza: the Mother of all Pandemics," *Emerging Infectious Diseases*, 12 (2006): 16.

⁵³ Langford, "1918-19 Influenza Pandemic Originate in China?," 475.

Province in China in December 1917 with similar symptoms to the epidemic in 1918/19.⁵⁴ Mortality rates in China were lower during the 1918/19 epidemic than in other countries which supports the view that the population had acquired some immunity from previous outbreaks of a similar influenza virus.⁵⁵

Langford argues that, from 1916 onwards, Chinese labourers recruited for the Western Front carried the virus to Europe and that the virus subsequently mutated into a more virulent form. Although most Chinese labourers travelled direct to France, some travelled via Canada and Liverpool providing the opportunity to spread infection through North America.⁵⁶ Mark Humphries confirms that Chinese labourers with signs of infection were transported to Vancouver for onward embarkation from Halifax to Europe. Canadian soldiers accompanying the Chinese labourers also contracted influenza. In March 1918, the epidemic in China was so concerning that the recruiting programme was cancelled and the remaining labourers were sent to New York for a speedy shipment to Europe.⁵⁷ It is, therefore, possible that infection could have been seeded in North American ports. Chinese labourers were sent to the ‘Coolie Camp’ outside Étaples thus providing the opportunity to infect British troops in Northern France. However, Dennis Shanks counters this argument by noting that mortality rates among Chinese and Southeast Asia labourers were relatively low and deaths lagged behind others in co-located military units which suggests that these labourers were not the source of infection.⁵⁸ Conversely, it could be that Chinese labourers carried infection but had acquired some immunity from the virus. The early signs of infection do not support the view that the virus was carried by Chinese labourers to Britain.

In Britain, the port cities of Glasgow, Portsmouth, Southampton and Liverpool were the first to contract the infection.⁵⁹ In late May 1918, the national newspapers reported on a new highly infectious and virulent infectious disease which had

⁵⁴ L. Spinney, *Pale Rider: The Spanish Flu of 1918 and How it Changed the World* (London: Jonathan Cape, 2017), 156-157;

⁵⁵ M.O. Humphries, “Paths of Infection: The First World War and the Origins of the 1918 Influenza Pandemic,” *War in History*, 21 (2013): 64-70.

⁵⁶ Langford, “1918-19 Influenza Pandemic Originate in China?,” 490, 492.

⁵⁷ Humphries, “Paths of infection,” 72-75.

⁵⁸ G.D. Shanks, “No evidence of 1918 Influenza Pandemic origin in Chinese Labourers/Soldiers in France,” *Journal of the Chinese Medical Association*, 79 (2016): 48.

⁵⁹ N.P.A.S. Johnson, “The Overshadowed Killer: Influenza in Britain in 1918-19,” in *The Spanish Influenza Pandemic of 1918-19: New Perspectives*, eds. H. Philips and D. Killingray (Abingdon: Routledge, 2003), 146; *The Times*, 15 January 1920.

appeared in Madrid, Spain.⁶⁰ However, the first indication of influenza in Glasgow was earlier, during the first week of May 1918 when 16 boys in Oak Street Industrial School, Anderston, showed signs of infection.⁶¹ The industrial school in Oak Street was close to Stobcross Docks on the north side of the River Clyde which was used for transatlantic trade. Three deaths were reported in ships moored in Glasgow later in May.⁶² A further 420 persons in three factories in Glasgow showed similar symptoms during early May although the location of these factories is not known. The Medical Officer of Health, A.K. Chalmers, described the infection as resembling influenza with the sudden onset of symptoms of severe headaches and prostration that passed after two to four days with no deaths and medical assistance not being required.⁶³ The infection spread to other factories and residential institutions in Glasgow as a series of ‘dissociated groups of diseases’ not always identified as influenza.⁶⁴ The evidence suggests that influenza arrived on an incoming vessel and was first transmitted to the hinterland of the docks area.

Other ports on Britain’s western seaboard were affected in this manner. In mid-June 1918, a number of Indian ‘lascar’ seamen were admitted to Brownlow Poorhouse Infirmary in Liverpool, with 14 seamen subsequently dying of pneumonia. Influenza soon appeared in schools in the surrounding area and, by the end of June, it was ‘working havoc’ throughout the city.⁶⁵ Influenza first appeared in Ireland in Queenstown, Cork, after the *USS Dixie* arrived from Philadelphia in May 1918 carrying the virus.⁶⁶

It is probable that infection arrived in Glasgow on a ship from North America and the first affected were in the poorer neighbourhoods surrounding the docks as was the case with the spread of yellow fever in North American cities in the nineteenth century.⁶⁷ Influenza appeared in the British Army in France in April 1918.⁶⁸ It is

⁶⁰ *The Times*, 31 May 1918, 3 June 1918.

⁶¹ Chalmers, “Unusual Forms of Nervous Disease,” 79-80; MacLean, “Outbreak of Acute Febrile Disease,” 84.

⁶² C. Arnold, *Pandemic 1918: The Story of the Deadliest Influenza in History* (London: Michael O’Mara Books, 2018), 63.

⁶³ Chalmers, “Unusual Forms of Nervous Disease,” 80; MacLean, ‘Outbreak of Acute Febrile Disease,’ 84.

⁶⁴ Report of the Medical Officer of Health, 1914-1919, 55.

⁶⁵ *Liverpool Echo and Liverpool Daily Post and Mercury*, 27 June 1918.

⁶⁶ G. Beiner, P. Marsh and I. Milne, “Greatest Killer of the Twentieth Century: The Great Flu of 1918-19,” *History Ireland*, 17 (2009): 41.

⁶⁷ K.D. Patterson, “Yellow Fever epidemics and mortality in the United States, 1693-1905,” *Social Science and Medicine*, 34 (1992): 860.

unlikely that the Glasgow outbreak was brought by troops returning from the Western Front since cities in the south would have experienced influenza before Glasgow as most troops disembarked from France on the south coast of England. London was not affected until the third week in June 1918, six weeks after the outbreak in Glasgow.⁶⁹ The early onset of influenza in Glasgow supports the view that infection arrived on an incoming transatlantic vessel rather than troops returning from France.

The direction of travel of infection also supports this conclusion. Matthew Smallman-Raynor, *et al*, suggest that the first wave followed a north to south spread of infection in England and Wales; the second, from the south northwards; and that the third had a southerly drift with a westerly inflection. The north to south drift of the first infection supports the view that infection in Glasgow had not originated in France. Influenza emerged in many English cities, such as London and Birmingham, two months after the first signs of infection in Glasgow.⁷⁰ Smallman-Raynor suggests that the second wave spread northwards from southern ports, such as Portsmouth and Cardiff; however, the second wave had already started a month before the southern ports. The third wave occurred in Glasgow and in many cities throughout England and Wales during the second week of February 1919.⁷¹ There is little evidence to support any geographical pattern in the spread of infection. The spread of infection during the three waves does not suggest that influenza originated in France and spread northwards.

The argument for a geographical spread of infection assumes that each wave was caused by a new source of infection. It may be that the virus, once embedded in a community, remained and progressed through periods of dormancy and virulence. The multiple waves of infection have been characteristics of influenza epidemics before, and after, the 1918-19 epidemic.⁷² Daihai He, *et al*, suggest that the multiple waves during an epidemic are due to changes in the transmission rate of infection as a result of biological, social or environmental factors. For example, the closure and re-opening of schools may have changed transmission rates between children as could

⁶⁸ Influenza Committee of the Advisory Board to the D.G.M.S., France, "A Report on the Influenza Epidemic in the British Armies in France," 505; Johnson, "The Overshadowed Killer: Influenza in Britain in 1918-19," 146.

⁶⁹ *The Daily Mirror*, 22 June 1918, 24 June 1918.

⁷⁰ Smallman-Raynor, Johnson, and Cliff, "The Spatial Anatomy of an Epidemic Influenza," 458-460.

⁷¹ Smallman-Raynor, Johnson, and Cliff, "The Spatial Anatomy of an Epidemic Influenza," 458-460.

⁷² C.W. Potter, "A History of Influenza," *Journal of Applied Microbiology*, 91 (2001): 574-577; M.A. Miller, C. Viboud, M. Balinska, & L. Simonsen, "The Signature Features of Influenza Pandemics – Implications for Policy," *The New England Journal of Medicine*, 360 (2009): 2596.

changes in social behaviour following public health measures.⁷³ There is no indication of changes in social behaviour in Glasgow over the three waves of infection.

However, the second wave started a few weeks after schools returned after the summer holidays as did the third wave after the Christmas and New Year holidays. This may have contributed to the resurgence in influenza rather than a new infection travelling across the country.

In summary, it is most likely that the virus arrived in Glasgow on a merchant vessel from North America and least likely that it came from France. This source of infection could have originated in rural Kansas or farms in China and carried by transient Chinese labour to North America. The war did not create the virus but the movement of troops and war materials would have facilitated the spread of infection. However, many neutral countries also contracted the virus in similar timescales and India, which was geographically remote from the Western Front, had one of the highest mortality rates with some 14 million deaths.⁷⁴

Research on the genomic sequence and evolution of the 1918 virus shows that the virus evolved over a period of years starting in the early 1900s. The genomic sequence of the virus was identified in 2005 using tissue samples from five victims of the second wave of infection, including frozen lung samples from an Alaskan Inuit woman.⁷⁵ The 1918 virus was an H1N1 type A virus which contained eight segments, one human H1 segment and seven segments from an avian source, perhaps wild waterfowl, which formed the N1 element of the virus.⁷⁶ Influenza A viruses the more virulent the outbreak due to the lack of acquired immunity from previous outbreaks.⁷⁷

Evolutionary biologists have used the host-specific molecular clock approach to determine the critical dates in the emergence of the virus. Michael Worobey, *et al*, calculate that the H1 virus segment emerged between 1895 and 1907 and replaced the previous H3 strain of viruses. The new H1 segment then mutated with the seven avian

⁷³ D. He, J. Dushoff, T. Day, J. Ma, & D.J.D Earn, "Inferring the causes of the three waves of the 1918 influenza pandemic in England and Wales," *Proceedings of the Royal Society B*, 280 (2013): 3.

⁷⁴ S. Ansart, *et al*, "Mortality burden of the 1918-19 influenza pandemic in Europe," *Influenza and Other Respiratory Viruses*, 3 (2009): 104; S. Chandra, G. Kuljanin, and J. Wray, "Mortality From the Influenza Pandemic of 1919-1919: The Case of India," *Demography*, 49 (2012): 861-862.

⁷⁵ J.K. Taubenberger, J.V. Hultin, and D.M. Morens, "Discovery and characterization of the 1918 Pandemic Influenza Virus in Historical Context," *Antiviral Therapy*, 12 (2007): 581, 587-588.

⁷⁶ M. Worobey, G-Z. Han, and A Rambaut, "Genesis and Pathogenesis of the 1918 Pandemic H1N1 Influenza A Virus," *Proceedings of the National Academy of Sciences United States of America*, 111 (2014): 8109.

⁷⁷ Taubenberger, "Origin and Virulence of the 1918 'Spanish' Influenza Virus," 86-91.

N1 segments somewhere between 1913 and 1916.⁷⁸ Taubenberger concurs that the genome of the 1918 virus points towards a derivation from an avian source in the decade before 1918.⁷⁹ The emergence of the 1918 virus was, therefore, the culmination of an evolutionary process which had started some time before the war and may have been completed just before 1914 or shortly thereafter.

This evolutionary process may explain the incidence of outbreaks of influenza-type respiratory diseases before 1918. Oxford shows that ‘herald’ waves preceded the 1918 epidemic, as was the case in the later epidemics in 1957 and 1968. Between 1915 and 1917, there were outbreaks of respiratory disease in France, Britain, Norway, Germany and the United States of America with some similar symptoms to the 1918 virus.⁸⁰ There was also a herald wave in China which emerged in November 1917.⁸¹ In the 1930s, Richard Shope formed the view that human and swine viruses ‘pre-seeded’ without causing disease and were latent in the population as a ‘masked’ form to be activated at a later date. Later, in 1957, Edwin Kilbourne, added that pandemic viruses smoulder before bursting into flame.⁸² Daniel Chertow also noted that ‘signals’ of a pandemic virus can be detected some months before the main infection became evident.⁸³ The 1968 pandemic virus seeded 12 to 14 months before explosive outbreaks; the 1957 pandemic virus took 10 months to effect a global spread.⁸⁴ It is probable that the virus had become established in many countries by 1915 with ‘herald’ outbreaks of respiratory disease thereafter. The purulent bronchitis in Étapes was simply one instance in a pattern of outbreaks of respiratory disease which culminated in the 1918/19 epidemic.

In summary, the argument that the influenza epidemic was a direct consequence of the war is not proven. Oxford’s case for the source being in the military base areas in Northern France has merit but so does the case for the virus originating in China or Kansas. The location and timing of the first signs of infection

⁷⁸ Worobey, *et al*, “Genesis and Pathogenesis of the 1918 Pandemic H1N1 Influenza A Virus,” 8107, 8109.

⁷⁹ Taubenberger, “Reconstruction of the 1918 Influenza Virus: Unexpected Rewards,” 2.

⁸⁰ J.S. Oxford, *et al*, “Early Herald Waves of Influenza in 1916 prior to the Pandemic of 1918,” *International Congress Series*, 1219 (2001): 155.

⁸¹ Humphries, “Paths of Infection,” 65.

⁸² Richard Shope and Edwin Kilbourne quoted in W.I.B. Beveridge, *Influenza: The Last Great Plague* (London: Heinemann, 1977), 49-50.

⁸³ D.S. Chertow, *et al*, “Influenza Circulation in United States Army Training Camps before and during the 1918 Influenza Pandemic: Clues to Early Detection of Pandemic Viral Emergence,” *Open Forum Infectious Diseases*, *The Infectious Diseases Society of America*, 2015, accessed via University of Stirling portal on 28 September 2017: 8.

⁸⁴ Oxford, “Early Herald Waves of Influenza,” 159.

in Glasgow point towards the source of infection being North America. It is not known whether the North America source was from Kansas or transient Chinese labour. In either case, the virus evolved in rural areas for reasons not connected to the war. Also, the timing and direction of the three waves of infection in Britain do not support the view that influenza arrived on the south coast of England from France and travelled to Glasgow. Finally, the virus evolved over ten to fifteen years and the process may have been completed before or shortly after the war commenced. It is likely that by the time that influenza appeared in France that the virus had already become embedded in many countries. The geographical spread of the disease and the more recent research on the evolution of the virus has confirmed Winter's statement that, in his view, the epidemic virus arose as result of viral morphology and not as a consequence of the war.⁸⁵

The Privations of War

The third part of this chapter explores whether the privations of war on the civilian population lowered their resistance to infection and contributed to the exceptionally high death toll during the epidemic. Adrian Gregory and David Stevenson highlight the prevailing social circumstances in 1918 commenting that civilians faced a second grim winter of shortages in 1918 with escalating industrial unrest and low morale.⁸⁶ Brian Abel-Smith suggests that the epidemic struck hard at a tired and neglected civilian population who could not obtain adequate medical care since half of the medical profession had been called up for military service.⁸⁷ Jack Drummond and Anne Wilbraham cite the impact of eighteen months of restricted diet at the end of the war and the consequent reduction in calorific intake and vitamin deficiencies that lowered resistance to infection and contributed to the severity of the epidemic.⁸⁸ Linda Bryder raises the issues of an increase in malnutrition and crowded working conditions for women in munitions as contributory factors to the increase in

⁸⁵ Winter, *The Great War and the British People*, 121; Winter and Robert, *Capital Cities at War*, 489.

⁸⁶ A. Gregory, *The Last Great War, British Society and the First World War* (Cambridge: Cambridge University Press, 2008), 213; D. Stevenson, *With Our Backs to the Wall: Victory and Defeat in 1918* (London: Allen Lane, 2011), 29, 387.

⁸⁷ Abel-Smith, *The Hospitals*, 279-280.

⁸⁸ J. C. Drummond and A. Wilbraham, *The Englishman's Food* (London; Pimlico, 1991), 438-440; J.C. Drummond and A. Wilbraham, *The Englishman's Food*, (London: Jonathan Cape, 1957), 529 quoted in J.M. Winter, *The Great War and the British People*, (London: Macmillan, 1985), 104.

tuberculosis during the war.⁸⁹ These conditions could also have lowered resistance to influenza. Winter refutes the privations of war argument on the basis that neutral countries suffered as much if not more than combatant nations; indeed, there were more victims in Asia than in Europe with a particularly high death toll in India.⁹⁰ Adrian Gregory concurs with Winter that nutrition was not an issue with regard to the high death toll but suggests that war conditions such as female employment in munitions may have spread the disease.⁹¹ The consequence of female employment in munitions on increased infectivity will be considered later in the chapter.

Earlier research in this study has shown that poverty in Glasgow declined during the war and that living standards improved. However, not all shared in this improvement and there is evidence of hardship towards the end of the war; food had become scarcer, clothing more expensive and coal was in short supply. Hardship was most evident among soldiers' families and others on fixed incomes or not employed in the war industries.⁹² This could support the view that the privations of war created the conditions for the virus to spread among the more vulnerable in Glasgow. The normal pattern of seasonal influenza is that it occurs during the cold months of the year and induces a three-day fever with only the more vulnerable members of society being at risk, although mortality rates are generally low.⁹³ The 1918 outbreak in Britain and elsewhere was atypical of normal seasonal influenza viruses being outwith the winter months with high infection rates among young healthy adults and spread across the social spectrum infecting the affluent and the poor.⁹⁴ It will be shown that this general pattern was also evident in Glasgow and that there was no correlation between mortality rates and social conditions and that the young and healthy died as well as the frail and vulnerable. This atypical profile will be considered with reference to the gender, age and social class of those who died during the epidemic.

It is probable that marginally more women than men died in Glasgow during the epidemic. The information on mortality by gender is not available for Glasgow but Chalmers did comment that more women had died than men but this may have

⁸⁹ L. Bryder, "The First World War: Healthy or Hungry?," *History Workshop Journal*, 24 (1987): 146-149.

⁹⁰ Winter, *The Great War and the British People*, 121; T. Wilson, *The Myriad Faces of War: Britain and the Great War, 1914-1918* (Oxford: Faber & Faber, 1986), 651.

⁹¹ Gregory, *The Last Great War*, 286.

⁹² See Chapter 2, pages 61-63, and Chapter 3, pages 107-108.

⁹³ Beveridge, *The Last Great Plague*, 11-17, 44.

⁹⁴ Johnson, "The Overshadowed Killer," 139-144.

been due to a higher proportion, albeit unspecified, of women in the population.⁹⁵ Many victims succumbed to secondary complications such as pneumonia. Female deaths in Glasgow from pneumonia were 50 per cent higher in 1918 compared to 1919 which suggests that the second wave was more fatal for women.⁹⁶ Over the course of the epidemic in Glasgow and Scotland, rather more women died than men. The mortality rate for females in Scotland was 437 per 100,000 population compared to 426 per 100,000 for males. The Registrar-General did not consider the difference significant since the gender balance of the population was based on estimates and many men had left for military service.⁹⁷ In England and Wales, 100,000 females died, of whom 2,198 were pregnant, compared to 84,000 males.⁹⁸ The death-rate for pregnant women in England and Wales was marginally higher than for females of the same age.⁹⁹ This was also evident in Scotland although Niall Johnson is doubtful if the evidence is conclusive.¹⁰⁰ It may be that many female deaths were in the early stages of pregnancy and not recorded as such. A study of the epidemic in the East Midlands identified that women nearing the end of their pregnancy were 50 per cent more likely to develop complications and die than women who were not pregnant.¹⁰¹ It is probable that the distribution of deaths between men and women in Glasgow over the course of the epidemic was similar to the UK national profile and that there was not a strong gender bias in the total deaths during the epidemic. Gregory suggested that the employment of women in munitions increased the infectivity of the disease. The lack of a significant gender bias in mortality does not support this view and the absence of mortality by gender by age-group for Glasgow makes it difficult to confirm this argument.

⁹⁵ Report of the Medical Officer of Health, 1914-1919, 61; Corporation of Glasgow, Medical Officer of Health, *Census 1911, Report on Glasgow and its Municipal Wards* (1912), Table IX, xii-xiii.

⁹⁶ Registrar General for Scotland, *Sixty-Fourth Annual Report for Scotland 1918*, Cmd. 655, (HMSO, 1920), 75; *Sixty-Fifth Annual Report for Scotland 1919*, Cmd. 980, (HMSO, 1920), 75.

⁹⁷ Registrar-General for Scotland, *Influenza in Scotland during the Epidemic of 1918-19*, 10.

⁹⁸ Registrar-General for England and Wales, *Influenza in England and Wales during the Epidemic of 1918-19*, 7, 36. The Registrar-General did not provide mortality rates per 100,000 population

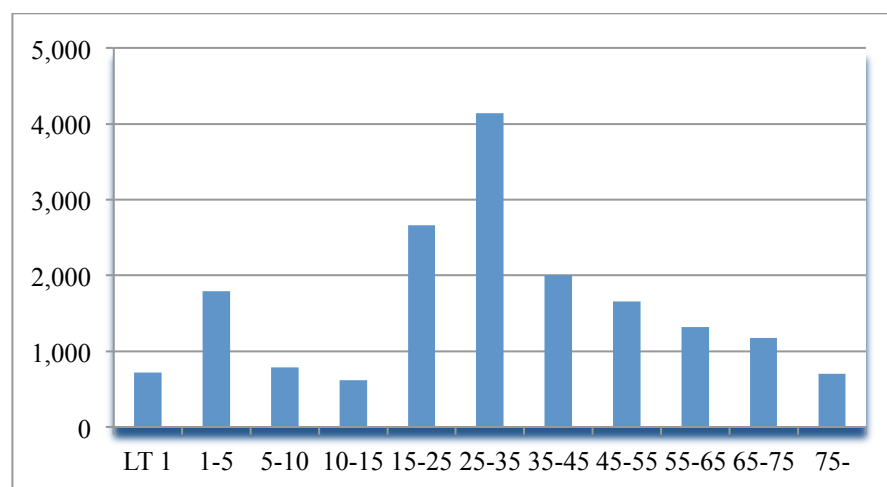
⁹⁹ Registrar-General for England and Wales, *Influenza in England and Wales during the Epidemic of 1918-19*, 36.

¹⁰⁰ C. Rollet, "The 'Other War': Protecting Public Health and Setbacks in Public Health," in *Capital Cities at War: London, Paris, Berlin, 1914-1919*, eds. J.M. Winter and J.L. Robert, (Cambridge: Cambridge University Press, 1997), 482-483; Registrar-General for England and Wales, *Influenza in England and Wales during the Epidemic of 1918-19*, 36; Johnson, "The Overshadowed Killer," 141.

¹⁰¹ A. Reid, "The Effects of the 1918-1919 Influenza Epidemic on Infant and Child Health in Derbyshire," *Medical History*, 49 (2005) quoted in J.E. Knight, *The Social Impact of the Influenza Pandemic of 1918-19: with special reference to the East Midlands*, Ph.D dis., University of Nottingham, 2014, 102-103.

The age profile of victims was one of the most distinctive features of the 1918/19 epidemic with more deaths among young adults than in previous outbreaks of influenza. In England and Wales, persons between 15 and 35 years of age accounted for 45 per cent of deaths compared to the previous norm of 8 to 10 per cent. Conversely, victims aged over 55 years of age only accounted for 12 per cent of overall deaths compared to 60 to 70 per cent in previous outbreaks.¹⁰² The same pattern was evident in Scotland as shown in Figure 6.4.

Figure 6.4. Influenza Deaths in Scotland by Age-group



Source: Registrar-General for Scotland, *Report on the Mortality from Influenza in Scotland during the Epidemic of 1918-19*, (HMSO, 1919), Cmd. 282, Table 1, 13.

Adults between 15 and 44 years of age accounted for 50 per cent of deaths with the highest number of deaths being among those aged between 25 and 34 years old which contrasts with the 1900 epidemic when 68 per cent were over 55 years of age.¹⁰³

Chalmers did not record epidemic deaths in Glasgow by age group but noted that deaths during the three waves of infection had been highest among young adults between 25 and 35 years of age.¹⁰⁴ It is possible to identify differences between the second and third waves of infection. More young adults died during the second wave with mortality from pneumonia among adults between 15 and 35 years being 80 per cent higher during the second wave than the third wave. Also, mortality among school children was almost double during the second wave compared to the third wave albeit

¹⁰² Registrar-General for England and Wales, *Influenza in England and Wales during the Epidemic of 1918-19*, 7.

¹⁰³ Registrar-General for Scotland, *Influenza in Scotland during the Epidemic of 1918-19*, 2, 12.

¹⁰⁴ Report of the Medical Officer of Health, 1914-1919, 61.

that over-all mortality rates among children were much lower than for other age groups. During the third wave, 50 per cent more adults over 55 years of age died of pneumonia than in the second wave.¹⁰⁵

The reason for the unusual age profile of the victims is unclear. Christopher Langford suggests that older age groups may have gained some immunity in the 1889-92 epidemic but acknowledges that the evidence is inconclusive.¹⁰⁶ Shanks and Taubenberger note that mortality peaked at 28 years of age in England, North America and New Zealand which suggests that this age group did not gain any immunity from the 1890 outbreak; whereas, those born before did so.¹⁰⁷ Michael Moresby develops this by asserting that the atypical profile was due to the aggregate exposure over time to different pandemic and seasonal viruses during childhood which had varying efficacy in providing immunity to the 1918 virus.¹⁰⁸

As an alternative explanation, Anthony Butler and Alfred Crosby suggest that the strong immune systems of young adults may have over-reacted to the virus resulting in the victims drowning in their own inflammatory fluids; whereas, the very young and the older age groups suffered less since they had weaker immune systems.¹⁰⁹ Recent experimental research has confirmed that the host response to the 1918 virus was a contributing factor in that the virus suppressed antiviral, and promoted inflammatory, responses in the affected population.

Irwin Sherman describes the 1918 virus as being the viral equivalent of the perfect storm being pathogenic, easily transmittable and invisible to the host's immune system. The 1918 virus had radically changed the shape of its surface proteins such that the host's antibodies could not recognise and neutralise the infecting virus.¹¹⁰ The epidemic virus was so novel that it was intrinsically virulent towards all age groups and only those age groups with childhood exposure to related viruses had some level of immunity to the 1918 virus. Those who had not acquired

¹⁰⁵ Registrar General for Scotland, *Sixty-Fourth Annual Report for Scotland 1918*, 75; *Sixty-Fifth Annual Report for Scotland 1919*, 75.

¹⁰⁶ C. Langford, "The Age Pattern of Mortality in the 1918-19 Influenza Pandemic: An Attempted Explanation based on Data for England and Wales," *Medical History*, 46 (2002): 18.

¹⁰⁷ G.D. Shanks, "Insights from Unusual Aspects of the 1918 Influenza Pandemic," *Travel Medicine and Infectious Diseases*, 13 (2015): 218; Taubenberger, "Origin and Virulence of the 1918 'Spanish' Influenza Virus," 6.

¹⁰⁸ Worobey, et al, "Genesis and pathogenesis of the 1918 pandemic H1N1 influenza A virus," 8109-8111.

¹⁰⁹ A.R. Butler and J.L. Hogg, "Exploring Scotland's Influenza Pandemic of 1918-19: Lest we forget," *Journal of the Royal College of Physicians of Edinburgh*, 37 (2007): 363; Crosby, *America's Forgotten Pandemic*, 215-222.

¹¹⁰ I.W. Sherman, *Twelve Diseases that Changed our World* (Washington: ASM Press, 2007), 162.

some immunity, such as young adults, were the principal casualties during the epidemic. Irrespective of the reasons for the atypical age profile, it is evident that the young and healthy fared worse during the epidemic rather than those laid low by the privations of war.

If the ‘privations of war’ led to the high epidemic death toll, as suggested by Abel-Smith, then it might be expected that this would be most evident in the poorer districts of Glasgow. Chalmers reported during the epidemic that influenza cases occurred among all classes and that it was prevalent in every district of the city with infection rates being higher among those living in the smaller-sized houses in poorer districts.¹¹¹ Conversely, Dr Alexander James, Medical Officer of the Edinburgh Merchant Company’s schools in Edinburgh, stated that ‘the epidemic did not show itself markedly in slum housing or districts; it rather struck at the well-to-do middle and working classes’.¹¹² The Registrar-General for England and Wales reported that mortality rates were similar between poor and affluent districts and concluded that ‘the healthier areas would have some, but by no means an overwhelming, advantage and that wealth had little effect upon mortality.’¹¹³

The correlation between epidemic deaths and social class can be assessed by the use of mortality rates for the four groups of municipal districts which broadly reflects the spectrum of social classes. These groupings were used in the earlier chapters on adult and infant health.¹¹⁴ The High Mortality Wards represent the poorer districts in Glasgow and the Low Mortality Wards, the most affluent districts, with a spectrum between these two social classes. Mortality rates for these groups for 1918 and 1919 have been compared to 1917, which was not an epidemic year, and are shown in Table 6.1 on the following page. The mortality rates are for all causes of death; however, the Medical Officer’s report for these years suggest that influenza was the major exceptional circumstance in this period.¹¹⁵

¹¹¹ Report of the Medical Officer of Health, 1914-1919, 61; *Glasgow Herald*, 9 October 1918.

¹¹² *Glasgow Herald*, 25 November 1919.

¹¹³ Registrar-General for England and Wales, *Influenza in England and Wales during the Epidemic of 1918-19*, 29.

¹¹⁴ See Chapter 4, pages 144-147 and Chapter 5, pages 166-167.

¹¹⁵ Report of the Medical Officer of Health, 1914-19, 7.

Table 6.1. Mortality rates within municipal wards, 1917-1919.

Municipal wards	1917		1918	+/-	1919	+/-
High mortality (Poorest districts)	16.50		17.84	+8.1%	17.42	+5.5%
Average mortality	14.98		16.34	+9.1%	15.72	+4.9%
Less than average	12.81		13.97	+9.1%	14.45	+12.8%
Low mortality (Most affluent districts)	10.72		11.26	+5.0%	12.32	+14.9%

Source: Glasgow City Archives, D-TC 7/11/3/14.22, Report of the Medical Officer of Health, 1914-1919. Mortality rates are per 1,000 living.

During 1918, the more affluent districts fared better than the other districts. Most of the poorer districts were in the north and east parts of the city. These districts, such as Camlachie, Calton and Bridgeton, fared worse in the second wave in 1918 than during the third wave in 1919, when mortality levels reverted to pre-epidemic levels. During the third wave in 1919, more affluent districts in the west of the city, such as Hillhead, Kelvin and Maryhill, experienced higher mortality rates.¹¹⁶ There is clear evidence of an east to west shift between the second and third waves and it has already been established that the third wave was more virulent than the second wave. This geographical shift in the locus of infection within the city was also evident in Birmingham where the pattern was the reverse of Glasgow with fatalities being higher in the affluent areas in 1918 and in the poorer areas in 1919.¹¹⁷ The increase in mortality in Glasgow, over the course of the epidemic, was higher among the more affluent districts than in the poorer areas. This evidence negates the ‘privations of war’ thesis. Every social class was affected during the epidemic with some evidence, such as shown in the above table, that the affluent and the healthiest, rather than the poorest and most vulnerable, suffered the most.

The evidence does not support the view that the privations of war on the civilian population in Glasgow contributed to the high death toll during the epidemic. There were variations in the gender, age and social class of the victims between the three waves of infection. However, the overall pattern of mortality during the epidemic in Glasgow was similar to elsewhere. The epidemic was particularly

¹¹⁶ Registrar General for Scotland, *Annual Report for Scotland 1918*, 29; *Annual Report for Scotland 1919*, 29.

¹¹⁷ W. Nicol, “Influenza in relation to the City of Birmingham,” *PostGraduate Medical Journal*, 39 (1963): 607.

virulent among young adults and less so among school children and the elderly. This was not a poor person's disease; the virus attacked across the social spectrum with somewhat higher mortality rates in among the healthier residents in the more affluent suburbs. There is no evidence to suggest that the victims had succumbed due to the privations of war.

Responses to the epidemic

The fourth, and final part of this chapter, considers the contemporary responses in Glasgow to the epidemic. In particular, the stoical and muted public response to the epidemic as indicated in the newspaper coverage of the developing crisis and the somewhat detached reaction of the municipal health authority to a virulent epidemic will be reviewed. It has been established in previous chapters that the war brought a change in attitudes towards social care, infant and maternal welfare and education.¹¹⁸ This part of the chapter seeks to identify whether the epidemic led to the 'sanitary' ethos of providing a safe environment to a more active policy after the war of ensuring good health for all citizens.

The epidemic was not given particular prominence in the local newspapers until early 1919 and it has been widely assumed by historians that government censorship restricted reporting of the epidemic.¹¹⁹ As the war progressed, propaganda was used to reinforce support for the war and to restrict news that might damage public morale.¹²⁰ The Press Bureau censored the publication of information by the issue of D-Notices; for example, in January 1918, a notice was issued requiring editors not to exaggerate, or to be over-zealous, in reporting the shortage of food supplies to avoid possible food riots.¹²¹ However, no D-Notices were issued on the epidemic nor were editors requested by confidential letter to curtail reporting of the outbreak.¹²²

¹¹⁸ Refer to footnote 4 in this Chapter.

¹¹⁹ Philips and Killingray, eds., *The Spanish Influenza Pandemic of 1918-19*, 7; N. Johnson, *Britain and the 1918-19 Influenza Pandemic: A Dark Epilogue* (Abingdon, Routledge, 2006), 163; T. Quinn, *Flu: A Social History of Influenza* (London: New Holland, 2008), 125; Crosby, *America's Forgotten Pandemic*, 27-28.

¹²⁰ C. Haste, *Keep the Home Fires Burning: Propaganda in the First World War* (London: Viking, 1977), 31-32, 48, 201.

¹²¹ N. Wilkinson, *Secrecy and the Media: The Official History of the United Kingdom's D-Notice System* (Abingdon: Routledge, 2009), Appendix 1.

¹²² TNA: PRO 40 139/46, *Admiralty, War Office and Press Committee, 'D' Notices sent to Editors from the Press Bureau*, April-December 1918; TNA: PRO 40 139/39, *Admiralty, War Office and Press Committee, Letters to Editors from the Press Bureau*, March 1918- March 1919; National Archives,

The scant coverage of the epidemic might have, therefore, been due to a desire to maintain public morale or it might have been stoical indifference to the outbreak of yet another infectious disease. Reports varied in editorial tone between newspapers but also between waves of infection with the most strident accounts being published during the third wave. Newspapers were generally slow to report on the first wave ‘Summer Influenza’ and the disruption to schools and places of work. However, it was noted that several ships had arrived carrying influenza.¹²³

The broadsheet *Glasgow Herald* did not report on the more virulent second wave until three weeks after the start of the outbreak. The reduction in the coal ration figured more prominently in the editorial leader of 15 October 1918 with only a passing reference to the epidemic. Later in the month, influenza in London was given more prominence than the report from the Medical Officer of Health on the epidemic in Glasgow.¹²⁴ In contrast, the local tabloids *Evening Times* and the *Daily Record* gave regular reports in prominent positions within the home news pages on the number of fatalities and the disruption to the city.¹²⁵

There was a significant change of tone during the third wave. The *Evening Times* had four front-page articles on the ‘Influenza Scourge’ with almost daily reports in the home news pages. In mid-February 1919, the *Evening Times* questioned whether the wearing of face-masks should be made compulsory. Later in the month, the paper made the somewhat surprising statement that ‘it is satisfactory to learn that few, if any, instances of more than one death in a family have occurred during the present outbreak’.¹²⁶

The *Daily Record* also reported on the third wave almost on a daily basis in prominent articles. Only one letter was published which was from Margaret Smith, a shell factory nurse, and was strategically placed next to the editorial leader on 1 March 1919. Smith placed responsibility for combating the disease on mothers and housekeepers and inferred that they were being negligent by failing in their duty to air

TNA: PRO DEFE 53/1, *Minutes of the Admiralty, War Office and Press Committee*, March 1918-March 1919.

¹²³ *Daily Record*, 17 May 1918, 20 May 1918, 18 June 1918, 24 June 1918, 18 July 1918; *Glasgow Herald*, 9 July 1918, 17 July 1918, 24 July 1918.

¹²⁴ *Glasgow Herald*, 27 September 1918, 9 October 1918, 15 October 1918, 21 October 1918, 24 October 1918.

¹²⁵ See, for example, accounts in the *Evening Times* between 2 October 1918 and 31 October 1918 and in the *Daily Record* between 4 October 1918 and 23 October 1918.

¹²⁶ *Evening Times*, 17 February 1919, 19 February 1919, 24 February 1919, 28 February 1919, 10 March 1919.

their houses, provide nourishing food and to make liberal use of household disinfectant. Furthermore, she admonished citizens who continued to go to picture houses and dance halls when ill and suggested that they remain at home.¹²⁷

The *Glasgow Herald* only published three articles which provided brief details of deaths with some advice on preventive measures. The only editorial leader was in August 1919, some time after the epidemic had passed, which commented on the global repercussions of the disease rather than the consequences of the disease for Glasgow. It noted that the ‘universal visitation’ had not destroyed the efficiency of British white troops but that it had rendered the German army immobile and that the training and movement of troops in certain of the African colonies had come to a complete stop. The leader concluded that ‘there is little doubt native races suffered more heavily than white from the outbreak in most parts of the world. White peoples have more stamina’.¹²⁸ The *Glasgow Herald* made no mention of the numbers who had died in Glasgow or the disruption to the life of the city but rather it was more focused on making the point of white supremacy in the face of adversity.

These differences in editorial tone and content were evident in other British newspapers. The *Daily Mirror*, a tabloid, provided regular reports of the infection in London: whereas, *The Times*, a broadsheet, was more circumspect and reported only briefly on the disruption to schools and places of work and deaths in London.¹²⁹ In June 1918, the *Liverpool Echo* noted that ‘negroes’ had arrived at the port infected with influenza but suggested that there was no cause for alarm.¹³⁰ On the same day, the *Liverpool Daily Post and Mercury* reported that 14 of the Indian ‘lascar’ seamen had died and that an infectious disease had entered the city.¹³¹ The *Liverpool Echo* stated in October 1918 that half of those who died owed their fate to their imprudence by not taking medical advice to remain at home in bed.¹³² In Ireland, Republican

¹²⁷ *Daily Record*, 27 February 1919, 1 March 1919.

¹²⁸ *Glasgow Herald*, 5 February 1919, 19 February 1919, 25 February 1919, 4 March 1919, 4 August 1919.

¹²⁹ *Daily Mirror*, 22 June 1918, 24 June 1918, 1 July 1918, 2 July 1918, 4 July 1918, 6 July 1918; *The Times*, 3 June 1918, 26 June 1918, 4 July 1918.

¹³⁰ *Liverpool Echo*, 27 June 1918.

¹³¹ *Liverpool Daily Post and Mercury*, 27 June 1918.

¹³² *Liverpool Echo*, 22 October 1918.

newspapers blamed returning soldiers for carrying infection; Unionist newspapers, which supported the war, minimised the impact of the epidemic.¹³³

In summarising this section of the chapter, three comments in local newspapers provide some insights to contemporary attitudes to the epidemic. The *Evening Times* was thankful that not more than one person per family had died, which suggests a stoical acceptance of the consequences of infectious disease or indicates the high death rate. The *Glasgow Herald* indulged in racial superiority with insensitivity towards those who had died in Glasgow; indeed, the middle classes seemed more pre-occupied with the shortage of coal. Finally, the letter in the *Daily Record* from the shell-factory nurse placed the onus for limiting the spread of infection on the individual with an inference that only the negligent and irresponsible contracted influenza – a sentiment shared by the *Liverpool Echo*. The newspaper reports suggest a stoical acceptance of the outbreak and that it was considered that it was the individual's responsibility to avoid infection with no call for the public health authorities to intervene.

The response of the municipal health authority in Glasgow to the epidemic was detached and was limited to giving advice on preventive measures and recording the death toll. Dr A.K. Chalmers, Glasgow's Medical Officer of Health, advised citizens to gargle with salt and water, take quinine, ventilate rooms and avoid crowded places such as music halls.¹³⁴ This was typical of the medical advice given around Britain. Chalmers did not believe that it was possible to arrest the spread of infection stating that 'there was no agent so far discussed which can be called specific either for prevention or cure'.¹³⁵ This led Chalmers to adopt a non-interventionist policy with regard to isolating infected individuals and closing places of assembly such as factories, schools and picture halls.

During the second wave, which was particularly infectious among school children, Chalmers discounted school closures stating that 'there is no evidence that closure is effective in preventing the spread of infection since disruption due to influenza was temporary with absenteeism peaking at the end of the second week

¹³³ P. Marsh, "'Mysterious Malady Spreading': Press Coverage of the 1918-19 Influenza Pandemic in Ireland," *Quest Proceedings of the Arts Humanities and Social Sciences Conference, June 2008*, *Queen's University of Belfast*, 6 (2008): 171-172.

¹³⁴ *Glasgow Herald*, 19 February 1919.

¹³⁵ Report of the Medical Officer of Health, 1914-1919, 56.

after infection and abates afterwards.’¹³⁶ Chalmers added that ‘in the early weeks of the recurrence, the disease was generally distributed, and raised doubt as to the utility of school closure.’¹³⁷ This was similar to Chalmer’s view on the ineffectiveness of school closures during outbreaks of measles.¹³⁸ Not all school governing bodies shared this view, since 32 voluntary schools were closed during the second wave, most of which were Roman Catholic schools.¹³⁹ In his later report on the epidemic, Chalmers appears pleased to note that only one local authority school was closed during the second wave. The preferred alternative to closure was to sanitise the classrooms of children who had been infected with influenza. Parkhead School, for example, was cleansed daily by spreading sawdust soaked in disinfectant.¹⁴⁰ This ineffectual response had been used for previous outbreaks of infectious diseases. Balshagray Public School had repeated outbreaks of scarlet fever from October 1914 to November 1915 and each time classrooms had been disinfected by the sanitary authorities.¹⁴¹

On 23 October 1918, during the second wave, the *Glasgow Herald* reported on the great increase in the previous week’s death rate due to the spread of infection which had been aggravated by the close association of masses of people, such as in picture houses. The report quoted Chalmers on the closure of picture houses to the effect that ‘any advantage in doing so would not be commensurate with the inconvenience caused’ and that they should be ventilated and disinfected. Chalmers was further quoted as noting that ‘all the amenities of social life such as meetings and travelling in tramway cars and railway carriages have an element of danger of infection and to restrict these activities would only be tinkering with the problem which would not be worth the price.’¹⁴² During the third wave, there was no change in Glasgow’s public health policy. Schools remained open as did places of entertainment with disinfectant periodically sprayed into the ventilation ducts. Chalmers’ response to the epidemic was to record the number of deaths and to place the onus of prevention on the individual. It may be that the war militated against more drastic

¹³⁶ Report of the Medical Officer of Health, 1914-1919, 56.

¹³⁷ Chalmers, *The Health of Glasgow*, 364; GCA, Report of the Medical Officer of Health, 1914-1919, 60.

¹³⁸ Chalmers, *The Health of Glasgow*, 342-343.

¹³⁹ Report of the Medical Officer of Health, 1914-1919, 57.

¹⁴⁰ Glasgow City Archives, D-ED 7/163B/1/2, Parkhead Public School, Log Book, 1901-1921, 18 October 1918.

¹⁴¹ 9 October 1914, 27 November 1914, 4 December 1914, 26 February 1915, 12 November 1915.

¹⁴² Chalmers quoted in the *Glasgow Herald*, 23 October 1918.

action in 1918, but this was not an issue during the third wave in 1919. Chalmers remained firm in his view isolating individuals from infection was neither possible nor effective.

The response of the health authority to certain other infectious diseases was quite different albeit that the response was a legislative requirement. These diseases were regarded as a hazard to public health and the general practitioner had to notify the health authority on diagnosis. It was incumbent on the authority to take action to isolate the individual and arrange for treatment at the rate-payers' expense. For example, pulmonary tuberculous sufferers would be sent to a sanatorium or hospitalised if the disease had become acute. Voluntary notification of pulmonary tuberculous had been introduced in Glasgow in 1899 and UK-wide legislation had made it compulsory in 1910. Legislation provided for compulsory isolation if the patient refused treatment although this was rarely required.¹⁴³ In 1912, Glasgow had 1,360 beds in fever hospitals for the treatment of notifiable infectious diseases. In addition to tuberculosis, the fever hospitals also treated childhood diseases such as scarlet fever and diphtheria which occurred in epidemics of varying intensity from year to year.¹⁴⁴ It is evident that the health authority did intervene in cases of infectious diseases that were hazardous to public health where there was a statutory obligation to do so. Influenza and influenzal pneumonia were not notifiable diseases during the 1918/19 epidemic.

The response of the British health authorities to the crisis is criticised by Sandra Tomkins who states that 'one of the most highly developed medical and public health establishments mounted one of the least effective responses to the epidemic' and cites the more active measures taken in America and the British Dominions where the authorities closed schools, theatres and cinemas and hospitalised the worst cases. Tomkins identifies a fundamental weakness in the public health policy of disinfection, isolation and personal prevention which proved to be ineffective in limiting the spread of infection.¹⁴⁵

Some other cities in Britain took more robust action. In Manchester, during the first week of the first wave of the epidemic, leaflets were distributed to advise on

¹⁴³ N.M. McFarlane, *Tuberculosis in Scotland, 1870-1960*, Ph.D. diss., University of Glasgow, 1990, 74; C. Clayson, "Tuberculosis," in *Improving the Common Weal: Aspects of Scottish Health Services, 1900-1984*, ed. G. McLachlan (Edinburgh: Edinburgh University Press, 1987), 388-389.

¹⁴⁴ Chalmers, *The Health of Glasgow*, 162.

¹⁴⁵ S.M. Tomkins, "The Failure of Expertise: Public Health Policy in Britain during the 1918-19 Influenza Pandemic," *Social History of Medicine*, 5 (1992): 443, 453-454.

appropriate precautionary measures and all elementary schools were closed. Similar actions were taken during the second and third waves with volunteer nurses recruited and the needy supplied with food and fuel.¹⁴⁶ In Liverpool, all elementary schools were closed for four weeks as a precautionary measure. Tramcars were disinfected twice daily, children were barred from picture houses and some large firms asked employees to remain at home if infected.¹⁴⁷ Streets in Belfast were disinfected with carbolic acid and all buildings used for public meetings and entertainment were ventilated and disinfected.¹⁴⁸ Measures in North America were even more robust. In New York, incoming vessels were quarantined and passengers with flu-type symptoms were isolated. Influenza and pneumonia were made notifiable diseases and, on diagnosis, patients were quarantined at home or hospitalised. However, New York schools remained open since it was thought that schools were a safer environment than their homes.¹⁴⁹

With the exception of school closures, the response in Glasgow was not materially different from that in other British cities. Manchester was perhaps the most active public health authority in trying to limit the spread of infection. However, the official mortality rates published by the health authorities show that Manchester was higher at 5.2 deaths per thousand than Glasgow at 4.1 per thousand.¹⁵⁰ Tomkins cites the more energetic steps in the Dominions such as New Zealand where the published death toll was 6,000 which compares to the 4,000 deaths in Glasgow recorded by Chalmers, the two having a similar sized population.¹⁵¹ These comparisons may be compromised by variations in the health authorities' underestimation of the death toll but they provide some indication that the more interventionist actions taken by other authorities to limit the spread of infection do not appear to have been effective in reducing mortality. Recent studies, based on the 1918 and subsequent epidemics,

¹⁴⁶ J. Niven, Medical Officer of Health for Manchester, "Report on the Epidemic of Influenza in Manchester, 1918-19," in Ministry of Health, *Report on the Pandemic of Influenza, 1918-19*, (HMSO, 1920), 472-483.

¹⁴⁷ *Liverpool Echo*, 4 October 1918, 23 October 1918, 4 November 1918.

¹⁴⁸ Foley, *The Last Irish Plague*, 107, 118.

¹⁴⁹ F. Aimone, "The 1918 Influenza Epidemic in New York City: A Review of the Public Health Response," *Public Health Reports*, 125 (2010): 74-75.

¹⁵⁰ Registrar-General for England and Wales, *Influenza in England and Wales during the Epidemic of 1918-19*, Table XX, 51; Registrar-General for Scotland, *Influenza in Scotland during the Epidemic of 1918-19*, Table IV, 16.

¹⁵¹ Summers, *et al.*, "The Influenza Pandemic of 1918-1919 in Two Remote Island Nations: Iceland and New Zealand," *The New Zealand Medical Journal*, 126 (2013): 2. Both mortality figures are official estimates which may be understatements of the death toll.

show that the transmissibility of the 1918 virus was too high for the spread of infection to be contained by social distancing.¹⁵²

However, Tomkins does identify a surprisingly passive attitude to a major epidemic. In Glasgow, Chalmers only accords two pages on the epidemic towards the end of his detailed and informative survey of the city's public health record between 1914 and 1918; more is said on smallpox and plague, diseases with much lower mortality.¹⁵³ Perhaps the comment from Chalmers that there was no cure or solution to avoid infection was accurate given medical knowledge at the time. However, it is evident that the public health authority role in Glasgow was limited to that of an observer providing advice and recording the outcome.

It is unclear whether the epidemic was a catalyst for change in public health care after the war. Laura Spinney makes the bold statement that, after the influenza epidemic, it was no longer reasonable for health authorities to blame an individual for becoming infected nor to treat them in isolation and that, in the post-war years, many governments adopted the principle of socialised medicine, free at the point of delivery.¹⁵⁴ Spinney is less convincing in drawing a causative link between the epidemic and these changes. Fred Van Hartesveldt and Anne Rasmussen are more measured and argue that the inadequate and fragmented response of the British medical profession to the epidemic provided political urgency for the reform of public health institutions after the war. Rasmussen notes that, after the war, influenza was replaced by typhus, tuberculosis and malnutrition as the most urgent health priorities.¹⁵⁵ Shanks also suggests that the war was a key transition point in attitudes towards infectious diseases but that the influenza epidemic quickly receded in the medical consciousness despite it being the most fatal outbreak of infectious disease.¹⁵⁶ Johnson concurs that the epidemic had been overshadowed by the war and had received scant attention in the contemporary newspapers and medical press and was quickly forgotten thereafter.¹⁵⁷ Bristow follows this theme by suggesting that the

¹⁵² Miller, *et al*, "The Signature Features of Influenza Pandemics," 2597.

¹⁵³ Chalmers, *Health of Glasgow*, 363-364.

¹⁵⁴ Spinney, *Pale Rider*, 240-246.

¹⁵⁵ F.R. Van Hartesveldt, "The Doctors and the Flu: The British Response to the Influenza Pandemic of 1918-19," *International Social Science Review*, 85 (2010): 8; A. Rasmussen, "The Spanish Flu," in *The Cambridge History of The First World War, Volume 111: Civil Society*, ed. J.M. Winter (Cambridge: Cambridge University Press, 2014), 356-357.

¹⁵⁶ G.D. Shanks, "How World War 1 changed global attitudes to War and Infectious Diseases," *The Lancet*, 384 (2014): 1669, 1705.

¹⁵⁷ Johnson, "The Overshadowed Killer," 154-155.

upbeat optimism of the post-war years in North America suppressed the voices of trauma.¹⁵⁸

The immediate change in health care in Scotland after the war was the formation of the Scottish Board of Health in January 1919. Helen Dingwall considers that this was a key change in emphasis with health care moving away from the ‘sanitation’ ethos of avoiding nuisance towards a more measured and scientific approach to improving public health with a particular focus on mothers and children.¹⁵⁹ However, the decision to make this change had taken place before the outbreak of the influenza epidemic. In 1914, Christopher Addison, then Parliamentary Secretary to the Board of Education, had set out proposals for a single health ministry. In 1916, after appointment as the Minister for Reconstruction, Addison was able to take these plans forward. The case for a separate health ministry for Scotland was made in late 1917 and early 1918 by the medical profession and the universities. By July 1918, the Cabinet Home Affairs Committee had accepted these proposals taken to it by the Secretary for Scotland.¹⁶⁰ Clearly, the first step in the reform of health services had been formulated before the serious outbreak of influenza.

The Scottish Board of Health set up a consultative council to make recommendations for the systemised provision of medical and allied services in the community. The interim report of the council in 1920 (*A Scheme of Medical Service for Scotland*) made quite radical proposals for a more inclusive and comprehensive system of health care which mirrored the earlier Dawson Report for England and Wales.¹⁶¹ The key proposal was for the establishment of a comprehensive health service in Scotland that would include preventive monitoring of the whole community facilitated by a co-ordinated medical service under a unified system of local

¹⁵⁸ N.K. Bristow, *American Pandemic: The Lost Worlds of the 1918 Influenza Epidemic* (Oxford: Oxford University Press, 2012), 195 quoted in H. Phillips, “The Recent Wave of ‘Spanish’ Flu Historiography,” *Social History of Medicine*, 27 (2014): 807.

¹⁵⁹ H.M. Dingwall, *A History of Scottish Medicine* (Edinburgh: Edinburgh University Press, 2003), 213-215.

¹⁶⁰ M. McCrae, *The National Health Service in Scotland: Origins and Ideals, 1900-1950* (East Linton: Tuckwell Press, 2003), 64-65.

¹⁶¹ Scottish Board of Health, Consultative Council on Medical and Allied Services, *Interim Report: A Scheme of Medical Service for Scotland*, Cmd. 1039 (HMSO, 1920), (‘The McAlister Report’); Ministry of Health, Consultative Council on Medical and Allied Services, *Interim Report on the Future Provision of Medical and allied Services*, Cmd. 693 (HMSO, 1920), (‘The Dawson Report’); J. Jenkinson, *Scotland’s Health: 1919-1948* (Oxford: Peter Lang, 2002), 79.

authorities. The recommendations were not carried forward due to the financial difficulties of the period.¹⁶²

Of particular interest with relation to influenza, the report acknowledged that treatment for certain infectious diseases, such as measles and whooping cough, was unsatisfactory after discharge from hospital. However, the report made no reference to influenza or the epidemic.¹⁶³ In setting out a general aim of ‘the provision of a complete and adequate medical service within the reach of every member of the community’ it does not appear that the influenza epidemic had contributed to this change towards a more universal health care system.

Influenza was also absent from discussions within Glasgow Corporation on the changes to health care. The report by J. Lindsay, Town Clerk, to the Corporation Council in April 1919 was more concerned with the structure and powers of the new Board of Health. He suggested that the proposals for the new Board were deficient in that the Minister of Health would not be responsible to Parliament and that no provision had been made for co-ordinating public health powers locally.¹⁶⁴ In March 1920, Glasgow Corporation approved a scheme to reorganise and expand the Health Department by combining the existing health, sanitary, bacteriological and inspection functions under the Medical Officer of Health. The city was to be divided into districts with an Assistant Medical Officer of Health appointed for each district.¹⁶⁵ This was clearly intended to create a more unified and comprehensive public health system as was being instituted nationally. There was no record of the influenza epidemic being a factor in any of these discussions in the council chambers.

The epidemic, however, did have consequences. It has been established that the marked reduction in tuberculosis deaths in the post-war years was due to the epidemic hastening the deaths of many infected with tuberculosis.¹⁶⁶ This reduced future mortality and transmission rates since there were fewer carrying the infection.¹⁶⁷ The average death rate from respiratory tuberculosis in Scotland between 1919 and 1923 was 21 per cent lower than in the previous 5 years with a similar

¹⁶² Jenkinson, *Scotland's Health*, 79-80; J. Hogarth, “General Practice,” in *Improving the Common Weal: Aspects of Scottish Health Services, 1900-1984*, ed. G. McLachlan (Edinburgh: Edinburgh University Press, 1987), 179-180.

¹⁶³ SBH, “*Interim Report: A Scheme of Medical Service for Scotland*,” 5.

¹⁶⁴ Glasgow City Archives, CI 3/61, *Minutes of the Corporation of Glasgow*, 3 April 1919, 996-997.

¹⁶⁵ *Minutes of the Corporation of Glasgow*, 30 October 1919, 22 March 1920.

¹⁶⁶ See Chapter 4, pages 151-152.

¹⁶⁷ A. Noymer, “The 1918 Influenza Pandemic hastened the decline of Tuberculosis in the United States: An Age, Period, Cohort Analysis,” *Vaccine*, 295 (2011): 38-41.

marked reduction in Glasgow in these years.¹⁶⁸ The second legacy was a result of acute and influenza pneumonia being classified as a notifiable disease from 1 March 1919.¹⁶⁹ Most epidemic victims had died from secondary bacterial pneumonia which, at that time, had not been a notifiable disease and health authorities were not required to hospitalise acute cases as they would have for say, pulmonary tuberculosis. It is probable that this was a consequence of the high death toll during the epidemic. It is not possible to establish a causal link between the epidemic and this change either through primary sources or historiographical comment. The timing, as the third wave of the epidemic was receding, does suggest that the epidemic led to this change. Encephalitis lethargica and acute polio-encephalitis, which were also linked to influenza, also became notifiable diseases in 1919.¹⁷⁰

Alexander MacGregor succeeded Chalmers as Medical Officer for Health for Glasgow in 1925 and had previously worked in Belvidere Fever Hospital. MacGregor comments that this addition to the list of notifiable diseases ensured that acute pneumonia cases received hospital treatment and that, as a consequence, the fever hospitals worked at ‘high pressure’ in the 1920s as a result of this change.¹⁷¹ This was a significant change since respiratory diseases were the most fatal of diseases in Glasgow with pneumonia replacing bronchitis as the principal cause of respiratory mortality.¹⁷² The additional burden on the city fever hospitals became increasingly difficult to manage due to the unpredictability and severity of pneumonia. Two tuberculosis pavilions in Robroyston and one in Knightswood, some 500 beds in total, had to be converted to the care of pneumonia patients. In 1928, an outbreak of influenza combined with frost and fog led to 3,875 respiratory patients being admitted to the fever hospitals. By 1930, pneumonia patients accounted for 17 per cent of admissions but accounted for nearly half of the deaths in the fever hospitals. This increase in admissions accelerated the need for the reform of hospital services that was introduced in the Local Government Act of 1929.¹⁷³

¹⁶⁸ Clayson, “Tuberculosis,” 395: See Chapter 4, 145-146.

¹⁶⁹ The Public Health (Notifications of Infectious Diseases) Regulations (Scotland) Act, 1919 and The Public Health (Pneumonia, Malaria, Dysentery, etc.) Act 1919 as outlined in the Glasgow City Archives, CI 3/61, *Minutes of the Corporation of Glasgow*, 7 July 1919, 1719.

¹⁷⁰ “Cases of Certain Infectious Disease Notified, 1912-1921: England and Wales, accessed from www.gov.uk/government/uploads/system/noidsHistoric_Annual_Totals.xlsx on 7 July 2018.

¹⁷¹ A. MacGregor, *Public Health in Glasgow, 1905-1946* (Edinburgh: Harcourt Brace/Churchill Livingstone, 1967), 29.

¹⁷² Chalmers, *The Health of Glasgow*, 144.

¹⁷³ MacGregor, *Public Health in Glasgow*, 29-33, 131-140.

Claims by Spinney, Shanks and Hartesveldt on a fundamental change in post-war attitudes towards the treatment of infectious diseases as a result of the epidemic are over stated. There is no direct evidence to confirm that the epidemic was a catalyst for change in the health services after the war other than the timing of the changes to make acute pneumonia and encephalitis notifiable diseases. However, it would have been apparent at the time that this would be a significant additional burden on hospital resources and it is probable that it was response to the high mortality from secondary pneumonia during the epidemic. The epidemic did probably lead to change but, as Johnson noted, appears to have receded from public consciousness soon after the infection passed.

Conclusion

This chapter had two objectives. Firstly, it sought to determine whether the influenza epidemic deaths should be regarded as attributable to the war either due to the virus originating as a result of the war or the high death toll being a consequence of the social conditions created by the war. Secondly, it sought to establish whether the epidemic had been a catalyst for the post-war changes in public health care towards providing a more universal and effective health care system after the war. The evidence with regards to the origin of the 1918 virus is circumstantial. However, the timing and location of the outbreak of infection in Glasgow supports the view that it is most likely that the influenza virus was carried on a ship from North America and least likely that it originated in the battlefield support areas in Northern France, as suggested by Oxford. There is no evidence of a south-to-north transmission in Britain and influenza had appeared in Glasgow at the same time as in France and some months before cities in the south. The North American seaports may have inherited the virus from Kansas or China; neither source was dependent on war conditions for the evolution of the H1N1 1918 virus. Furthermore, the evolution of the H1N1 virus took place over a decade and started with the emergence of the H1 gene in the early 1900s. The traffic of personnel and war materials no doubt facilitated the spread of infection but neutral countries fared as badly, in similar timescales, as combatant nations.

The 'herald' outbreaks of respiratory disease in many countries, both combatant and neutral, between 1916 and late 1917 suggest that the virus had already pre-seeded in many countries several years before the 1918 outbreak. The evolution

and spread of the virus were more complex than a simple mutation of viruses in the 'evolutionary soup' of war conditions in France. Winter does not provide evidence to support his view that the epidemic was due to viral morphology which was unconnected to the war. Subsequent research by a range of virologists, such as Taubenberger and Worobey, has supported Winter's view.

The argument from Abel-Smith, Drummond and Wilbraham that the high death toll was due to adverse social conditions created by the war clearly fails since the victims of this epidemic were not confined to the weak and frail. The marked post-war reduction in tuberculosis deaths suggests that influenza claimed the lives of many with underlying respiratory problems; however, the highest mortality rates were among young healthy adults. Whilst the epidemic claimed victims across the social spectrum, it is evident that the affluent districts in Glasgow had a higher mortality rate than the poorer neighbourhoods. This epidemic was atypical of previous influenza outbreaks in that it was less prevalent among those who might be compromised by age or poor social conditions; therefore, war-time social conditions were not responsible for the high death toll.

The epidemic may be described as the most fatal event in human history yet it does not appear to have been a catalyst for improved health care after the war. Whilst some 6,000 persons died in Glasgow, based on my estimates, the public response was measured with no sense that the authorities were negligent in failing to stem the spread of infection. It was regarded as a personal responsibility to avoid infection and that the consequences of the epidemic should be borne bravely. The public health authority's response was surprisingly passive and non-interventionist. Chalmers may have been correct to say that he had no cure or means of limiting the spread of infection. However, his response suggests a lack of ownership of a disease that was not, at that time, a notifiable disease and not within his sphere of responsibility.

There is scant evidence to suggest that the epidemic had been a catalyst to the changes in the immediate post-war years. Johnson, Shanks and Bristow were correct to note that the epidemic quickly receded from the public consciousness, perhaps by the latter stages of the war and the economic dislocation afterwards. There is no reference to the epidemic in the local or national debate on an improved health service after the war; indeed, plans for this were in hand before the epidemic occurred in 1918. Shortly after the epidemic, pneumonia became a notifiable disease and municipal authorities were required to hospitalise acute cases. It is probable this was a

legacy from the epidemic since most epidemic deaths had been from pneumonia rather than influenza. This was a significant change since respiratory diseases were the most fatal of diseases in Glasgow and pneumonia was becoming the most virulent respiratory disease and accounted for half of the deaths in the city fever hospitals. The additional burden on the hospital services accelerated the need for reform which took place later in the 1920s.

In summary, it can be concluded that the epidemic deaths should not be attributed to the war and that they should not be set against the health gains identified by Winter and in the earlier research in this study. There was a change in the ethos of public health provision after the war towards a more universal system although these ambitions were curtailed by financial pressures on the national economy. There is no evidence that the epidemic had been a catalyst for this change; however, the classification of pneumonia as a notifiable disease did bring about change, albeit that it may have been an unintended consequence.

Chapter Seven

Conclusion

A harsh line of demarcation is drawn between the dependants of those who produce the things of war and those who use them.¹

Before 1914, most of the registered unemployed were out of work for less than three months; by 1933-7 nearly 30 per cent had been out of work for over a year.²

This study set out to determine the impact of the war on the well-being of the civilian population in Glasgow so as to conclude whether the war had a positive or negative influence and whether any changes in social conditions were transitory or permanent. The research process has broadly followed that of Jay Winter in *Great War and the British People* in which Winter concludes that the war had a beneficial influence on living standards and health. This was challenged by Linda Bryder and Bernard Harris who suggest that the war had a minimal, or an adverse, impact on health.³ Winter and Bryder called for more regional studies to inform the unresolved debate. Glasgow is an appropriate choice for a regional study since it was typical of many regional industrial cities in this period being notable for its successful staple heavy industries and a progressive municipal authority but also for long-standing social issues of urban squalor, poverty, poor health and slum housing. The impact of the war was particularly pronounced in Glasgow since it became a major munitions centre during the war. This provided employment opportunities but also placed additional demands on housing and the populace. This study provides an opportunity to measure the impact of the war on Glasgow, one of Britain's largest industrial cities.

The social impact of the war extends to a longer period than the four years of military conflict. Concerns on the growth of the German naval fleet led to warship orders for the Clyde in 1910 ending a depressed period in the industry with the

¹ *Glasgow Herald*, Leader, 3 August 1918.

² D. Reynolds, *The Long Shadow: The Great War and the Twentieth Century* (London, Simon and Shuster, 2013).

³ See Chapter 1, pages 28-30, for a fuller account of the historiographical debate between Winter, Bryder and Harris.

tonnage launched of merchant and naval vessels in the immediate pre-war years being at record levels. War conditions did not end with the Armistice. Food shortages and some rationing continued until 1920 and demobilisation took some time. The economic dislocation and decline in Glasgow's staple industries were a direct consequence of the war and caused considerable hardship and distress during the 1920s and 1930s. Consequently, in assessing the social impact of the war, the main focus of this research has been the period from 1910 to 1925.

The Glasgow City Archives proved to be a rich source of primary material which has been key to the research process including both quantitative records, such as municipal health reports and school medical records, and qualitative accounts, such as parish poor relief records and school log books. However, the sources have been incomplete in certain regards. There are many personal accounts of life on the Western Front but there is a dearth of similar material for civilian life during the war. This would have been particularly useful in understanding the lives of women and the social conditions in the poorer districts. Newspaper accounts were sanitised to maintain public morale and there was scant coverage of social problems or issues. The muted public response during the influenza epidemic typified an era when troubles were borne privately which makes the task of understanding contemporary attitudes and conditions more difficult.

The primary sources have allowed extensive research to be undertaken to assess the social impact of the war with the main areas of research being poverty, housing, earnings, diet, household finances and adult and child health. Together, these factors determine the well-being of a population. The influenza epidemic of 1918/19 was also researched since it was the most fatal event in this period. It may be useful to summarise the research findings before returning to the main points of the historiographical debate and formulating a conclusion in relation to this study of Glasgow.

Poverty reduced significantly during the war with applications for poor relief at the end of the war having reduced to a third of the applications in September 1913. Two-thirds of the reduction occurred in the last year of the war but this improvement had been preceded by periods of increased poverty in the winter of 1914/1915, due to the delay in the payment of separation allowances to soldiers' dependants, and again

in 1917, due to the rising cost of living.⁴ Poverty returned after the war with applications for poor relief in the 1920s being considerably higher than at any time during the war or in the immediate pre-war period.⁵

Living standards improved during the war particularly for those working in the war industries. The poorer families, who had previously subsisted on irregular work and low earnings, benefited from regular employment and the opportunities to work in the war industries. These families also benefited from government price controls such as on the price of bread which was their main staple food. In addition, new opportunities for women and juveniles in more highly paid work were also key to improving living standards. A third of the families in Glasgow benefited from these opportunities, particularly towards the end of the war. Conversely, another third of the population who were reliant on fixed incomes, such as soldiers' wives, were less fortunate and found their income significantly eroded by price inflation. They suffered increasing levels of hardship to the point of subsisting day to day. The remaining third of the population, the artisans and middle classes, either maintained their standard of living or suffered some erosion but without significant hardship.

Based on an analysis of mortality rates, underlying health in Glasgow improved by 11 per cent between 1914 and 1918. There had been no improvement in the four years preceding the war and a much lower rate of improvement after the war. The improvement was most marked in the poorer districts which showed an improvement of between 16 and 18 per cent; whereas, there was no improvement in the districts with a high concentration of skilled workers or in the affluent suburbs. These health gains occurred towards the end of the war with all categories of disease reducing. Significantly, mortality from tuberculosis, a disease associated with poverty and malnutrition, continued to reduce during the war which supports the evidence of improved social conditions.⁶

Infant mortality showed a similar pattern with an annual rate of reduction during the war which was three to four times greater than at any time in the previous fifty years. After the war, infant mortality rates reverted to the pre-war rate of decline. It is likely that the higher reduction during the war was due to improved maternal health rather than the rather modest war-time welfare initiatives. With regard to the

⁴ See Chapter 2, pages 57-64.

⁵ See Chapter 2, pages 71-76.

⁶ See Chapter 4, pages 129-140, for details on improvements in health.

health of schoolchildren, there is some evidence of an increase in body weight over the war years albeit with some erosion in these gains in the last year of the war. The evidence relating to the health of school children is less clear with regard to an improvement in health.⁷

The most fatal event affecting the civilian population in Glasgow during the war was the influenza epidemic in 1918 and 1919 with some 6,000 persons dying from influenza or secondary respiratory complications.⁸ It was an exceptionally virulent outbreak quite different from normal seasonal influenza and has not been repeated since. The most likely source of infection was from an incoming ship from North America. The high death toll resulted from the unique genetic characteristics of the virus against which the population had no acquired resistance. This study has concluded that the virus was not caused by the war nor was the high death a result of social conditions during the war. The epidemic deaths have therefore, been excluded from the calculation of underlying mortality.⁹

It could be concluded that these research findings broadly support Winter's view that the war had beneficial consequences for civilians, particularly in the poorest districts. It could also be concluded that Bryder's challenge fails with regard to Glasgow since tuberculosis deaths continued to reduce during the war. The Glasgow research also casts doubt on Harris's thesis that child health did not improve during the war at a greater rate than before the war. These would be simplistic conclusions and a more careful assessment is required. The more focused approach of this study has provided new insights and a more nuanced view of the improvement in social conditions during the war. Four themes will be considered in more detail: the three phases of poverty in the periods before, during, and after the war; the diverging outcomes for families' well-being during the war based on their personal circumstances; whether the war was a period of continuity or discontinuity with regards to health trends; and finally, the legacy of the war - whether it was an agent for social change and whether any improvements in social conditions continued into peace-time.

The first theme is the changing nature of poverty over three quite distinct periods of before, during, and after the war. It has been argued that acute poverty

⁷ See Chapter 5, pages 164-173, for information regarding infant mortality and the health of school children.

⁸ Chapter 6, pages 199-207, provides the detail of the calculation of mortality during the epidemic.

⁹ Chapter 6, pages 232-234, sets out the rationale for excluding these deaths.

changed from being a temporary state before the war, largely created by downturns in the trade cycle, to a less acute state of penury for some during the war with a fundamental shift towards long-term unemployment and poverty after the war. The contemporary debate on the causes of poverty needs to be recognised which either considered the poor as simply feckless and indolent or victims of a labour market that denied them the opportunity to earn a living wage.¹⁰ The balance of opinion was towards the flawed moral compass. Poverty varied between destitution, which accounted for most poor relief applications before the war, and hardship where the applicant had some income but needed supplementary help, which was generally the case during the war.

Before the war, poverty, in its most acute form, was cyclical and circumstantial. The vagaries of the trade cycle resulted in intermittent downturns in trade that led to many skilled and unskilled workers being unemployed. For example, the period between 1908 and 1910 was one such downturn with one in five of shipbuilding workers being unemployed, but by 1913 the shipbuilding cycle had reverted to good order books and full employment.¹¹ Skilled workers would have had some insurance, savings and possessions to help them through a downturn; the unskilled less so.

Poverty caused by adverse personal circumstances could be related to the nature of an individual's employment or events that disturbed the cohesion of the family unit. Reliance on unskilled casual or seasonal work left many families in difficulties during weeks of short-time working with these families being the poorest, most malnourished and unhealthiest section of the community with little prospect of escaping from their circumstances.¹² Events that destabilised the family such as the death or disability of the main wage earner placed the family in immediate difficulty, as did the incapacity of the mother to provide supplementary income or look after the home. Two-thirds of the poor relief applications in September 1914 were due to such adverse personal events.¹³

Poverty before the war was a condition that most families could endure if work was available and they did not suffer destabilising events. The poor relief system before the war was designed to provide limited assistance for a temporary

¹⁰ Chapter 2, pages 47-51, provides detail on the contemporary debate on the causes of poverty.

¹¹ See Chapter 3, pages 82-83.

¹² Chapter 2, pages 48-50, gives more detail on the incidence of irregular, low-paid work.

¹³ See Chapter 2, page 57, for a summary of the destabilising events in September 1914.

period after which the recipients were expected to be self-supporting. Poor relief was available for the old, sick and young but not the able-bodied unemployed and it was intended to deter indolence as much as to help the disadvantaged. In some respects, it reflected the nature of pre-war poverty that was, when acute, temporary, albeit that many labouring families in Glasgow lived continually on the verge of distress.¹⁴

During the war, the incidence and nature of poverty changed. As already noted, poor relief applications had reduced significantly by the end of the war which suggests that fewer families became destitute. However, the winter of 1914/15 and late 1917 were difficult periods for many people with an increase in request for parish relief. The causation of poverty changed. The unskilled and casual labourers who previously had been the main claimants of poor relief, now had regular work with improved earnings and a 'new poor' emerged. These were households on a fixed income such as widows, soldiers' families, annuitants and low paid workers on time rates. The 'new poor' came from a wider social spectrum and were not destitute but suffered increasing hardship as price inflation eroded the value of their income. As the war progressed, they looked to parish relief or charitable help for modest sums to alleviate their hardship.

Events that de-stabilised the family, such as the death or illness of a parent, featured less in poor relief applications during the war. This may reflect the improvement in health during the war or it may be that the higher wages for men and women among the extended family network made life-events such as death and illness easier to cope with without resorting to parish relief. New war-related issues emerged in the poor relief applications. For example, soldier's wives being destitute having lost their separation payments due to the husband being a deserter, common law widows not being given separation allowances, infidelity of a wife discovered during the soldier's leave, death or illness of a soldier's wife whilst the husband was at the Front. However, the incidence of these war-related issues was lower than the de-stabilising family events before the war. The nature of poverty had changed from subsistence living or intermittent destitution among the poorer labouring classes before the war to a less acute but increasingly difficult existence for many on fixed incomes who represented a wider social spectrum than was the case before the war.¹⁵

¹⁴ See Chapter 2, page 51. Comment made by Richard Tawney to the 1910 Royal Commission on the Poor Laws.

¹⁵ Chapter 2, pages 57-63, provides further details of poor relief applications during the war.

After the war, there was a fundamental change in the incidence and nature of poverty. Whereas poverty had been cyclical and circumstantial before the war, and a state of increasing penury during the war, poverty now became a chronic and long-term problem due to the high levels of unemployment on Clydeside among skilled and unskilled workers. The economic dislocation and the decline in the staple industries after the war was exacerbated by the 1921 Washington Naval Treaty which severely restricted new naval ship orders. There was a deep recession between 1920 and 1922 with high levels of unemployment after which there was some recovery but trade continued to be depressed to the end of the decade. An indication of the severity and longevity of the downturn was that a third of the shipbuilding work force was still unemployed at the end of the decade.¹⁶

The war had changed the nature of poverty. Although the most acute cases of poverty had almost been eliminated during the war, the most fundamental and long-lasting change was the transition from the pre-war pattern of cyclical poverty among the labouring poor to a chronic long-term condition of unemployment which affected artisans and labourers alike. The social consequences for the unemployed were severe – a diet of mainly bread and carbohydrates, being poorly clothed with deteriorating health particularly among women and children, with tuberculosis and rickets rife. An indication of the scale of suffering in Glasgow was that in 1921-22 a third of the children on the school roll were classed as necessitous and were given free meals, boots or clothing. The need for welfare support continued with three times as many free meals being provided in the mid-1920s as compared with the last year of the war.¹⁷

The second theme is one of diverging outcomes for families' living standards as a result of their personal circumstances. It will be suggested that there were both winners and losers in the new environment created by the war and that there was a matrix of opportunities and threats that influenced living standards which led to significant differences in family circumstances within a social class. It would be simplistic to conclude that all unskilled labourers were lifted out of poverty or that all widows suffered penury or that all artisans and salaried staff stood still or suffered an erosion in their living standards. A family's living standard during the war was

¹⁶ See Chapter 3, page 112; also H. Peebles. *Warshipbuilding on the Clyde: Naval Orders and the Prosperity of the Clyde Shipbuilding Industry, 1889-1939*. Edinburgh: John Donald, 2000, 98-100; 105.

¹⁷ See Chapter 2, pages 74-75.

determined by a number of factors such as whether the father had enlisted, the number and age of children and whether there was a supportive extended family network. The research carried out for this study also shows that the divisions between the advantaged and the disadvantaged deepened as the war progressed.

Personal circumstances played an important part in determining whether a family was going to have a 'good' war, or otherwise. A tenement in a poorer street in working-class Gorbals would have had four landings and a lived-in attic with 36 families comprising some 200 residents.¹⁸ Before the war, these families would have had a similar standard of living being reliant on earnings of twenty to twenty-five shillings a week from unskilled work. During the war, a third of these families enjoyed unprecedented levels of affluence with improved health whilst another third would have been consigned to years of progressively more acute hardship finding it difficult to clothe and feed their children.

The unskilled labourer who remained at home and worked in the war industries would be likely not only to have enjoyed continuous employment but also to have been incentivised to maximise the output of war materials. Bonus payments together with shift allowances provided an income that exceeded the earnings of a skilled man and more than compensated for the increase in prices. The stay-at-home may have suffered some irregularity of work at the beginning of the war but that was short-lived. The insatiable demand for war materials led to a drive to maximise output which placed a premium on physical labour. As the war progressed, the incentivised earnings of semi and unskilled workers increased which provided these families with sufficient disposable income to enjoy an improving and comfortable standard of living. The stay-at-homes never had it so good.

In contrast, the father who enlisted in the early part of the war placed his family in immediate difficulties due to the delay in the payment of separation allowances. It may be that the father had already been unemployed for several weeks before enlisting so that any savings had been spent and that their few possessions were left to pawn. Parish poor relief would only provide an income of around seven shillings a week. This was only a third of an unskilled labourer's earnings at that time. Separation allowances started during 1915 and were some twenty-five shillings a week for a wife and two children which was equivalent to the pre-war earnings of an

¹⁸ G.R. Robertson, *Gorbals Doctor* (London, Jarrolds, 1970), 56.

unskilled worker. However, by the time these allowances were paid, prices had already increased by thirty per cent. Allowances were increased in 1915 but did not compensate for the continuing increase in prices.

By the end of the war, the value of the allowances had been halved and a family would only have been able to pay the rent and scrape by on a meagre diet, unable to afford clothes or boots.¹⁹ The soldier's family and the war worker's family may have lived on the same tenement landing but their standard of living was quite different and increasingly diverged as the war progressed. This growing inequality gave rise to a series of letters to newspapers in 1918 from soldiers' wives which expressed their resentment at being so disadvantaged whilst the more fortunate stay-at-homes continued to agitate for more money.²⁰

The age of children was another determining factor. A family with children of working age could benefit from the higher earnings available to women and juveniles during the war. Unmarried women and juveniles were given low rates of pay before the war, with many women employed on a casual basis. A young tailoress might have earned 6 shillings a week before the war but could have increased this to 55 shillings a week on munitions work.²¹ The same was true for male juveniles who preferred the high earnings in unskilled work to taking up an apprenticeship.²² One unmarried daughter or teenage son employed in munitions, or other war work, could transform the finances of a family, even if the father had enlisted. Families with younger children were unable to benefit from the buoyant market for young women and juveniles and had the cost burden of feeding and clothing the family with the mother being denied the opportunity to enter the war industries. A soldier's wife with a young family was at a particular disadvantage.

Another point of difference is whether the family had an extended family network. The most important safety net for families in this period was the extended family network rather than the poor relief system, which was only applied for as a last resort. The lack of such a network arises in many of the cases of families in difficulty in primary sources such as poor relief applications, charity organisation accounts and medical reports. There were many single-parent families during the war due to the father having enlisted. Death, incapacity or infidelity of the mother placed the family

¹⁹ See Chapter 2, page 70, and Chapter 3, pages 85-87.

²⁰ For examples, see *Daily Record*, 5 January 1918; 18 May 1918; 19 June 1918;

²¹ Refer to Chapter 3, Table 3.2, page 106.

²² See Chapter 3, pages 100-102.

at risk with the children boarded out or taken into the poor house if relatives could not provide support. A soldier's wife with a young family could work to supplement her separation allowance if relatives were able to look after the children. As an alternative, the soldier's wife could take in a relative as a lodger to supplement her income. The death or incapacity of the stay-at-home father could also require support of the extended family network but there were fewer cases of this compared to soldiers' families.

Personal circumstances such as civilian or military occupation, composition and age of the family, and the support of an extended family network could make a significant difference to the family's living standards. The socio-economic environment was the same for all but the outcome for families could be quite different dependent on their circumstances. The divisions between the advantaged and the disadvantaged in the same Gorbals tenement became more accentuated over the war years due to the progressively more attractive financial benefits from war work and the continuing erosion of living standards of those not on war work. Diverging outcomes created an economically divided city.

The third theme to be considered is whether the war was a period of continuity, or discontinuity, with regard to health trends. Winter regards the war as a period of discontinuity since the improvement in health was at a greater rate than before the war. In contrast, Harris uses Winter's data to show that the improvement simply followed the longer term trend of improving health between 1900 and 1913.²³ The evidence gathered during this study suggests, in some respects, that both were correct. The war was a period of discontinuity with respect to the step-change improvement in the health of the poor but a period of continuity for artisans and the middle classes whose health followed the pre-war long term trend.

This study shows that underlying health in Glasgow improved by 11 per cent during the war. There had been no improvement in the four years prior to the outbreak of war and the war-time improvement was four times greater than that between 1900 and 1913. Mortality rates continued to decline after 1918 but only a third to a quarter of the rate of reduction during the war. The evidence suggests that the war had been a period of discontinuity. A more compelling argument for discontinuity is provided by

²³ The debate between J. Winter and B. Harris is referred to in Chapter 1, pages 28-29. Harris's calculation is set out in detail in B. Harris, "The Demographic Impact of the First World War: An Anthropometric Perspective," *Social History of Medicine*, 6 (1991): 346-347.

the analysis of mortality by social class. Winter and Harris based their work on incomplete data in that it was only for males aged 45 years and over and only included insured workers, the more affluent section of the population. Much of the ill health in a community was concentrated in the poorer districts whose unskilled workers were uninsured. The war-time improvement in mortality rates in the poorer districts in Glasgow was higher at some 16 per cent with no improvement in artisan districts and a small increase in more affluent suburbs.²⁴ Much of the overall reduction in Glasgow was due to the improvement in the poorer districts.

Harris makes the further argument in support of continuity in that there was no appreciable improvement in the height of school children during the war. This was confirmed during the research process for this study as being the case with regards to Glasgow. However, the benchmark of children's height may not be the most appropriate for changes over short periods of time. The school inspections in Glasgow show that there was an increase in children's weight during the war and school medical staff reported that children's stature had generally improved in the period. The evidence with regard to school children is somewhat inconclusive. In contrast, infant mortality rates showed a more substantive change during the war with rates reducing by 15 per cent which was three to four times higher than in any period in the previous fifty years.²⁵ In some poorer districts in Glasgow the reduction was as high as 24 to 31 per cent whilst there was no discernible improvement in the affluent suburbs. After the war, the rate of increase reverted to the pre-war trend in the period up to 1925, which was a quarter of the rate during the war.

There is much to support the view that the war was a period of discontinuity with regards to health trends due to the step-change improvement during the war and the reversion to the lower pre-war trends afterwards. However, this takes the aggregate view of the city as a whole; a more careful consideration of the data by social class suggests otherwise. It was a period of discontinuity, or improvement, for the uninsured unskilled workers, and their dependants, in the poorer districts as shown by the significant reductions in adult and infant mortality rates. This was less evident in the artisan and middle-class districts with scant evidence of an improvement above the long-term norm that suggests that they experienced a period of continuity during the war.

²⁴ See Chapter 4, page 148.

²⁵ See Chapter 4, page 165.

The final theme explored in this thesis relates to the legacy of the war; whether the conflict had been an agent for social change and whether any such improvements in social conditions continued into peace-time. There is much to suggest that there was a more benevolent attitude towards the disadvantaged after the war with aspirations for more inclusivity in education and in the provision of health services. The legacy of the war on Clydeside, however, was almost two decades of depressed staple industries, high unemployment and much hardship.

The argument that the war had been a catalyst for social change was promoted by Arthur Marwick although his comments on the war-time emancipation of women proved particularly controversial. There is little to suggest that on a personal level that roles within the family changed. Men returned to work, if available, and women returned to the home and perhaps casual, low paid work. The numbers of women employed after the war were similar to the pre-war level which is contrary to Marwick's analysis. The status quo in the home was quickly re-established without any apparent emancipation for men or women.

This study has identified a number of changes in attitudes and new aspirations after the war at a national and municipal level which suggests that the war had been an agent for social change. The post-war provision of welfare assistance was much more comprehensive than before the war. For example, relief was given to the able-bodied unemployed which would not have been countenanced before the war as it would have been seen then as encouraging idleness. Glasgow started to provide poor relief to the able-bodied after the war before unemployment benefits to the uninsured were sanctioned nationally. The provision of meals and milk in Glasgow to needy mothers and children during the recession in the early 1920s was on an unprecedented scale with a clear intent to preserve maternal and child health. There was an expansion in the maternal and infant clinics after the war with a greater emphasis on improving health rather than simply treating the consequences of poor health. These initiatives indicate a more heightened sense of municipal responsibility for the disadvantaged as compared to attitudes before the war.

New aspirations arose during the war to create a more inclusive and fairer society after the war. These were initiated nationally but were embraced by the municipal authority in Glasgow. The proposals for the reform of education were far-reaching which included raising the school leaving age and extending the numbers of

pupils remaining in secondary education.²⁶ Housing reforms envisaged a new housing programme by local authorities as a replacement for the moribund private sector.²⁷ The McAlister Report set out plans for a more comprehensive system of health care that included an emphasis on preventative monitoring.²⁸ These were bold national and local initiatives which were frustrated by the nation's weakened finances after the war and they foundered during the 'Geddes axe.'²⁹ The war had created a desire for a different society but had also removed the ability to implement the changes required.

The legacy of the war was bittersweet. Fathers, brothers and sons had seen military service; some returned damaged and some not at all. Men took up their previous occupations but the return to normality was short-lived since the consequences of the war soon became apparent. The staple industries were in serious difficulty; markets lost, industry overcapacity and a slump in world trade consigned Clydeside to a difficult inter-war period of high unemployment and much distress. The war cast a long and painful shadow over the 1920s and much of the 1930s. A heavy price had been paid for a relatively short period of social improvement in Glasgow.

This study of Glasgow has shown that impact of the war was more complex than a simple conclusion on whether the war had a positive or negative influence on social conditions and health. There is clear evidence of an improvement in the well-being within the poorer districts in Glasgow towards the end of the war. Those who had the least before the war, the unskilled labouring class, gained the most from the new environment created by the war. However, not all of the labouring poor benefited; only those who worked in the war industries enjoyed the war 'dividend' of full employment and high earnings. Those who had the most before the war, the artisan and middle classes, did not experience an improvement in health and either maintained their standard of living or suffered some erosion.

This evidence does not support the view that there was a general improvement in health and well-being in Glasgow during the war. The reduction in the overall municipal adult and infant mortality rates was entirely due to the significant improvement in health in the poorer districts that had the highest mortality rates in the

²⁶ See Chapter 5, pages 185-186, for details of education proposals.

²⁷ Chapter 3, page 115, refers to the housing reforms.

²⁸ Chapter 6, pages 229-230, refers to the health care proposals.

²⁹ The nation's financial difficulties and the 'Geddes' axe are referred to Chapter 3, page 115; Chapter 5, page 195; and Chapter 6, page 230.

city. The improvement in well-being was, therefore, for only part of the population and only towards the end of the war. This was a 'windfall' improvement derived from the war industries and not a structural social change.

There is scope for further research with the relationship between living standards and health meriting further study. It has been established that full employment during the war, with an improvement in living standards, led to a reduction in mortality in the poorer districts. It might be expected that the converse would be the case during the post-war period of high unemployment but this study has shown that mortality rates continued to reduce in the poorer districts in the period up to 1925 despite the significant deterioration in social conditions.³⁰ The improvement in welfare benefits and health care may provide partial answers as might a health 'dividend' which had been carried forward from the war years. This paradox merits further study. Research into the social impact of the depression on Clydeside, say between 1929 and 1933, would be a useful comparison against this study of full employment during the war years.

So, in summary, the war did have a positive impact on the well-being of the civilian population of Glasgow but only for a third of the population who lived mainly in the poorer districts and only towards the end of the war. However, a similar proportion of the population suffered increased hardship due to fixed incomes being eroded by price inflation with soldiers' dependants being particularly disadvantaged. The war had a marginal impact on the remaining third. The war created divisions improved during a time of national emergency but that the 'feckless and indolent' poor in Calton, Gorbals and Mile-end were the main beneficiaries. Full employment during the war had provided the escape from unremitting poverty and ill health.

³⁰ An analysis of post-war mortality by social class is provided in Chapter 4, page 153.

Contents:

Appendix A Mortality rates (all causes) by Groups of Municipal Districts

Appendix B Infant mortality rates by Groups of Municipal Districts

Appendix C Maps of Municipal Districts

Appendices A and B show the composition of municipal districts within each Group and the calculation of the mortality rates for each district and the mortality rate for each Group. Appendix C provides two maps for the municipal districts. The first map shows the boundaries of each district. The second map provides a visual indication of the location of the poorer areas with high mortality rates and the more affluent areas with lower rates.

Appendix A – Mortality (All-Ages)

High Mortality Group

Municipal Ward	1914	1915	1916	1917	1918
Population:					
Calton	34,790	35,382	36,524	37,372	37,566
Cowcaddens	33,969	33,614	35,674	36,584	37,820
Hutchiesontown	40,119	41,066	42,560	43,052	43,380
Whitevale	32,461	33,254	33,975	34,218	34,375
Ibrox	20,766	21,562	21,930	21,993	21,998
Govan Central	23,305	23,667	23,781	23,788	23,764
Mile-end	47,834	48,917	49,789	50,204	50,006
Total	233,244	237,462	244,233	247,211	248,909
Deaths:					
Calton	702	852	675	589	710
Cowcaddens	701	799	686	708	668
Hutchiesontown	800	873	682	718	794
Whitevale	639	767	575	553	593
Ibrox	407	415	399	351	376
Govan Central	447	454	407	343	435
Mile-end	905	1,073	771	817	865
Total	4,601	5,233	4,195	4,079	4,441
Mortality rate per 1,000 population:					
Calton	20.18	24.08	18.48	15.76	18.90
Cowcaddens	20.64	23.77	19.23	19.35	17.66
Hutchiesontown	19.94	21.26	16.02	16.68	18.30
Whitevale	19.69	23.06	16.92	16.16	17.25
Ibrox	19.60	19.25	18.19	15.96	17.09
Govan Central	19.18	19.18	17.11	14.42	18.30
Mile-end	18.92	21.94	15.49	16.27	17.30
Average for Group	19.73	22.04	17.18	16.50	17.84

Source:

D-TC 7/11/3/14.22, *Report of the Medical Officer of Health for 1914-19*, Population: Table 1, 127; Deaths: Table VIII, 132.

Appendix A – Mortality (All-Ages)

Average Mortality Group

Municipal Ward	1914	1915	1916	1917	1918
Population:					
Springburn	46,742	48,499	49,661	50,018	50,475
Dalmarnock	52,963	54,995	56,334	56,964	57,211
Townhead	35,596	36,720	38,024	38,536	39,308
Sandyford	23,499	23,799	24,452	24,741	24,895
Pollockshaws	13,763	13,819	13,989	14,086	14,064
Plantation	29,501	29,707	30,660	30,698	30,837
Gorbals	34,156	34,737	35,765	36,312	36,588
Total	236,220	242,276	248,885	251,355	253,378
Number of Deaths:					
Springburn	807	877	724	713	823
Dalmarnock	906	1,027	905	875	990
Townhead	602	687	611	568	682
Sandyford	396	457	404	398	403
Pollockshaws	221	203	188	171	195
Plantation	464	575	434	498	473
Gorbals	528	591	512	543	573
Total	3,924	4,417	3,778	3,766	4,139
Mortality rate per 1,000 population:					
Springburn	17.26	18.08	14.58	14.25	16.31
Dalmarnock	17.11	18.67	16.06	15.36	17.30
Townhead	16.91	18.71	16.07	14.74	17.35
Sandyford	16.85	19.20	16.52	16.09	16.19
Pollockshaws	16.06	14.69	13.44	12.14	13.87
Plantation	15.73	19.36	14.16	16.22	15.34
Gorbals	15.46	17.01	14.32	14.95	15.66
Average for Group	16.61	18.23	15.18	14.98	16.34

Source:

D-TC 7/11/3/14.22, *Report of the Medical Officer of Health for 1914-19*, Population: Table 1, 127; Deaths: Table VIII, 132.

Appendix A – Mortality (All-Ages)
Lower than Average Mortality Group

Municipal Ward	1914	1915	1916	1917	1918
Population:					
Fairfield	21,482	21,723	21,770	21,761	21,814
Woodside	42,515	43,717	44,564	44,996	45,375
Shettleston/Tollcross	27,190	27,454	27,527	27,488	27,504
Cowlairs	31,019	32,128	33,015	33,648	34,072
Partick East	23,180	23,283	23,502	23,559	23,641
Maryhill	42,349	43,701	44,523	44,864	45,299
Partick Central	28,932	28,690	28,859	28,941	29,023
Total	216,667	220,696	223,760	225,257	226,728
Number of Deaths:					
Fairfield	313	329	251	246	364
Woodside	610	765	514	620	649
Shettleston/Tollcross	388	428	326	329	393
Cowlairs	434	526	443	446	444
Partick East	324	403	310	314	328
Maryhill	575	689	546	557	592
Partick Central	388	509	348	373	398
Total	3,032	3,649	2,738	2,885	3,168
Mortality rate per 1,000 population					
Fairfield	14.57	15.15	11.53	11.30	16.69
Woodside	14.35	17.50	11.53	13.78	14.30
Shettleston/Tollcross	14.27	15.59	11.84	11.97	14.29
Cowlairs	13.99	16.37	13.42	13.25	13.03
Partick East	13.98	17.31	13.19	13.33	13.87
Maryhill	13.58	15.77	12.26	12.42	13.07
Partick Central	13.41	17.74	12.06	12.89	13.71
Average for Group	13.99	16.53	12.24	12.81	13.97

Source:

D-TC 7/11/3/14.22, *Report of the Medical Officer of Health for 1914-19*, Population: Table 1, 127; Deaths: Table VIII, 132.

Appendix A – Mortality (All-Ages)

Low Mortality Group

Municipal Ward	1914	1915	1916	1917	1918
Population:					
Govanhill	38,534	38,897	39,065	39,236	39,309
Partick West	22,239	22,845	23,132	23,176	23,206
Park	23,377	23,643	23,866	24,051	24,294
Dennistoun	39,752	40,017	40,270	40,387	40,455
Jordanhill	14,695	14,798	15,039	15,095	15,056
Langside	43,114	43,346	43,354	43,404	43,483
Pollockshields	18,677	18,735	18,818	19,008	19,121
Kelvinside	22,354	22,470	22,203	22,364	22,664
Cathcart	14,904	15,035	15,049	15,054	15,076
Total	237,646	239,786	240,796	241,775	242,664
Number of Deaths:					
Govanhill	497	554	476	498	520
Partick West	269	312	261	292	285
Park	263	333	275	274	291
Dennistoun	432	461	431	456	466
Jordanhill	155	161	146	158	169
Langside	429	492	410	401	414
Pollockshields	185	238	207	189	191
Kelvinside	194	198	215	184	249
Cathcart	128	183	153	139	147
Total	2,552	2,932	2,574	2,591	2,732
Mortality rate per 1,000 population:					
Govanhill	12.90	14.24	12.18	12.69	13.23
Partick West	12.10	13.66	11.28	12.60	12.28
Park	11.25	14.08	11.52	11.39	11.98
Dennistoun	10.87	11.52	10.70	11.29	11.52
Jordanhill	10.55	10.88	9.71	10.47	11.22
Langside	9.95	11.35	9.46	9.24	9.52
Pollockshields	9.91	12.70	11.00	9.94	9.99
Kelvinside	8.68	8.81	9.68	8.23	10.99
Cathcart	8.59	12.17	10.17	9.23	9.75
Average for Group	10.74	12.23	10.69	10.72	11.26

Source:

D-TC 7/11/3/14.22, *Report of the Medical Officer of Health for 1914-19*, Population: Table 1, 127; Deaths: Table VIII, 132.

Appendix B – Mortality (Infants)

High Mortality Group

Municipal Ward	1914	1915	1916	1917	1918
Births:					
Calton	1,130	1,016	947	900	867
Cowcaddens	1,035	945	935	779	817
Hutchesontown	1,392	1,431	1,318	1,205	1,067
Whitevale	1,000	958	898	818	763
Ibrox	709	622	702	581	592
Govan Central	837	798	825	695	667
Mile-end	1,700	1,633	1,556	1,335	1,354
Total	7,803	7,403	7,181	6,313	6,127
Deaths:					
Calton	186	194	138	119	112
Cowcaddens	162	141	139	148	111
Hutchesontown	219	224	167	174	149
Whitevale	169	170	117	119	89
Ibrox	104	83	91	79	66
Govan Central	118	114	109	75	97
Mile-end	257	287	188	202	159
Total	1,215	1,213	949	916	783
Infant mortality per 1,000 births:					
Calton	164.60	190.94	145.72	132.22	129.18
Cowcaddens	156.52	149.21	148.66	189.99	135.86
Hutchesontown	157.33	156.53	126.71	144.40	139.64
Whitevale	169.00	177.45	130.29	145.48	116.64
Ibrox	146.69	133.44	129.63	135.97	111.49
Govan Central	140.98	142.86	132.12	107.91	145.43
Mile-end	151.18	175.75	120.82	151.31	117.43
Average for Group	155.71	163.85	132.15	145.10	127.80

Source:

D-TC 7/11/3/14.22, *Report of the Medical Officer of Health for 1914-19*, Births: Table VI, 130; Deaths: Table XV, 137.

Appendix B – Mortality (Infants)

Average Mortality Group

Municipal Ward	1914	1915	1916	1917	1918
Births:					
Springburn	1,572	1,595	1,536	1,360	1,375
Dalmarnock	1,883	1,848	1,741	1,619	1,539
Townhead	991	932	890	819	808
Sandyford	550	496	508	501	486
Pollockshaws	398	358	312	256	277
Plantation	915	861	836	815	777
Gorbals	893	839	876	728	740
Total	7,202	6,929	6,699	6,098	6,002
Deaths:					
Springburn	223	223	151	170	160
Dalmarnock	308	285	227	199	190
Townhead	138	144	101	122	90
Sandyford	81	87	69	61	47
Pollockshaws	42	36	39	24	27
Plantation	109	121	80	114	82
Gorbals	124	113	95	105	113
Total	1,025	1,009	762	795	709
Infant mortality per 1,000 births:					
Springburn	141.86	139.81	98.31	125.00	116.36
Dalmarnock	163.57	154.22	130.38	122.92	123.46
Townhead	139.25	154.51	113.48	148.96	111.39
Sandyford	147.27	175.40	135.83	121.76	96.71
Pollockshaws	105.53	100.56	125.00	93.75	97.47
Plantation	119.13	140.53	95.69	139.88	105.53
Gorbals	138.86	134.68	108.45	144.23	152.70
Average for Group	142.32	145.62	113.75	130.37	118.13

Source:

D-TC 7/11/3/14.22, *Report of the Medical Officer of Health for 1914-19*, Births: Table VI, 130; Deaths: Table XV, 137.

Appendix B – Mortality (Infants)
Less than Average Mortality Group

Municipal Ward	1914	1915	1916	1917	1918
Births:					
Fairfield	676	631	665	560	553
Woodside	1,183	1,092	1,067	863	954
Shettleston/Tollcross	906	786	789	704	664
Cowlairs	987	898	890	819	755
Partick East	496	503	437	430	458
Maryhill	1,316	1,277	1,189	987	965
Partick Central	837	798	825	695	667
Total	6,401	5,985	5,862	5,058	5,016
Deaths:					
Fairfield	73	74	58	46	56
Woodside	137	176	86	119	86
Shettleston/Tollcross	102	119	60	81	66
Cowlairs	107	141	98	88	70
Partick East	56	72	57	38	54
Maryhill	146	147	107	112	98
Partick Central	103	125	79	88	77
Total	724	854	545	572	507
Infant mortality per 1,000 births:					
Fairfield	107.99	117.27	87.22	82.14	101.27
Woodside	115.81	161.17	80.60	137.89	90.15
Shettleston/Tollcross	112.58	151.40	76.05	115.06	99.40
Cowlairs	108.41	157.02	110.11	107.45	92.72
Partick East	112.90	143.14	130.43	88.37	117.90
Maryhill	110.94	115.11	89.99	113.48	101.55
Partick Central	123.06	156.64	95.76	126.62	115.44
Average for Group	113.11	142.69	92.97	113.09	101.08

Source:

D-TC 7/11/3/14.22, *Report of the Medical Officer of Health for 1914-19*, Births: Table VI, 130; Deaths: Table XV, 137.

Appendix B – Mortality (Infants)

Low Mortality Group

Municipal Ward	1914	1915	1916	1917	1918
Births:					
Govanhill	1,148	1,061	1,004	868	811
Partick West	662	626	594	511	544
Park	195	217	245	260	289
Dennistoun	922	901	910	724	668
Jordanhill	358	335	301	306	251
Langside	771	764	722	606	539
Pollockshields	182	166	155	121	157
Kelvinside	270	299	264	221	260
Cathcart	305	269	315	216	212
Total	4,813	4,638	4,510	3,833	3,731
Deaths:					
Govanhill	137	120	96	93	67
Partick West	67	74	56	59	40
Park	13	23	17	23	20
Dennistoun	82	77	59	58	46
Jordanhill	34	27	19	24	19
Langside	41	51	31	26	34
Pollockshields	10	8	3	6	8
Kelvinside	16	13	9	9	12
Cathcart	16	25	19	8	10
Total	416	418	309	306	256
Infant mortality per 1,000 births:					
Govanhill	119.34	113.10	95.62	107.14	82.61
Partick West	101.21	118.21	94.28	115.46	73.53
Park	66.67	105.99	69.39	88.46	69.20
Dennistoun	88.94	85.46	64.84	80.11	68.86
Jordanhill	94.97	80.60	63.12	78.43	75.70
Langside	53.18	66.75	42.94	42.90	63.08
Pollockshields	54.95	48.19	19.35	49.59	50.96
Kelvinside	59.26	43.48	34.09	40.72	46.15
Cathcart	52.46	92.94	60.32	37.04	47.17
Average for Group	86.43	90.13	68.51	79.83	68.61

Source:

D-TC 7/11/3/14.22, *Report of the Medical Officer of Health for 1914-19*, Births: Table VI, 130; Deaths: Table XV, 137.

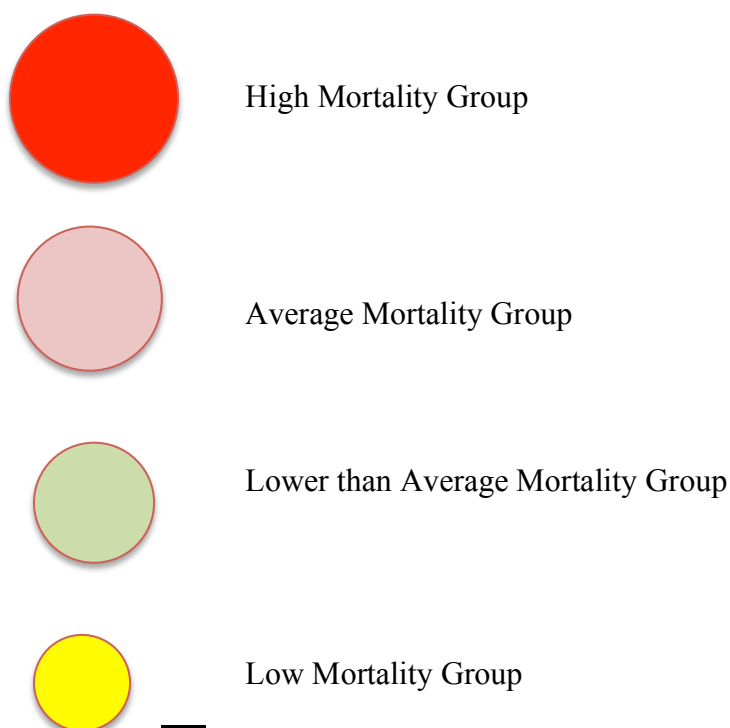
Municipal District Boundaries

The map on page 259 shows the geographical boundaries of each municipal district in 1912.¹ There were no changes in boundaries until after the war.²

Mortality Rates by Municipal Districts

The map on page 260 provides a visual guide of the location of the poorer and more affluent districts in 1914. Larger red circles denote poorer areas with high mortality rates graduating down to smaller yellow circles for affluent districts with low mortality rates.³

Key to Mortality Rates by Municipal Districts (Page 259).



¹ A.B. McDonald, City Engineer, City of Glasgow. *Map of the County of the City of Glasgow as Divided into Municipal Wards: Compiled from Actual Survey*, 1:12672 scale, 86 by 112cm. (Edinburgh: John Bartholomew, 1912), accessed from University of Glasgow Library, Shelf-mark: Maps C18: 45 GLA44.

² See page 151.

³ The visual guide uses a map provided by the Edinburgh Geographical Society, *Survey Atlas of Scotland, Plate 64: Plan of Glasgow*, 1:12672 scale, 41 by 54 cm. (Edinburgh: John Bartholomew, 1912), accessed from the National Library of Scotland.

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