‘Fit to Fight’: How the Physical Condition of Conscripts Contributed to the Manpower Crisis of 1917-18, by R.J. Clare

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‘FIT TO FIGHT?’
HOW THE PHYSICAL CONDITION OF THE CONSCRIPTS CONTRIBUTED TO THE MANPOWER CRISIS OF 1917-18

R.J. CLARE

Introduction
By 1917 the British Army on the Western Front faced a manpower crisis. Great Britain’s difficulties in struggling to maintain her industrial output and her import/export trade while simultaneously trying to maintain her armed forces at full strength has long been recognized. The defeat of Russia had released more than a million battle-hardened German soldiers from the Eastern Front for service in the west and, following the mutinies within the French Army in 1917, the manpower requirement of the British Expeditionary Force [BEF] in the face of superior German forces was ever more urgent. While the United States of America had entered the war, it would take time for her soldiers to undertake the full combat training required to participate effectively in operations. The demand for British manpower was therefore enormous. While these external factors provide a reliable and traditional explanation for the manpower crisis, other factors also need to be taken into consideration before a definitive assessment of the situation can be made.

This article aims to establish another element in the manpower crisis as a significant cause of the situation in which the BEF found itself. It will explore the extent to which the health and fitness of British Army conscripts of 1917-18 affected the BEF’s ability to provide men for the combat formations that constituted the Army’s fighting strength on the Western Front. It will challenge the view that the principal reason for the manpower crisis of 1917-18 was due to the competing demands of the Army and industry.

Social enquiry and the British Army
To understand why so many men were rejected as unfit to fight as frontline soldiers it is necessary to set the context of their health and fitness into their Victorian and Edwardian childhoods.

5 R. Chickering, 'World War 1 and the Theory of Total War' in R. Chickering & S. Forster. (Eds), Great War, Total War, (Cambridge: 2000), p. 44.
Seebohm Rowntree's detailed study of poverty in York published in 1901 provides a startling picture of the health and fitness of men who applied for enlistment into the Army at York, Leeds and Sheffield between 1897 and 1901. Of 3,600 men who applied, 950 were rejected outright.6 However, of the 2,650 who were accepted, 760 were accepted as specials; men who although not up to the Army's standard of health and fitness when they applied, were accepted for a trial period in order to give them the opportunity to achieve the required standard of fitness after several months of regular food, exercise and attention to hygiene.7 What is of significance in Rowntree's study is that if the number of men who were rejected outright is combined with the specials then the total number of men who were unfit on applying is 1,710, or 47.5% of the total. Although the number of outright rejections in Rowntree's study amounts to 26.5%, it was below the national average. The Annual Report of the Inspector General of Recruiting in 1900 was quoted in Rowntree's study in order to compare his findings with the national rejection rate, which stood at 28% for all ailments and 'want of physical development.'8 The national figure gave no details of specials that were accepted into the Army, but if the local figures were replicated for the United Kingdom as a whole, then it naturally follows that the health of at least 50 per cent of the recruits who applied for enlistment into the Army was below the required standard.

The living and social conditions of the working classes
A number of social studies were undertaken in the nineteenth century that highlighted the poor conditions in which the working classes lived.9 In 1886 Charles Booth undertook a detailed study of the poor in London's East End.10 His findings highlighted in graphic detail the dreadful conditions of housing and nutrition that the working classes endured and he identified more than 300,000 people living in a state of poverty and chronic want.11 In 1892 Booth provided evidence that for the whole of London 30.7% of the population, almost one third, was below the poverty line, while 8.4%, were living in abject poverty.12 Five years later, in 1897, Booth's assessment of poverty was virtually unchanged and that within reasonable expectations one third of the population was on, or below the poverty line. He concluded that the food the poor survived on was basic and repetitive and, while they more or less had enough, they seldom had sufficient.13

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7 Ibid., p. 217. See also House of Commons Sessional Papers, 1892, Vol. L (50), p. 625 - Army (Recruiting) Command Paper C 6838 – Report showing the present position of recruiting, giving the number and describing briefly the quality of recruits obtained in 1892, up to 31st July.
8 Ibid., p. 219.
13 Rowntree, Poverty, pp. 69-74.
In 1899 Rowntree gathered information on housing, occupations and the earnings of 11,560 wage-earning families living in 388 streets in York. His study identified 4.2% of the working class population as being chronically ill-housed, ill-clothed and underfed, attributing their poverty to a variety of economic reasons. The findings also suggested that a lack of food meant that the children of the poor grew up weak and diseased and thus perpetuated the 'race of the unfit'. In October 1900 Rowntree's investigators carried out examinations of 1,919 school children to highlight the effects of poor nourishment in relation to height and weight. They found on average that the height of a child of 'the unfit' was three and half inches lower than those in the higher classes, while their weight was on average eleven pounds less.

It was from this background of childhood poverty and social deprivation that many young adult men were conscripted into the Army of 1917-18.

Just as the Boer War showed up the many failings of the British Army at a strategic and tactical level, of equal importance was the poor health of the volunteers who tried to enlist at the outbreak of the war and whose rejection exhibited the country's neglect toward its people. High levels of malnutrition were evident in the number of men who were rejected when trying to enlist in the Army. Of 12,000 Salford men who volunteered for service in 1899, 8,000 were rejected outright following medical examination, with only 1,200 being accepted as completely fit for active service.

The report of the Inspector General of Recruiting of the Army Medical Services during the Boer War stated that 40% of recruits nationally had to be rejected and in some areas the figure was 60% due to physical disabilities.

In 1903, a Royal Commission was set up to enquire into all aspects of the war in South Africa, taking evidence from soldiers and statesmen alike. General Kelly-Kenny, Adjutant-General to the Forces and Inspector-General of recruiting between 1897-98, stated that the mental qualities of the ordinary soldiers did not match their European counterparts and that their physical disabilities were due to overcrowding in the industrial towns. He went on to state that, 'the recruits now come from a class who have not had the advantage, as a rule, of good food in their childhood, of careful bringing up, careful nursing and doctoring and so on.'

The Boer War brought about a great debate in both the Tory and Liberal parties on the health of the poor. The Tory MP John Gorst took up the cause of...
school meals for children, but the Balfour government would not sanction any measures that involved a financial imposition on national or local taxation.\textsuperscript{23}

The Liberal Party’s perspective on Liberal-Imperialism led to an acrimonious division in the Party, but what both sides did agree on was the need for social reform following the war. Lord Roseberry argued that, ‘Where you promote health and arrest disease, where you convert an unhealthy citizen into a healthy one, where you exercise your authority to promote sanitary conditions and suppress those which are the reverse, you, in doing your duty, are also working for the Empire.’ Similarly Asquith declared, ‘Make the Empire worth living in as well as worth dying for’\textsuperscript{24}

Arising out of the Royal Commission was an acknowledgement by parliamentarians and philanthropists alike that more needed to be done to address the health of a large proportion of the population. The concept of ‘National Efficiency’\textsuperscript{25} became an axiom in the dialogue of social reformers, although the means by which it was to be achieved differed greatly among reformers. Sidney Webb suggested a ‘National Minimum’ standard of life that included an improved educational system, pure water supplies, proper drainage systems, healthy housing and the availability of hospital accommodation.\textsuperscript{26}

An inter-departmental committee representing the Board of Education, Board of Scottish Education, Inspector of Marine Recruiting, Inspector of Industrial and Reformatory Schools and the General Register Office was appointed to enquire into ‘Allegations concerning the deterioration of certain classes of the population as shown by the large percentage of rejections for physical causes of recruits for the Army.’\textsuperscript{27} It had specific terms of reference to, ‘indicate generally the causes of such physical deterioration as does exist in certain classes; and to point out the means by which it can be most effectively diminished.’\textsuperscript{28}

General Sir Frederick Maurice, former Officer Commanding at Woolwich, stated in his evidence to the committee an incident in his own household that had shaped his opinion of the poorer classes. He recalled to the committee how his family was kept awake at night by the cries of a baby belonging to a cook in his employ who was feeding her six-month old infant cold, boiled cabbage for supper. He stated ‘the child was certainly given food it was quite unable to digest. . . I was perfectly convinced that that would have an effect on young men of 18 years of age if that was the way they were treated when babes in arms.’\textsuperscript{29} General Maurice was

\textsuperscript{25} Searle, \textit{The Quest For National Efficiency}.
\textsuperscript{27} British Library, A.W. Fitzroy (Chairman), Command Paper Cd 2175 – Inter-Departmental Committee report on Physical Deterioration Vol. 1- Report and Appendix (1904), p. v.
\textsuperscript{28} Ibid., p. v.
\textsuperscript{29} Ibid., Minutes of Evidence, Gen Sir Frederick Maurice, p. 1.
right, as it was precisely young boys growing up in this period, in conditions of poverty and hardship, who would be called up to serve as conscripted soldiers in 1917-18. The former Inspector-General of Recruiting, Major-General Herbert Cuthbert Borrett, stated in his evidence to the committee ‘it is a disturbing fact that 40 to 60 per cent of the men who present themselves for enlistment are found to be physically unfit for military service.’

Borrett also went on to state that he did not consider the standard of fitness required by the Army to be particularly high; in fact he thought it to be a fair standard, and suggested that some even thought it too low. He stated that the physique of the recruit-giving class was poor and in 1902 medical rejections amounted to 32.22%.

The Surgeon General, Sir William Taylor, reported to the committee that in 1902 the recruiting centres with the largest number of medical rejections were respectively the urban areas of Manchester, Liverpool, Belfast, Hounslow, Newcastle and London.

Among the many recommendations of the Inter-Departmental Report on Physical Deterioration were the feeding and medical inspection of schoolchildren as a means of evaluating and improving the health of future generations. As a consequence, the debates in Parliament on the feeding and general health of schoolchildren led to the ‘Education (Provision of Meals) Act, 1906’. The Act allowed Local Education Authorities (LEAs) to provide food for schoolchildren, either out of public funds or in association with voluntary organisations. This was an important milestone in the feeding of schoolchildren, who otherwise relied on charitable organisations, or went hungry. However, a major flaw of the act was that the provision of school meals was not obligatory. Leicester LEA, for example, refused to take responsibility for providing meals. Consequently, the provision of school meals varied considerably between the LEAs with the result that much of the feeding of schoolchildren nationally was administered in a selective manner, or supplemented by voluntary organisations. Significantly, the Education Board was keen to emphasise that the principle reason for the Act was not to extend the provisions of poor relief, but to enable children to take full advantage of the education system and not be inattentive in class because of hunger. However, child health did begin to show signs of improvement. A Board of Education report of 1910 stated, ‘In some cases it is suggested that the provision of meals by

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33 Inter-departmental Committee on Physical Deterioration,’ p. 91.
36 Ibid., p. xiv.
37 Bulkley, School Children, pp. 50-58.
improving the physical condition of the children rendered them less likely to remain at home for trifling ailments; but it is obvious that the prospect of a dinner may have made the children more ready to come to school.’ The report from a teacher at a school in Wallasey, Cheshire stated, ‘In several cases the dull, tired and frequently bored look about the children has disappeared, giving them a brighter manner and keener interest in their work.’

The medical inspection of schoolchildren was established under the Education (Administrative Provisions) Act of 1907. It placed a duty on LEAs to carry out medical inspections of children, ‘before, at the time of, or as soon as possible after, their admission to school.’ However, the legislation was rather generalised and did not specify the administrative procedures or financial arrangements required of the Education Board or LEAs in implementing a school medical service. As late as 1914, the Chief Medical Officer of the Board of Education, Sir George Newman, in his annual report criticised the lack of cooperation between the Sanitary Authority and the Education Authority in the way infant health was managed.

In 1907 the Chief Medical Officer of the Board of Education reported that more than 100,000 schoolchildren were in a condition of semi-starvation between the ages of five and thirteen. He went on to state that in the same year he observed the clearest signs of starvation in an inspection of Liverpool schoolchildren; ‘stunted growth, emaciation, rough and cold skin and mouths full of viscid saliva due to hunger.’ The poor physical condition of children noted by Rowntree’s investigators was also recorded in subsequent enquiries around the UK. In Glasgow in 1903-4, 40% of working class children were reported as suffering from defective hearing, while in 1909 among elementary school children in London 16% had respiratory impairment and the same percentage was reported in Manchester and Birmingham in 1912-13. A report published in 1905 commented on ‘vermin, uncleanliness and disease in children.’ In London 50,000 children were examined for ringworm and 10,000 parents were notified of the problem.

Providentially, organisations such as the Birmingham Infants’ Health Society (BIHS), formed in November 1907 in St Bartholomew’s Ward of the city, did much to provide food for children and child-rearing education for mothers. Its

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40 Ibid., p. 4.
42 TNA, Treasury, T 171/78, Report by Sir George Newman, Chief Medical Officer of the Board of Education to Lloyd George 8th April 1914, pp. 10-11.
45 Cd 2779 – Medical Inspections and Feeding of Children Attending Public Elementary Schools, pp. 24-25.
46 Ibid., p. 25.
1911 annual report showed that apart from undertaking home visits the Society was also providing weekly consultations for mothers, recording the weight of infants and offering advice on feeding, clothing and the nurturing of children. Educational classes for mothers were held in sewing, cookery, food values, childhood ailments and cleanliness. This programme formed part of the ‘Schools for Mothers’, a national initiative run by voluntary organisations, or LEAs. The BIHS report showed that deaths from diarrhoea and enteritis among infants who had attended the Society’s health clinics had fallen from 66 in 1904 to 43 in 1911.

Birmingham was not alone and many other voluntary organisations set up similar infant and child health societies at this time to provide, or supplement existing services. However, despite some improvements in the health of children in the years following the Education Acts of 1906 and 1907, long-term demographic trends in health improvement were dependent on socio-economic development for the working classes. Better nutrition, regular meals, sleep, exercise and better living conditions were aspirations that would take longer to implement.

The Volunteers and Medical Examination
At the outbreak of the Great War hundreds of thousands of men flocked to recruiting offices. Despite the logistical problems by 12 September 1914, 478,893 men had attested at recruiting offices across the nation that were only designed to handle less than 100 men a day. Men volunteering for service up to December 1915 were subjected to the Army’s old system of medical examination, which was a straightforward process requiring the examiner to certify that a man possessed certain definite characteristics and was free from other equally definite defects. Among the definite characteristics were good intelligence, good chest formation and lung capacity, a high standard of vision and no congenital malformations or defects. Defects included such conditions as diseases of the heart, defective intelligence, loss or decay of teeth, traces of corporal punishment, or any disease or physical defect calculated to render the man unfit for the duties of a soldier. The medical officer

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48 TNA, T 171/78, Report by Sir George Newman, Chief Medical Officer of the Board of Education to Lloyd George 8th April 1914, p. 6.
49 Ibid., pp. 20-28.
50 Cd 2779 – Inter-departmental Committee on Medical Inspection and Feeding of Schoolchildren Attending Public Elementary Schools, pp. 38-41.
53 Ibid., p. 52.
was simply required to pass a man as fit or unfit. To supplement the over-stretched army doctors, civilian doctors were drafted in and were paid 2s 6d (30p)\(^{56}\) for each recruit they examined. However, civilian doctors were largely ignorant of the physical standards of the Army, and with the sheer volume of men that they and army doctors had to examine combined with the financial reward for passing men as fit, examinations were often rushed and superficial. Consequently, disabilities and medical conditions went unnoticed or were ignored. The War Policy Committee reported on 7 September 1915 that almost a quarter of a million men (245,457) had broken down physically after enlisting during the early months of the war and had been discharged from the Army. The reason given was the large numbers of men enlisting when regular medical inspections were not possible.\(^{57}\) As a consequence of such high numbers of unfit and unhealthy men still being found in the ranks of the Army, the War Office reviewed the whole system of medical examinations. On 24 December 1915 it issued instructions for the formation of medical boards. A board consisted of civilians with the president of each board being a military officer with the rank of Major or Lieutenant Colonel.\(^{58}\) On 26 January 1916, The Army Council introduced into the medical examination a revised system of grading with the following categories of fitness:

- **General Service**
- **Field Service at Home**
- **Garrison Service**
  - Abroad
  - At home
  - Labour (road making, entrenching work, etc.)
  - Sedentary work (clerks, etc.)\(^{59}\)

On 4 May 1916 the Council revised the medical grades and issued Instruction number 1023, which divided the men into the following five categories;

- **(A) Fit for General Service.**
- **(B) For Service Abroad.**
- **(C) For Service at Home only.**
- **(D) Temporarily unfit for Service in (A), (B), (C), but likely to become fit in six months.**
- **(E) Unfit for Service in (A), (B), (C), and not likely to become fit in six months: or awaiting discharge or re-classification.**\(^{60}\)

Each of the categories, A-D, were further sub-divided giving a total of thirteen different categories in which a man could be placed. Between August 1916 and June 1917, the War Office Department of Recruiting examined more than 2.6 million men.\(^{61}\) It became known, however, that a high proportion of recruits who

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\(^{55}\) Ibid., pp. 12-13.

\(^{56}\) Simkins, Kitchener's Army, p. 72.

\(^{57}\) TNA, Cabinet Papers, CAB 27/2, Committee of Imperial Defence, War Policy: Report, Supplementary Memoranda, Proceedings and Appendices Of A Cabinet Committee. 7 September 1915, p. 5.


\(^{59}\) Ibid., p. 14.

\(^{60}\) Ibid., p. 14.

\(^{61}\) Winter, The Great War, p. 51.
had been examined and recommended for exemption were having their status redefined by medical boards in an attempt to supply the manpower demands of the Army, consequently unfit men were being passed fit for service. In April 1917, Army Council Instruction 640 provided for the re-examination of men who had previously been rejected as unfit, or had been given an exemption from military service. Around a million men were called up for re-examination and although the number of men passed fit for Category A was small, it was found that some medical boards were over-enthusiastic in their desire to find men fit. One Board passed over 40 per cent of the men it examined, as fit for Category A, despite the fact that they had previously been rejected outright. A Parliamentary enquiry was set up in July 1917 to look at the medical grading system. Chaired by Edward Shortt, the enquiry examined the evidence and found it so damning that responsibility for medical examinations passed from the War Office to the Ministry of National Service. On 1 November 1917, medical examinations were placed entirely under civilian control. The Ministry of National Service re-organized the medical boards and divided the country into ten regions with each region under the administration of a commissioner of Medical Services.

The Conscripts and the Medical Grades
The demand for manpower from the Army had brought into sharp focus the physical condition of many working class men who were called up for military service and made evident the difficulty in establishing specifically military fitness as opposed to an overall state of adequate health. Physical fitness, then as now, has many variables and is a quality that cannot be measured exactly. The revising of the medical grades was an attempt to address this problem in order to accommodate the various states of fitness, or unfitness, of the conscripts. On 17 November 1917 National Service Instruction No. 13 was issued outlining a revised and final classification system that simplified the grades into four broad grades – I, II, III and IV.

Grade I – Fit for general service
Grade II – Likely to improve with training
Grade III – Only fit for labouring duties or sedentary work
Grade IV – Permanently and totally unfit for any form of military service

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62 Ibid., p. 53.
63 TNA, NATS 1/768, Report upon the Medical Department of the Ministry of National Service, 1917-1919, p. 16.
64 Ibid., p.16.
65 Ibid., p. 17.
66 Ibid., p. 22.
67 Winter, The Great War, pp. 48-64.
69 Ibid.
The grades themselves did not give an index of fitness; simply an indication of the distribution of the health of conscripts. The allocation of a grade of fitness did not give a definition of fitness; it merely showed that the fitness of a group of men varied widely. The Ministry of National Service Report, Volume 1, ‘Physical Examination of men of Military Age’\(^{70}\) (referred to as Report), gave the medical returns from the nationwide Ministry of Service regional boards and actually defined the foundation of a physical census of men of military age to a degree never before embarked upon. Among the findings of the Report was a recognition of the necessity for a method of calculating an average crop of fit men and what relationship the numbers of men in the four grades bore to each other. The Report was submitted to anthropologist Professor Arthur Keith in August 1918 for his interpretation and analysis of the figures. In setting out his analysis he commented:

>We have every reason from past enquiries to suppose that Physical Fitness, the quality that separates men into grades, will be distributed amongst recruits exactly as are certain qualities capable of exact measurement – such as stature.\(^{71}\)

Keith devised a mathematical formula based on a sample of 1,000 Cambridge students who had been measured for height in order to see how that particular characteristic was distributed.\(^{72}\) From his calculation, he was able to determine an index of fitness in a group of men by whatever physical attribute was to be measured; for example, height, weight and chest size. In his calculations of physical characteristics a man of 5 feet 11 inches with a 40 inch chest and weighing 12 stone could, theoretically, be considered likely to be militarily fit; conversely, a man of 5 feet with a 28 inch chest and weighing 7 stone was likely to be militarily unfit.\(^{73}\) Keith’s calculations measured only physical characteristics and took no account of physiological condition. This, theoretically, gave medical boards the means of estimating the quality of the men being examined and if there was any wide variation from the index of fitness then it meant either the quality of the men was not very high, or that there was a fundamental flaw in the characteristic being measured in respect of its accuracy as an indicator of fitness.

Keith’s test was designed to calculate an index for the average fitness of a population. He suggested a definition of efficient fitness as for men placed in Grade I and the index of efficient fitness was intended to equate to the numbers of soldiers the population was likely to contribute to Grade I. In a normal population, Keith regarded the normal/average index of efficient fitness as 70%,\(^{74}\) therefore,

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\(^{71}\) Ibid., p. 6.

\(^{72}\) Ibid., p. 6.

\(^{73}\) Metric equivalents are for tall candidates – Height 5’11” = 180.5cm, chest measurement 40” = 101.5cm. Weight 12 stone = 168lb = 76.2kg. Short candidates – Height 5’ = 152.5cm, chest 28’ = 71cm. Weight 7 stone = 98lb = 44.45kg.

\(^{74}\) Ibid., p. 7.
whatever test for fitness was applied, a figure of 70% of men should have appeared in Grade I. However, in reality this was not the case. Table 3 shows the number of men graded between 1 November 1917 and 1 November 1918 compared with the notional 70% Grade I that Keith hypothesized. Line 1 illustrates the result of the men graded. Line 2 shows the predicted distribution according to Professor Keith's hypothesis.

Table 3:75

<table>
<thead>
<tr>
<th>Grade</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Total Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual numbers in each grade</td>
<td>871,769</td>
<td>546,276</td>
<td>756,859</td>
<td>250,280</td>
<td>2,425,184</td>
</tr>
<tr>
<td>Numbers by Keith’s predicted standard</td>
<td>1,697,595</td>
<td>485,040</td>
<td>181,902</td>
<td>60,647</td>
<td>2,425,184</td>
</tr>
<tr>
<td>Difference</td>
<td>-825,826</td>
<td>+62,236</td>
<td>+574,957</td>
<td>+189,633</td>
<td></td>
</tr>
</tbody>
</table>

The combined total of 1,303,135 men appearing in Grades II – III, i.e. those men who could be employed as soldiers but not for combat duty, represent an astonishing proportion. If the number of men passed fit for general service in Grade I is compared with those men in Grades II – IV, then the total number who were unsuitable for general service, or military service of any kind is 1,553,415 men; 64% of the 2,425,184 men examined. This huge number highlights the poor physical standard of the men who were being called up from 1917 onwards. At a time when manpower was short, to have over 1.3 million men in uniform, but unsuitable to provide combat replacements for casualties was a major problem for the Army.

The Causes of Low Grades and Rejection

The instructions that were laid down for grading men took into account sixty common medical conditions76 and naturally influenced the grade a man was given in respect of his suitability for military training and his military role.

The findings in the Report are a unique record that shows the extent and nature of the physical disabilities that afflicted conscripts, and most likely represented an accurate record of the state of British manhood during that period. The Report acknowledged that there was no reason to suspect that the men who volunteered before conscription were any fitter than men who had been conscripted, as the numbers of volunteers who were later medically discharged

75 Ibid., p. 12.
76 BL, Command Paper Cd 8834. NSI No. 3 of 1917 – General Directions for the Guidance of Commissioners, Deputy Commissioners and Members of Medical Boards.

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http://www.sahr.org.uk
indicated. It must also be remembered that the volunteers of 1914 were not subjected to the same system of grading that was subsequently introduced. The Report’s authors concluded:

*It [the report] has compelled us to take stock of the health and physique of our manhood; this stock-taking has brought us face-to-face with ugly facts and – one hopes – awoken us from the half-hearted complacency with which in the past we have treated our most important national asset, the health of the nation.*

One of the most predominant reasons highlighted in the Report for downgrading or rejection among the conscripts was poor physique, which included height, weight and chest measurement. Physical deformity was also a reason for rejection. The Report acknowledged that physique was a quality that arose out of racial inheritance and environment. And, while the report made known that there was no evidence to support racial degeneration of the population, it was thought there was ample evidence to support the contention that the modern conditions of life had a baneful effect on the physique of youths and men of military age.

It also stated that only some 20% of the male population between 18 and 41 years of age were found free from noteworthy physical defect. Of 210 youths in the North Western region rejected for military service aged 18, 19 and 20 years, 85 (40%) were rejected for poor physique and other physical defects. The remainder was rejected for a variety of chronic diseases.

Table 4 shows the average measurements expected for youths of 18 years and the average measurements of the 36 youths who were rejected because of poor physique.

<table>
<thead>
<tr>
<th>18 years of age</th>
<th>Expected average measurements</th>
<th>Actual measurements: 36 rejections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>5'5&quot;</td>
<td>4'9&quot;</td>
</tr>
<tr>
<td>Weight</td>
<td>116 lbs.</td>
<td>84 lbs.</td>
</tr>
<tr>
<td>Chest girth</td>
<td>32&quot;</td>
<td>29.9&quot;</td>
</tr>
</tbody>
</table>

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78 Ibid., p. 22.
79 Ibid., p. 140.
80 Ibid., p. 23.
81 Ibid., p. 49.
Another example is shown in Table 5, which presents the grades of Liverpool youths aged 18.

**Table 5:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade I</th>
<th>Grade II</th>
<th>Grade II</th>
<th>Grade IV</th>
<th>Deferred &amp; Unfit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>361</td>
<td>189</td>
<td>100</td>
<td>49</td>
<td>135</td>
</tr>
<tr>
<td>Percent</td>
<td>43.3%</td>
<td>22.6%</td>
<td>12.0%</td>
<td>5.9%</td>
<td>16.1%</td>
</tr>
</tbody>
</table>

Average Height: 65"
Average Weight: 114lbs
Average Chest Girth: 30.7 inches

The number of men unsuitable for general service was high – 473 or 56.7% of the sample did not meet the required standards for frontline service.

Table 6 shows the returns from the West Midlands region for November 1917 to April 1918 for 18 year olds. Average height is almost identical to the Liverpool figures.

**Table 6:**

<table>
<thead>
<tr>
<th>Place of Origin</th>
<th>Height inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birmingham</td>
<td>65</td>
</tr>
<tr>
<td>Burslem</td>
<td>65</td>
</tr>
<tr>
<td>Wolverhampton</td>
<td>65</td>
</tr>
<tr>
<td>Dudley</td>
<td>65</td>
</tr>
<tr>
<td>Coventry</td>
<td>66</td>
</tr>
</tbody>
</table>

Table 7, however, shows that the average weight for the same age group was slightly higher than for Liverpool.

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82 Ibid., p. 22.
83 Ibid., p. 76
Table 7:84

<table>
<thead>
<tr>
<th>Place of Origin</th>
<th>Weight, lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wolverhampton</td>
<td>115</td>
</tr>
<tr>
<td>Dudley</td>
<td>115</td>
</tr>
<tr>
<td>Birmingham</td>
<td>117</td>
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<td>Burslem</td>
<td>117</td>
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<tr>
<td>Coventry</td>
<td>118</td>
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The returns for the West Midlands Region also showed 1,747 men rejected for a variety of physical reasons; 38 for poor physique, 41 for amputations, 67 for defective limbs and 110 for deformity. Together the total was 246, or 14%.85

Chronic diseases and conditions were other reasons for rejection or downgrading. Tuberculosis (TB) of the lungs and heart disease being the most prevalent. In the North West return of the 834 Liverpool youths, 36 had TB while 26 had heart problems. In the Barnsley area 24,281 men aged between 18 and 51 were examined in the first six months of 1918 of which 1,844 were rejected for service: 461 had TB (18.9%) and 188 had heart disease (0.7%).86 In the London region 160,545 men were examined during January to October 1918. Of those men 4,327 had TB (2.6%) and 12,562 (7.8%) had heart problems.87

The Report states that medical boards did not grade recruits too low, but did, in fact, grade them as high as their medical conscience would allow. In cases of doubt, a man was placed in a higher rather than a lower grade. This is borne out by the numbers of men placed in higher grades during the German offensives of 1918, particularly during the months of March, April and May, when a substantial increase in those allocated to Grade I was recorded.88

Occupational and regional Differences

Occupation played an important part in the physical condition of the recruits, as did the regions they came from. The Report highlights the physical condition of three groups of workers who were well represented in Grade I in the Scottish region; miners, agricultural workers and men employed in iron works, three occupations that demanded a high degree of physical fitness. The three occupations were protected occupations, but by the fourth year of the war even these occupational groups were being scoured for suitable men. For agricultural workers the percentage of men of military age eighteen to forty-one who were

84 Ibid., p. 77.
85 Ibid., p. 86.
86 Ibid., p. 24.
87 Ibid., p. 25.
88 Ibid., p. 15. The reports for Great Britain in April 1918 show an almost 20% increase in Grade I numbers by monthly comparisons.
placed in Grade I was 78.75%. For miners it was 75.07% while men employed in ironworks supplied 77.28%.89

The industrial areas of Scotland exhibited similar statistics regarding the physical and medical condition of conscripts as the industrial regions of England previously mentioned, and showed similar patterns of down-grading and rejection. Out of 10,000 men examined between August 1916 and May 1917 less than half, 48.5%, were graded outside of Grades II to IV. Heart disease and TB, as in other areas, were the conditions with the highest incidence.90 The physical characteristics of the men of Glasgow were particularly noted in the Report as being, on the whole not good; stature being on the small side, and there being an unduly high percentage of deformities.91

Between November 1917 and June 1918 during the manpower trawl of the protected industrial and agricultural occupations in Wales, large numbers of men were placed in Grade I. The Welsh region had a high proportion of miners and agricultural workers who demonstrated similar levels of health and fitness to their counterparts in Scotland. However, figures for Lampeter, Monmouthshire and Glamorganshire also show high levels of heart disease, which the Report described as alarming. It also stated the reasons for heart disease among the conscripts being due to (a) starting work at too early an age, (b) not being medically examined and graded on starting work, (c) often being put to work that was too physically demanding.92

However, while agricultural communities were able to supply Grade I men in a higher percentage, attention was drawn to physical and medical conditions present among agricultural workers that were common to urban workers. The Cambridge Medical Board reported that while agricultural workers formed the majority of their recruits, it was found that the physical condition of these men deteriorated abnormally with advancing years. The Reading (Berkshire) Medical Board reported that among its agricultural workers, rheumatism and pulmonary conditions were common afflictions. The Norwich Medical Board found that the percentage of military rejections among young agricultural workers was high, with many being due to deformities, epilepsy, defective intelligence and TB.93 Despite the high percentage of agricultural workers in Scotland placed in Grade I, a chairman of one of the Scottish National Service Medical Boards reported that the examinations of young men of minimum military service age were disappointing; the numbers deferred for re-examination because they were not up to the required standard of physical fitness being unduly high. This was equally noticeable amongst the agricultural as amongst industrial workers.94

89 Ibid., p. 132.
90 Ibid., pp. 140-142.
91 Ibid., p. 128.
92 Ibid., p. 154.
93 Ibid., p. 120.
94 Ibid., p. 138.
It would appear from the Report that there was little variation in the incidence of physical and medical conditions between urban and rural workers, and while occupation and health were recognized as interdependent, it would also appear that rural life was just as harsh on the development of the individual as was industrial work. The figures suggested that the perception that agricultural workers were much fitter than their urban counterparts was probably not accurate.

The Unfit Conscripts and the Consequences for the Army

The demand for manpower on the Western Front had been a concern for some considerable time prior to 1918. In December 1916, Major-General Henry Merrick Lawson, GOC Northern Command, made a tour of the rear areas of the BEF in France in order to comb-out men in the lower medical grades who might be fit enough for frontline service. In the week ending 3 December 1916, the number of troops identified in the lines of communication amounted to 10,084 officers and 241,589 Other Ranks. These troops were distributed among a variety of units such as the Royal Army Veterinary Corps, Army Pay Corps, Royal Army Medical Corps, Army Service Corps and soldiers recovering from wounds in hospitals.95 Among the numbers of men identified were ‘permanent base’ (PB) men and ‘permanent unfit’ (PU) men.96 PB men were those unfit for general service who could either attain full fitness, remain in their grade, or be downgraded to PU status. The role of the PB men was many and varied and essentially they fulfilled any task that they were able to undertake, such as guarding prisoners of war, ammunition depots, or undertaking a trade in which they were skilled. In his examination of PB men in the base at Étaples, Lawson noted men of all professions and with ages ranging up to 60 years. A summary in Table 8 of men aged between 40 years and 60 years shows the respective percentage of their age group in a total of 1,115 PB men.

<table>
<thead>
<tr>
<th>Ages</th>
<th>40-45</th>
<th>45-50</th>
<th>50-60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of men</td>
<td>179</td>
<td>174</td>
<td>38</td>
</tr>
<tr>
<td>Percentage</td>
<td>16%</td>
<td>15.6%</td>
<td>3%</td>
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Lawson’s report hinted at more than a degree of disorganization in the rear areas with regard to the PB men. He suggested that PB men who were unlikely to be passed fit for general service should be organized more effectively into garrison troops and either battalion labour corps, or transferred to Home Service. He went on to make the recommendation that women could fulfill many of their functions.

96 Ibid., p. 14.
Nevertheless, at the conclusion of his report, out of the 241,589 men in the rear areas, he could only identify the modest figure of 26,000 men suitable for General Service.98

By May 1916 the War Office (WO) issued instructions to officers commanding districts and recruiting areas informing them of the requirement in the Defence of the Realm Act (DORA), for all businesses that employed men of military age to display in their premises lists of employees falling within that category. The WO instructions were designed to keep up the search for manpower and to act as a reminder that all premises should be inspected regularly to view the lists.99

On 30 November 1917, the return of the establishment of the BEF in France showed a fighting strength of 1,042,406 men and 603,877 non-fighting troops.100 In a letter to the Army Council in November, Field Marshal Haig stated his requirements to keep the BEF up to establishment. He cited ‘wastage’ from 1 January to 30 September 1917 as 75,700 men per month and went on to request a total reinforcement of 355,100 men by 31 March 1918.101 On 24 November Haig wrote, that ‘a serious situation’ was likely to arise in manpower following the dispatch of six British divisions to reinforce the Italian front. The effect of this would be to reduce the infantry by 250,000 men, a reduction of some 40% of his force by 31 March 1918.102 He expressed his anxiety that not only would the offensive power of the BEF be ‘paralysed’, but that its defensive power would also be affected and it might not be able to hold its line. Haig also made known his strong opposition to the reduction in the composition of divisions in order to meet the establishment requirements.103

Consideration had been given prior to this date as to the feasibility and advisability of changing the ages at which men could be called up by extending service to both younger men and older men. In a memorandum by Sir Auckland Geddes, Minister of National Service, dated November 1917 he had made suggestions for sending soldiers under the age of nineteen years overseas for service. He provided several estimates for the numbers of extra troops his proposals would bring. If soldiers aged 18 years and eight months were sent, the numbers available for reinforcements would be increased by 40,000; 18 years and six months would release up to 60,000 and young soldiers sent overseas at 18 years would provide another 120,000 soldiers. In order to be able to carry out his suggestion, Geddes recognized that the military age would also have to be lowered to 17 years in order that conscripts could receive sufficient training. Alternatively, he suggested that raising the military age to 45 years would bring in a further

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98 Ibid., Appendix.
100 TNA, NATS 1/385, Allotment of recruits to Army Council Demand.
101 Ibid., Haig letter, 2 November 1917.
102 TNA, WO 32/9553/2792, Memo from the Secretary of State for War, Lord Derby, regarding Haig's letter dated, 24 November 1917.
103 Ibid., Haig letter, 24 November 1917.
500,000 men and by increasing it to 50 years of age an estimated additional million men could be conscripted. The Army Council replied to Geddes’ proposals about the lowering of the military age by stating that it would not be in the interests of either the country or the recruit, due to the physical strain it would place upon youths who were not fully developed, resulting in their breakdown and the subsequent overcrowding of hospitals. Ultimately, however, the age limit for service overseas was reduced. George Archer was called up for service upon reaching 18 years of age and was drafted to France after only six weeks training in August 1918.

A draft report of the Cabinet Committee on Manpower dated January 1918 outlined the demand by the Army Council for the maintenance of the armed forces for the coming year and set the total requirement for the Army at 600,000 new men. Of these, 250,000 were to meet immediate requirements and 350,000 were casualty replacements to be provided at the rate of 50,000 a month. This was a requirement that the committee believed the Minister of National Service had no hope of providing, and in fact that no more than 100,000 men could be provided in total. In a memorandum dated 3 December 1917 Geddes stated a number of options for recruiting men from the munitions industries, other than from shipbuilding. He estimated that provided the Government was released from its pledges regarding protected occupations, following negotiations with the Trades Unions, up to 60,000 men could be found. Following their enlistment, Geddes estimated a further 108,000 men in category A could become available, provided a reduction in output was approved. He was keen for a re-negotiation of protection in the industrial workforce and argued that as Asquith had made the original pledge of protection in 1916, without a re-negotiation only 25,000 more men could be obtained from the munitions industry. In a summary of Cabinet minutes regarding Geddes’ proposals, it was recognized that in order to get a proportion of the men required, reductions in output of shipbuilding, food-production and munitions would be necessary. It was also considered that any further conscription among coal miners would result in a serious strike.

Another of Geddes’ proposals for securing manpower was made in January 1918 to Sir William Weir, Director General of Aircraft Production. Geddes

106 Imperial War Museum (IWM), Sound Archive 8949, George Thompson Archer.
109 TNA, WO 32/9553 GT2850, Maintenance of Armed Forces. Memo by Auckland Geddes, 3 December 1917.
111 Ibid., The position and Prospects of Recruiting. Cabinet Minutes, 1917.
proposed that all labour fit for general service between the ages of 18 to 23 should be withdrawn from aircraft production. However, Weir pointed out that the total number of skilled and semi-skilled men employed in aircraft production was 110,000 and that with a planned increase in aeroplane production, a further 40,000 men were required. He concluded that it was impossible to take manpower away from the industry without consequences to the programme.\textsuperscript{112}

\textbf{The Unfit Conscripts and the Manpower Crisis}

Clearly the search by Geddes, the Army Council and the War Cabinet for manpower was a difficult one that threw up many conundrums in balancing the needs of the Army with the needs of the other Armed Services and industry. As has been shown, the large numbers of conscripts, who were placed in the lower medical grades did not make their task any easier. There was also the added problem of what effective contribution men who had been medically downgraded could make to the war effort. Despite the improvements in the medical examination and grading systems, some men slipped through the net into the Army. The Chief of the Imperial General Staff, Sir Henry Wilson, inspected troops of the 25\textsuperscript{th} Division at Aldershot in 1918 prior to their embarkation for France and was clearly disturbed by the large numbers of unfit men he found in their ranks. In a War Cabinet minute, dated 3 September 1918, it was recorded that he was at a loss to understand how so many unfit men had been passed fit for duty by doctors.\textsuperscript{113} The problem of Grade III men often posed a problem for recruiting officers once a man had been medically graded and called up. On 20 November 1917, an Army Council Instruction advised on the distribution of Grade III men once they had been sent to a Recruit Distribution Battalion. They were to undertake a two-month physical training course to assess their level of fitness. If they successfully completed the course, they would be brought before an itinerant medical board for a re-assessment and possible re-grading into a higher grade. Those who failed would be found employment according to their civilian trade or level of ability.\textsuperscript{114} In a Ministry of National Service letter to the Commissioners of Medical Services in all regions dated May 1918 it was noted that in many cases men examined and placed in Grade III were not being called up and sent to Recruit Distribution Battalions for assessment, but instead remained in civilian work. The letter stated that a fair percentage of men in Grade III, after a course of physical training, were achieving higher grades and it therefore advised that great care should be taken when grading men if the probability was they would not be called up.\textsuperscript{115} The situation regarding Grade III men often

\textsuperscript{112} TNA, NATS 1/218, Memo by Sir William Weir, Director General of Aircraft Production. Proposed Withdrawal of Labour Aged 18 – 23 from Aircraft Production, 1 January 1918.

\textsuperscript{113} TNA, NATS 1/316, Extract from the minutes of a meeting of the War Cabinet, dated 3 September 1918. Inferior men of the 25th Division, September 1918.

\textsuperscript{114} TNA, NATS 1/714, Army Council Instruction No.1702 of 1917, Organisation of Recruit Distribution Battalion, Training Reserve for the Reception and Disposal of Cat B (ii) and B (iii) Recruits.

\textsuperscript{115} TNA, NATS 1/758, Grading of Recruits, Inconsistencies, 1918.
caused problems for the Medical Boards and the Army, and many examples can be found of recruiting regions requesting advice on what should be done with these men.\textsuperscript{116} One option suggested for Grade III men was to employ them as war work volunteers. In a memorandum from the Ministry of Labour dated 17 January 1918, the Director General of Recruiting, John Seymour-Lloyd, gave advice that Grade III men above the age of 35 could be employed as war work volunteers in order to release younger men for service.\textsuperscript{117}

The poor state of the health of the population was not a new phenomenon and in many respects, the standard of health found in the early volunteers and the later conscripts could have been anticipated. Their poor physical development was aggravated by a system that provided poor housing, unsanitary conditions and lack of medical provision, yet these same working class men were called up for service into the Army at a time when their physical health should have been their most valued asset.

The health and physical fitness of the conscripts who did not meet the required standards of health clearly posed problems for the Government and the Army in their seemingly unending search to find men for the Fronts. Only one out of every three men available for service was capable of enduring the physical exertion that was considered normal for their age.\textsuperscript{118} The report into the Medical Department concluded with a damning indictment of the nation’s health:

\begin{quote}
These results indicate the existence of a state of national health which may fairly be described as deplorable. The details of this great mass of medical examinations have been analysed. It is evident that preventable disease is responsible for the bulk of these disabilities, and demonstrates the alarming ravages which our industrial activities have made upon our real national capital – the health and vigour of the population. Food, insufficient in quantity, improperly prepared, or eaten under unsuitable conditions; work too heavy, too prolonged, or in unhygienic surroundings; too little sleep, too little fresh air, too little play, too little physical comfort in the home; too little attention to the beginnings of disease and often inadequate treatment of established disease are evidently the principal factors concerned in bringing into existence this mass of physical inefficiency, with all its concomitant human misery and moral and material loss to the state.\textsuperscript{119}
\end{quote}

\textsuperscript{116} TNA, NATS 1/714, Medical Boards Instructions Re: Posting of Grade III Men, October 1918.

\textsuperscript{117} TNA, NATS 1/975, Shipyard Labour, War Work Volunteers.

\textsuperscript{118} TNA, NATS 1/768, Report upon the Medical Department of the Ministry of National Service, 1917–1919, p. 11.

\textsuperscript{119} Ibid., p. 12.