

# MEASURES OF ENTHUSIASM: NEW AVENUES IN QUANTIFYING VARIATIONS IN VOLUNTARY ENLISTMENT IN SCOTLAND, AUGUST 1914 – DECEMBER 1915

Daniel Coetzee

The author holds a Ph.D. in History from Cambridge University, where he attended Pembroke College (2000–2004) and was supervised by Professor Richard Smith. His Ph.D. thesis, *Variations in voluntary enlistment in Scotland during the First World War*, concerned economic, demographic and cultural factors that brought about variations between Scottish counties in the percentage of men that enlisted voluntarily during the First World War, and it is from here that this article arises.

## Introduction

In 1914, when Britain entered the First World War it had no mass conscript army to mobilise.<sup>1</sup> The initial policy was of voluntary enlistment of troops, and an estimated 2,466,719 men, or 49.7 per cent of the total British armed forces during World War One enlisted voluntarily between 4 August 1914 and 31 December 1915.<sup>2</sup> Many researchers have investigated why men volunteered in the (initial) absence of official compulsion.<sup>3</sup> This article investigates new, quantitative avenues towards studying the response towards recruiting in 1914 and 1915. One problem of historiography is ‘the methodological divide between the literary and quantitative approach to the history of the war.’<sup>4</sup> Most past writing has been descriptive and qualitative.<sup>5</sup> The interest of this piece of research rests with a statistical means of investigating war enthusiasm. The current paper seeks to avoid what Winter calls ‘the vagueness of many impressionistic studies’ and to draw causal links between demography, economics and war-time behaviour.<sup>6</sup> Superficially, the public responded positively to the call to arms, and the British Left’s anti-militarism bowed before patriotic acquiescence in 1914 (although it reasserted itself later).<sup>7</sup> However, three decades of scholarly work has undermined the retrospective ‘myth of war enthusiasm’ as the overwhelming response to hostilities Europe. Strachan describes war enthusiasm as the ‘surface element only’, and describes the common denominator as ‘passive acceptance’. Whatever enthusiasm did exist was ‘composed of a wide range of differing responses’ of which in the British case, mass volunteering formed only one aspect.<sup>8</sup>

## Past research in quantifying voluntary enlistment

Since so many British men chose to fight, volunteering has long been used as evidence for broad-based war enthusiasm.<sup>9</sup> Past research identified ignorance among many Europeans as to the realities of modern warfare.<sup>10</sup> However, a

notion that the queues formed because of public ignorance of the kind of war that awaited the colliding mass armies, and then receded as people learned what was happening, ignores the many people that did not voluntarily enlist. It also begs the question as to why Britons kept volunteering, even when casualty figures became public.

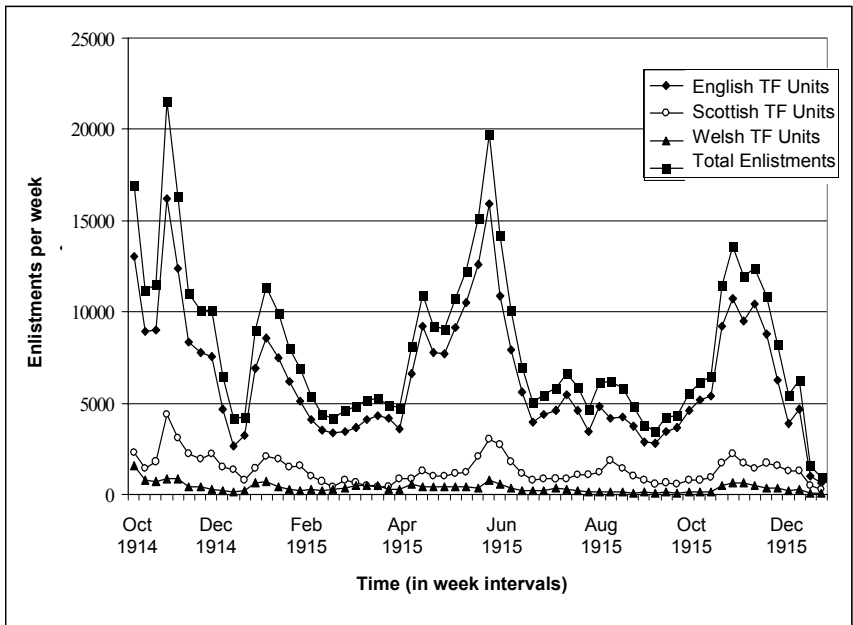
Little research has been done on explaining enlistment patterns, beyond narrating the general decline in volunteers over time.<sup>11</sup> This is surprising since the three examples from the quantitative school, that of Becker, Dewey and Winter were completed up to three decades ago.<sup>12</sup> Becker's work on French attitudes to the war qualified the notion of a *union sacrée*. His method relied on notes compiled during the war by French schoolteachers, who listed quotes from inhabitants in their district concerning the events which unfolded. This allowed Becker to produce graphs depicting changes in morale among the French.<sup>13</sup> However, his statistics focused on those few places where reasonably complete records were kept.<sup>14</sup> This paper seeks a broader statistical basis and a greater variety of sources.

Dewey provided another seminal quantitative article in 1984. He suggested that military recruiting varied in its impact on different industries. He also questioned the importance of 'generalised' factors such as 'patriotism' in affecting recruitment, and added 'more specific ones – economic, demographic, medical and institutional.' His method of subjecting wartime Board of Trade statistics to simple statistical methods provides inspiration and detailed facts to the current research, which, like Dewey's, looks at the influence of population trends on the way Britain conducted its war.<sup>15</sup>

A third quantitative influence is Winter, who looked at 'the effects of war on ... population trends'.<sup>16</sup> Winter mentioned that British military enlistment was 'uneven in its regional incidence', a point also raised by Simkins and, briefly, by Dewey, but all three focused on enlistment variations between men from different sectors of the British economy, rather than areas.<sup>17</sup> Winter concluded that 'enlistment in British forces had a definite social structure'.<sup>18</sup> Beckett also noted a 'national basis for recruiting' but did not pursue it.<sup>19</sup>

The reasons supplied for enlistment are legion, but much of the existing evidence comes from newspapers, diaries and memoirs, and thus privileges the literate classes. D. Winter, for example, speaks about 'traditional responses within the (ruling class)', and concepts of 'duty, honour and sacrifice' in the minds of wealthy volunteers.<sup>20</sup> Ferguson refers to successful recruiting techniques, female pressure, peer-group pressure, economic motives and impulse as causing men to volunteer. He concludes that institutional indoctrination and the use of culture and history as nationalist propaganda tools played a significant part in motivating the middle-class volunteer. However, some of these factors, he admits, could have caused a man to desist, and recruiting methods were initially primitive.<sup>21</sup> Paris identifies fears about German imperialism and the quality of imperial defence, invasion scares, and jingoistic but often sanitised juvenile literature, paramilitary youth movements and ignorance of the conditions of warfare as factors preparing the young

**Figure 1** Voluntary direct enlistments into the Territorial Force between 15<sup>th</sup> October 1914 and 29<sup>th</sup> December 1915.



**Source:** *Statistics of the Military Effort of the British Empire in the Great War*, (London, His Majesty's Stationery Office, 1922) pp. 365–6.

British male for voluntary enlistment.<sup>22</sup> But the level to which these causes penetrated working class thought is open to debate.

Dewey's major suggestion was that 'patriotism had to work within certain constraints' such as the average age of industries' male workforce, and the level of protection from military service that their workers received. His explanation accounted only for variations in the percentage of men that voluntarily enlisted from different industries, and he admitted that he was unable to resolve the complexities that he found.<sup>23</sup>

### **New means of measuring of war enthusiasm**

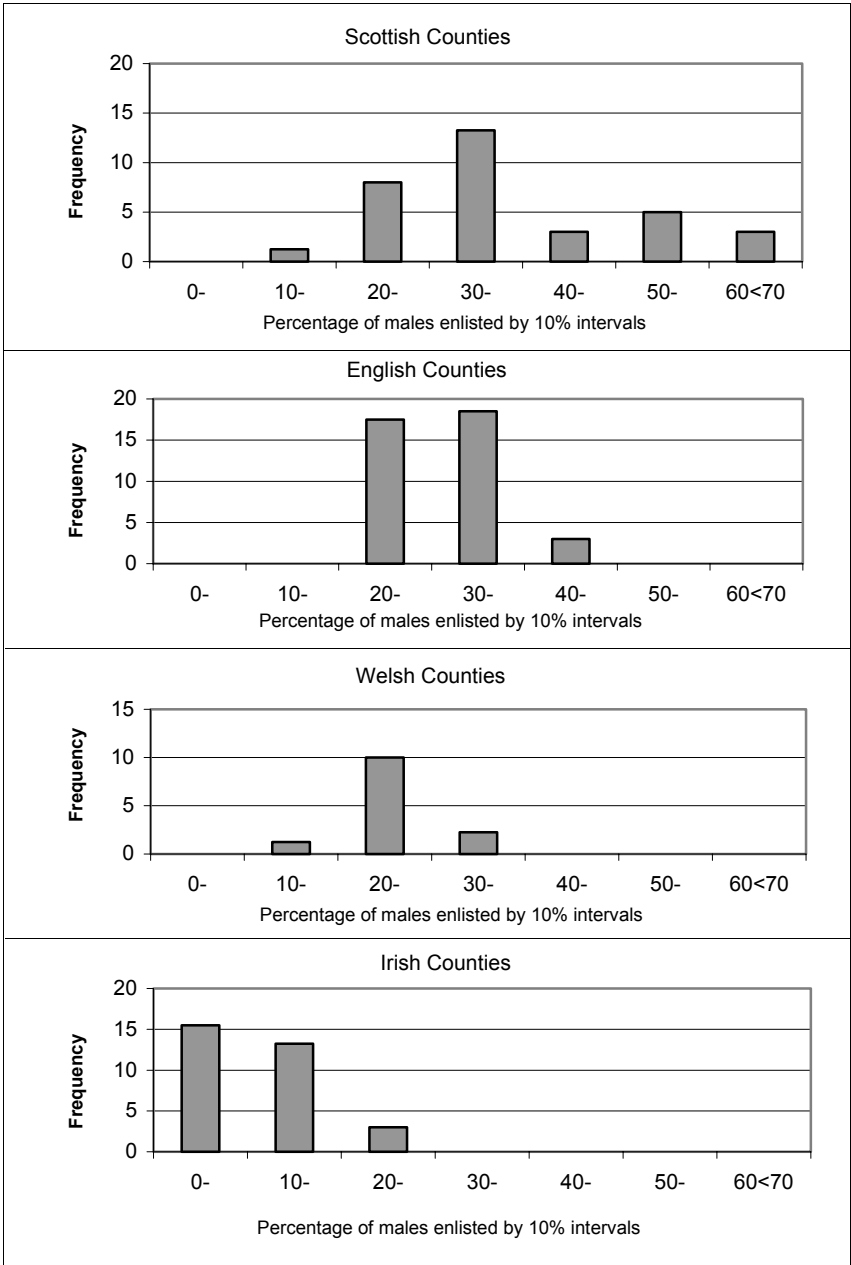
This paper delves into Dewey's answers using alternative sources and methods. Most past research has described British enlistment variations over time, since such statistics, processed by the War Office, are readily available and give considerable detail; for example the weekly figures given in Figure 1.<sup>24</sup> Generally there was a near universal enlistment pattern in the British Empire of a 'First Rush' (August–September 1914) of very high recruiting figures, a 'Recruiting Rally' (September 1914 to July 1915) of lower enlistment

with minor peaks and troughs brought about by events such as major battles or seasonal labour demands, and a final pre-conscription phase of low enlistment.<sup>25</sup> The statistics for the comparative contributions of geographical areas are more difficult to find.<sup>26</sup> However, intriguing geographical variations in enlistment appear. England, which recruited 24 per cent, Scotland (23.7 per cent) and Wales (21.5 per cent) were the top performers. New Zealand recruited 19.4 per cent, Canada and Australia 13.4 per cent, and South Africa around 12 per cent of their 'white male population'. Ireland produced around six per cent.<sup>27</sup> These figures include both voluntary and conscripted soldiers. Finding the exact causes for variation is complex, since the contrasts between the British Isles and Dominions make comparison difficult.<sup>28</sup> Wales, Scotland and England provide an easier basis for comparison, yet no definitive study is available to compare enlistment in the different geographical areas of Britain.

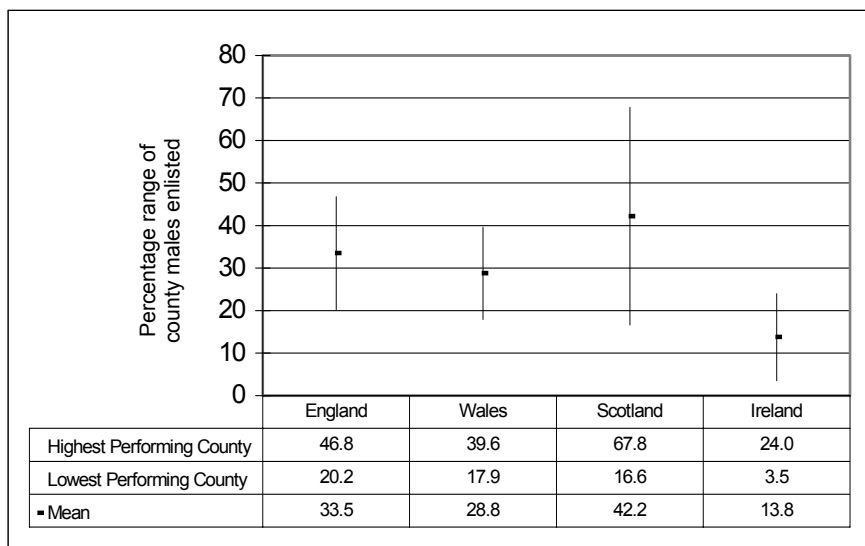
The task of compiling a British database for statistical analysis is massive. Lamm and Phillips discussed techniques for studying the several million World War One service records available, but up to now, only representative sampling exists.<sup>29</sup> There is, however, another more accessible means of quantifying enlistment variations. As early as December 1914, the Parliamentary Recruiting Committee (PRC) noticed geographical differences in recruiting percentages within Britain that they could not fully interpret.<sup>30</sup> This provided the impetus for the more scientific 'Memorandum on Compulsory Service' (MCS). The MCS was drawn up by the War Office in May 1915, utilising statistics from recruiting offices throughout Britain, as part of the debate about the introduction of conscription.<sup>31</sup> The MCS included enlistment statistics for both branches of the military (Army and Navy) for each county in England, Wales, Scotland and Ireland, both in terms of the number of men raised, and more importantly, of the percentage of males of military age recruited in each county. The statistics reflected the place of enlistment, not the place of birth of the recruit, since a man could enlist anywhere in Britain. The MCS covered the period between 4 August 1914 and 30 April 1915, when the voluntary recruiting movement was at its strongest, and dealt with 118 counties. The document did not, however, analyse variations.<sup>32</sup> The variations within the first category in the MCS, relating to numbers of men recruited in different counties, are simple: more populous counties usually recruited more men.<sup>33</sup> But the second category, dealing with the percentage of men recruited, is less straightforward, given the range of 64 per cent. Looking at percentages of men recruited allows comparisons of the relative performance of counties whose populations were different in size. Even if the variations do not purely represent support for military action (pro-war individuals might have stayed in war-related industries, for example), these percentages suggest the impact of the war on every British county. Comparing counties improves our understanding of the voluntary enlistment phenomenon.

Figure 2 depicts the relative contribution to the war effort of different parts of Britain. The histograms show the frequency at which the counties of England,

**Figure 2** Histograms of the percentage of males of military age enlisted in the counties of Scotland, England, Ireland and Wales between 4<sup>th</sup> August 1914 and 30<sup>th</sup> April 1915.



**Figure 3** Range of percentage of county males of military age enlisted in England, Wales Scotland and Ireland, between 4<sup>th</sup> August 1914 and 30<sup>th</sup> April 1915.



**Source:** PRO WO 162/27, Memorandum on Compulsory Service 1915, Appendix Table B.

Wales, Scotland and Ireland recruited men of military age (about 17–41 years during the voluntary period) between August 1914 and April 1915, within ten per cent intervals between 0 and 69 per cent. England’s distribution of frequencies suggests that it made an average contribution, with almost all counties recruiting between 20 and 50 per cent of their available men. Wales enlisted less enthusiastically and Ireland did badly, although there are differences between Catholic and Protestant-dominated areas. Figure 3 shows how the range in the percentage of men of military age that enlisted in Scottish counties far outstripped the ranges found in England, Wales and Ireland. From this figure and Table 1, which shows the performance of Scottish counties, it is clear that a cluster of Scottish counties performed far above any other counties in Britain.<sup>34</sup>

In accounting for geographical variations, Scotland’s thirty-three counties provide a statistical sample small enough to allow detailed analysis, and large enough to suggest trends. The top eight counties in Britain, judged by percentages of men recruited, were all Scottish. As mentioned, Dewey recognised Scotland’s out-performance of the rest of Britain in terms of enlistment, although he limited his explanation to the uniqueness of the Scottish industrial structure.<sup>35</sup> This paper can expand that explanation considerably. The first line of enquiry of this research is to correlate categories of the 1911 Censuses and other statistical documents with the county enlistment percentages in the MCS. These factors can then be

**Table 1 Scottish Counties, arranged within regions, in descending order of percentage of county males of military age recruited between 4 August 1914 and 30 April 1915.**

	% of men recruited		% of men recruited	
<b>Central Belt</b>		<b>West</b>		
1	Midlothian	51.8	1 Argyll	43.9
2	Clackmannan	41.3	2 Ayr	32.2
3	Fife	36.2	3 Bute	28.9
4	Lanark	35.7		
5	Stirling	34.2	<b>Highland</b>	
6	Dumbarton	29.5	1 Perth	67.8
7	Renfrew	22.4	2 Sutherland	65.8
8	Kinross	22.1	3 Inverness	60.0
9	Linlithgow	21.8	4 Ross and Cromarty	56.5
			5 Caithness	52.6
			6 Argyll	43.9
<b>South-east borders</b>				
1	Peebles	58.8	<b>North-East</b>	
2	Berwick	43.3	1 Elgin	56.2
3	Roxburgh	39.1	2 Aberdeen	39.7
4	Selkirk	38.6	3 Forfar	34.6
5	Haddington	35.3	4 Nairn	32.0
6	Dumfries	33.8	5 Banff	27.6
			6 Kincardine	26.0
<b>South-west</b>				
1	Kirkcudbright	34.6	<b>Islands</b>	
2	Wigtown	21.7	1 Orkney	32.7
			2 Zetland	16.6

**Source:** PRO WO 162/27, Memorandum on Compulsory Service 1915, Appendix, Table B.

analysed using correlation and multiple regression (see Appendix).<sup>36</sup> The strongest correlations found are 0.6 and -0.46, which is a reminder that the correlation coefficients for enlistment only indicate tendencies, and that there is much about enlistment that cannot be explained from the available data susceptible to statistical analysis. By using several correlation coefficients in a multiple regression, it is possible to create a model that accounts for a considerable amount of the variation in enlistment percentages. These methods complement Dewey's use of tabulated percentages and correlation, but consider the statistical role of more variables.<sup>37</sup> However, given the complexity of divining influences, and the limited sources, this current research can only suggest reasons for varying rates of enlistment.<sup>38</sup>

## Problems with the sources

These statistical methods also suffer from problems with the sources. Vovelle argued for the 'autonomy of the mental sphere and its irreducibility to the economic and social.'<sup>39</sup> No materialist interpretation suffices to explain enlistment. This paper therefore only shows how certain factors made groups of men more likely to volunteer, while avoiding the pitfalls of determinism.<sup>40</sup> It investigates how the socio-economic environment that surrounded men before and in the early months of the war affected the chances that they would enlist. This research is not negating personal initiative. The paper uses Phillips's argument that 'conditions' are 'the outcomes of the accumulated actions and decisions of other human agents.'<sup>41</sup> It is therefore not depicting people as mere victims.

The argument of this paper relies on the 1911 census and related official surveys of the immediate pre-war period up to December 1915. Utilising pre-war sources has disadvantages: the 1911 census was out of date by 1914, but because it is the last pre-war instance in which certain statistics were gathered for all counties, researchers have to accept this inaccuracy when cross-referencing the census with the Memorandum on Compulsory Service. This paper's key source, the MCS, relies on 1914 estimates of the male population of military age, based on the 1911 census, and on 1914-15 enlistment records from recruiting stations for the number of men that volunteered. There is therefore immediate inaccuracy involved. Another problem is the fact that the census counted people where they resided on census night. It does not account for temporary absence from home. As seen below, seasonal or temporary migration played a huge role in the economy of Highland counties in particular. In addition, the collapse of key industries such as fishing in August 1914 had a big effect on enlistment figures. The census summaries, however, provide only a snapshot of the distribution of male workers, in what was a highly complex annual migration cycle.<sup>42</sup> Some counties therefore recorded having more men than actually resided there for most of the year, and others fewer men. Also, MCS totals for men of military age were probably derived from the 1911 Census. The MCS gives no indication that 1911 figures were corrected using known trends to estimate 1914 population numbers. If, at the outbreak of war, men therefore returned from their seasonal employment to their 'home' counties to enlist, some counties' enlistment rates would have been elevated, because their resident males had been underestimated in 1911.<sup>43</sup> In addition, a man could have joined the Army anywhere in Britain. Readers must accept distortion in the MCS, but the memorandum figures are essentially robust.<sup>44</sup>

## Underlying causes of enlistment variations

Dewey used Board of Trade figures of the percentage of male workers who had enlisted by July 1915 in ten sample industries, to show that Scotland had the highest enlistment rate of any British region. However, his investigation over-emphasised the impact of 'industrial structure'. The regional contrasts he



revealed (a range with maximum 24 per cent and minimum 17 per cent) lacked nuance. His regional units were also badly designed for cross-referencing with other statistical data.<sup>45</sup>

The first step in refining Dewey is to put the MCS county statistics in their spatial context. In general, the north and western 'Highland' region performed well, while the southern and eastern 'Lowland' regions recruited lower percentages.<sup>46</sup> An exception is the counties surrounding Edinburgh, which performed above average. Zetland performed worst, but otherwise the more remote counties enlisted the highest percentages. Scottish border counties performed at average levels, similar to the adjacent English counties.<sup>47</sup> England and Wales recruited in a lukewarm fashion, although south-eastern English counties, those most vulnerable to raids, had slightly higher enlistment percentages.<sup>48</sup> The range from the highest to the lowest level of recruitment at the county level in England and Wales was only 26 per cent compared to the Scottish range of 51.2 per cent, so the factors that caused variations in enlistment were probably stronger in Scotland than elsewhere in Britain.

This initial picture can be elaborated upon. Given the constraints of space in this article, it will follow one strong line of investigation to show how quantifiable reasons for enlistment variations may be. Migration, and its demographic and economic causes and consequences, had long affected the Scottish population on a similar scale to participation in the First World War.<sup>49</sup> In the nineteenth and early twentieth centuries, Scottish rural depopulation became almost universal.<sup>50</sup> Devine cites explanations as the consolidation of smallholdings; great population increase; pressure on surplus (non-labouring) family members of agricultural labourers living on farms; poor living conditions; periodic unemployment, and the short distances of most internal migrations that utilised the increasing quality of railway transport.<sup>51</sup> Brock argues that regional factors were influential in producing a migration culture.<sup>52</sup> A consideration of this mind-set is crucial in explaining the MCS variations.

Nearly all Scottish counties lost population through migration in the decade before the war.<sup>53</sup> In terms of the MCS, nine out of the thirteen top performing counties experienced population decline by up to six percent between 1901 and 1911.<sup>54</sup> The greater a Scottish county's pre-war population gain, the more likely it was to enlist a low percentage. The English and Welsh trend is similar but weaker, which suggests that there was something distinctive about Scottish migration that affected enlistment.<sup>55</sup> Out-migration, whether from one's home country or county, and enlistment might simply have been two alternative strategies against severe economic pressures.<sup>56</sup> Baines, Hatton and Williamson have defined typical emigrants or cross-border migrants of the nineteenth-century era of European mass migration as 'young adults', three-quarters of whom were between 15 and 40 and overwhelmingly male. They were people 'most responsive to labour market conditions' but were typically unskilled.<sup>57</sup> Many emigrants were therefore ideal candidates for enlistment in 1914.<sup>58</sup> However, among internal migrants, the correlations on population growth show that counties that received many in-migrants of both sexes did not obviously benefit from the influx of male internal migrants when it came to

enlistment.<sup>59</sup> Rather, it seems as men who did not out-migrate or emigrate, and opted to remain behind in top performing counties were more likely to enlist.

The next step is to correlate the options to enlist with life-stage decisions such as marriage. At present, the discussion will remain with individual correlations without reference to potential inter-correlations, which will be discussed later. Dewey's insistence that gender ratio patterns are primarily a function of industrial employment, a result of his focus on employment data, made insufficient allowances for influences from Scottish nuptial and reproductive behaviour on recruitment patterns.<sup>60</sup> Scottish counties had a gender ratio pattern distinctive within Britain: there was a deficit of men to women in 31 of the 33 counties in 1911.<sup>61</sup> The gender ratio statistic supports the idea that Scottish men were more likely to emigrate than women, largely because employment opportunities for men were lacking in many areas.<sup>62</sup> There is no correlation between the pre-war gender ratio of Scottish counties on Census night in 1911 and voluntary enlistment.<sup>63</sup> However, correlating the percentage of men who were bachelors in 1911 in the nine Scottish counties with the best enlistment performance in 1914 and 1915, with their female/male ratio in 1911, produces a coefficient of -0.88.<sup>64</sup> This means that there was a greater likelihood in these counties in 1911 for men over 15 to be bachelors, even though there were more women available for the men to choose from. This marital behaviour is a key demographic question for nineteenth- and early-twentieth century Scotland, addressed by, among others, Coale and Treadway for the Princeton Fertility Project. Of particular interest to demographers are four indicators:  $I_f$  (overall fertility of all women regardless of marital status),  $I_m$  (the proportion of potentially fertile women married),  $I_g$  (the rate of childbearing by married women) and  $I_u$  (the rate of childbearing by unmarried women). Each of these indexes lies between zero and one, with zero equal to no marriage or childbirth, and one equal to a situation where all the women between certain ages (usually 15–49, but sometimes 15–44, completed years) in a population were married or had children at a given time.<sup>65</sup> Between 1861 and 1914, the period covered by the Princeton project, Scotland experienced higher out-migration, lower nuptiality and, in places, markedly higher marital fertility than England and Wales. Scottish nuptiality and fertility also showed greater regional heterogeneity than England.<sup>66</sup> Of special interest are the trends of strong out-migration, late marriage and lower marital fertility in the counties designated 'Highland' and 'Far North' by Flinn *et al.*, because they overlap sharply with the counties with high enlistment performances.<sup>67</sup>

Nuptiality can be defined as 'the proportion of all women between 15 and 50 who are currently married'.<sup>68</sup> Early twentieth-century Scotland had zones of extremely low nuptiality, with less than a third of women of fertile age married in large parts of the north-west in 1911. By contrast, more than half of fertile women were married in the industrial Central Belt region.<sup>69</sup> Anderson discussed the 'depression in nuptiality' in parts of Scotland in terms of 'legal, cultural, economic and agrarian variations' impacting on household economies.<sup>70</sup> In rural Scotland, family-sized houses often came only with the more prestigious jobs. Poor relief in Scotland was also far more limited than in

England and Wales, making only small and transitory payments to able-bodied unemployed people (rather than the entitlement to parish support in England).<sup>71</sup> Scots therefore faced a higher risk of destitution if they married without good financial prospects as a minimal insurance against unemployment. According to Anderson, the tendency of men and women to stay single crucially reflects lack of security in particular areas. Marriage and migration were integrally connected in counties such as Sutherland, Inverness and Argyll especially. In the south-western lowlands, small family-sized dairy enterprises provided jobs for both men and women. In the northeast, the focus on beef cattle meant that fewer women were needed, and unmarried workmen preferred. In the north and northwest, sheep-farming and pressure on crofters also offered opportunities and housing for single men, but few for married couples. So, if a man wanted to retain a job and housing in such an area, he had to remain single.<sup>72</sup> The delay of marriage over decades meant that there was a greater proportion of single men available to volunteer in certain counties in 1914.

Waites claims that nationally, volunteers came disproportionately from among unmarried men.<sup>73</sup> Many women probably discouraged their partners from risking their lives. Young men, with fewer responsibilities, would have been more willing to risk fighting than those with families. Younger men, with less training and experience, also had less to gain from staying in their jobs. And finally, peer pressure and the call of 'adventure' might have had bigger influence on unattached men. Stronger statistical tests confirm Waites's hypothesis. Scottish nuptiality indicators (women married / women between their fifteenth and fiftieth birthdays) correlate with the MCS at -0.398 in 1901, and -0.449 in 1911.<sup>74</sup> Higher incidences of marriage therefore considerably lowered enlistment. Similar results are produced using the correlation of nuptiality statistics for men from the 1911 Census. The variable 'Percentage of county male population aged 20–24 years single in 1911', correlates with the enlistment percentages at 0.599, the strongest positive correlations with the MCS.<sup>75</sup> Those areas with a higher percentage of bachelors among males of military age therefore experienced a higher voluntary enlistment rate.

By extension, whatever socio-economic factors inclined men to remain single affected enlistment. The percentage of a Scottish county's men being bachelors correlates significantly with higher unemployment (0.512), higher percentages of county males being military personnel (0.655), and the percentage of a county's population being Gaelic-speaking in 1911 (0.822).<sup>76</sup> The percentage of a county's male population between the ages of 20–24 being single in 1911 correlates with percentage intercensal population increase at -0.620 – meaning a strong connection between not migrating and remaining single. Men tended to stay single until at least the age of 29 in areas where they were engaged in agriculture (0.564), and married earlier in areas with higher in-migration (-0.635), and where higher percentages of the labour force worked in coal-mining (-0.566).<sup>77</sup>

The man's domestic responsibilities gained further weight when couples had their first child. Figures based upon the Scottish county Health and Sanitary

Medical Reports reveal a coefficient of -0.4 between county enlistment figures and the average county crude birth-rate (CBR) (number of births per year/mid-year population  $\times$  1000) between 1900–1912, meaning that better performing Scottish counties tended to have lower crude birth-rates.<sup>78</sup> The accuracy of the CBR estimate from the medical reports can be tested using the 1911 Census, where enlistment correlates at -0.464 with 'Percentage of Scottish County Population (both sexes) < one year old in 1911'.<sup>79</sup> The last figure is the strongest negative correlation found with the MCS. Coale and Treadway's research provides an even more exact measure of the influence of the presence of children in a population upon enlistment: overall fertility,  $I_f$  (the rate of childbearing by all women, regardless of marital status). This correlates with the MCS at -0.329 for 1911.<sup>80</sup> These statistics, inextricably linked yet from three independent sources, confirm that in counties where there were many young children, enlistment percentages dropped.

Marital fertility (number of births per year/mid year population of married women aged 15–44  $\times$  1000) was another potential influence on enlistment. Although linked to CBR and  $I_f$ , it reflects a different tendency in a population (the incidence of large families, as opposed to the presence of children within a population) that had independent influences on the likelihood of a man to enlist. In Scotland, the CBR could be low because of low nuptiality but many births per marriage, and marital fertility in agricultural areas could be high, even though people married less and later.<sup>81</sup> A population that tended to produce fewer married couples, but larger families for those that did marry, would have a different enlistment profile than a population where men were far more likely to marry (even though they then only had one or two children). Marital fertility for Scottish counties in 1911 correlates with the MCS figures at only 0.033, but the figure improves to -0.4 if outliers, including most of the Highland counties, are removed. This marked change in the coefficient suggests a stronger negative link between enlistment and marital fertility in the Lowlands, than in most of the Highlands.<sup>82</sup> Future research might reveal why the relationship between marital fertility and enlistment is so vastly different between the Highland and Lowland counties. In the Highlands, there seems to have been another, more influential factor than fertility behaviour increasing enlistment. The answer might lie in the cultural dimension: Scottish counties where above 5 per cent of the population spoke Gaelic in 1911 usually recruited well, and correlating MCS county enlistment statistics with the 1911 Census category 'Percentage of total county population speaking Gaelic in 1911' produces a coefficient of 0.54, second only to the percentage of males remaining single in its effect on enlistment.<sup>83</sup> This might be because of a strong association between Gaelic communities and later marriages among men.<sup>84</sup> In most of Scotland, however, the negative relationship between fatherhood and enlistment apparently increased with the birth of subsequent children. The greatest inhibiting factor upon enlistment was therefore the fear of leaving one's family poorly provided for.

On a grander scale, the division between high- and low-enlistment counties closely follows the Highland Line,<sup>85</sup> suggesting that peculiarities of the two

regions, or their relationship, helped cause enlistment variation. As mentioned before in the section discussing the source material, enlistment benefited from the manner in which many landless Highland Scots survived economically benefited enlistment. By 1914, there was a 'marginalised seasonal labour reserve' following annual 'circuits of temporary mobility' in Scotland, characterised by a 'seasonal relocation of labour'.<sup>86</sup> This 'frequent, short-distance movement' of labour followed regional wage and price differentials, and functioned particularly between the Highlands and Lowlands. During the nineteenth century, the Highlands had neglected to develop industries sufficient to employ its surplus population.<sup>87</sup> Even the 1886 Crofter's Act made the Northern and Western Highlands less capable of becoming commercially competitive by protecting farming on small plots. The shift towards large-scale dairy farming in the north-east during the nineteenth century drew in many Highland men.<sup>88</sup> The fishing industry also became increasingly important between 1851 and 1914, when the war interrupted it.<sup>89</sup> Many crofters participated seasonally in the fishing to augment their income and feed the growing population of the crofts. The percentage of county males engaged in 1911 in agriculture and fishing respectively, correlates with one another at 0.56 for all Scottish counties, 0.88 for the Highland counties and 0.84 for the Crofting Counties.<sup>90</sup> Highland workers could work in fishing, on north-east coast farms and then in Lowland harvesting in one year, before wintering on the family croft. This migration cycle was precarious, but well before 1914 had been 'the only way by which the croft could be maintained or the rent paid'.<sup>91</sup> Many people moved directly from the fisheries to Lowland harvest work in August – the failure of one industry 'brought undue hardship' to the crofting parishes.<sup>92</sup> Many of the crofts were subsidised by remittances from migrant family members. Also, the fall in world grain prices after 1880 caused Highland crofters to import grain and use the croft to grow animal feed.<sup>93</sup> This made them less self-sufficient and more vulnerable to inflation of food prices. Crofters especially remained vulnerable to sudden rises in rent and lapses in income, and the concentration of arable land under larger landowners led to congestion on the remaining plots.<sup>94</sup>

The war indeed caused deterioration in economic opportunities for young men, particularly in the Highland, Gaelic-speaking counties. August 1914 saw a sharp rise in prices and taxes.<sup>95</sup> Given the growing reliance of even Highland crofters on purchased food, these communities were also hit by the price increases.<sup>96</sup> The peak of enlistment in Britain coincided with economic recession, mass unemployment and sharp price increases in Autumn 1914, when the Army was the one economic 'growth sector'. Some unemployed saw no other choice but to enlist.<sup>97</sup> The variety of financial strategies that Szreter describes as employed by working families for whom 'the fight against income insecurity, poverty and the workhouse was the fundamental condition of existence' illustrates the difficulty of predicting how a breadwinner would respond to recruiting in 1914.<sup>98</sup> Men who had delayed marriage were, however, more likely to enlist in 1914 than those with working wives, or those who were single breadwinners with many children. The fate of many Highland men was sealed by the unravelling of the seasonal migration cycle in 1914. The

decline of the Scottish fishing industry, brought about by the loss of export markets and the German U-boat campaign, affected many crofting households by cutting off seasonal income. Fishing activity had to shift to the West coast, and the loss of employment was only partly compensated for by the Admiralty's chartering of vessels and crews for coastal patrolling.<sup>99</sup> The distillery industry was also hit by barley shortages.<sup>100</sup> The economic shock was exacerbated by a simultaneous fall in demand for Harris Tweed. In some areas, unemployed fishermen or crofters became farm-workers or went to work in the revived kelp industry.<sup>101</sup> Others could join the gathering of the Lowland harvest, but by 1914 Highland workers had difficulty finding such employment because of the distances involved and competition from Irish labour.<sup>102</sup> Indications are therefore that a subsistence crisis took place in the core Crofting Counties' of Inverness, Argyll, Ross and Cromarty and Sutherland in the early months of the war.<sup>103</sup> Faced simultaneously with disrupted income and sudden rises in consumer prices, many crofters were pushed towards the Army to survive.<sup>104</sup> In addition, promises to crofters of land rights in return for military service motivated many to join the Army in 1914 and 1915.<sup>105</sup>

### **Explaining interrelationships**

As indicated above, there are many possible correlations between MCS enlistment percentages and other variables. Correlations with different formulations of many variables derived from the 1911 census relating to age, marital status, language, occupation, fertility, etc., were tested. Only those most strongly correlated with enlistment are discussed here. However, many of these variables were also intercorrelated or associated with each other – for example, places with high proportions of single men were also the places where a large proportion of the population spoke Gaelic. To see which variables are the most important, it is possible to combine them in a multivariate analysis which shares out common variation between correlated variables. The resultant multiple regression model minimises intercorrelation while accounting for the greatest possible amount of variation in enlistment percentages. The model was composed from an original list of over 55 possible variables, but here comment will be restricted to those that ended up in the final explanation. Encouragingly, these prominent variables, arrived at through statistical means, correspond with evidence available from written or qualitative sources. For example, the variable 'Per Cent County Males in Naval or Military Service in 1911' fits particularly well with qualitative evidence, which suggests that cultural militarism, and the efficacy of Army recruiting apparatus in specific areas before 1914 improved war-time enlistment. Also, the presence of the variable 'Per Cent Single men aged 20–24 in 1911' in the final model is supported by it having the strongest positive correlation with the MCS, among the 55 variables tested. The third variable, the 'Per Capita Value of County Infrastructural Investment in 1915 over Population 1911', is supported by arguments about the ideology, economic strategy (and vulnerability) and typical nuptial and fertility behaviour of middle class men.<sup>106</sup> The higher the per capita investment in infrastructure in an area, the

**Table 2 Multiple Regression Model: variations in enlistment in all Scottish Counties, August 1914 – April 1915.**

<b>Number of observations</b>	33	
<b>Adjusted R-Square</b>	0.325	
<b>Variable Names</b>	<b>Coefficients</b>	<b>p-values</b>
Intercept	-177.52	0.005
Per Cent of Male Population in Naval or Military Service, 1911	0.74	0.481
Per Cent of Males aged 20-24 who are single	2.28	0.001
Per Capita Value of County Infrastructural Investment in 1915 over County Population in 1911	1.22	0.183

greater was the percentage of professional-commercial volunteers in its population. Szepter confirms that the liberal and professional-commercial occupations tended to marry late and limit fertility in the immediate pre-war period.<sup>107</sup> These wealthier men provided greater relative financial security for their families, and had a greater ability to withstand rises in the cost of living than the poor. They were therefore not so pressured to adjust to the economic crisis of late 1914 by finding better employment. Commercial sectors did not experience the same boom and labour shortages that increased manual labour wages. Men who left commercial employ could more easily be replaced by women than could industrial workers, so these sectors did not have to compete so hard for new workers, and did not raise their wages generously.<sup>108</sup> The incentive to remain in civilian employ, in the hope that one could increase one's earnings, therefore did not typify clerical occupations, as it did manufacture. Many middle class men therefore more readily left their employment to fight, raising the percentage of volunteers in a county's male population.

The model, shown in Table 2, can be summarised as follows: the percentage of men that enlisted in any given county between August 1914 and May 1915, tended to increase by 0.74 percentage points for each one per cent increase in the percentage of a county's males in naval or military service (effective or retired) in 1911. It increased by 2.28 per cent for each percentage increase in the per cent of single men between the ages of 20 and 24 in 1911; and by 1.22 per cent for each one pound sterling per capita increase in the estimated value of infrastructural investment made in a county by 1915. These three factors account for about a third of the variation between counties in the percentage of their men of military age that enlisted. Because of the low correlations (taken as the absence of correlation coefficients exceeding -0.5 / 0.5) between the three principal independent variables shown in the model in Table 2 each variable makes a considerable contribution to the strength of the model. However, much of the extant variation in enlistment probably cannot be explained through available statistical data, and needs to be approached from a social or cultural history perspective.

## Conclusion

The variety of factors involved in enlistment variations underscore both the weakness of wholly materialist and determinist interpretations, and the shortcomings of explanations that focus only on psychology. Clearly, there was a complex reaction to war. This paper identified some motivations behind enlistment, or the refusal to volunteer, and situated the potential recruits and their decisions regarding armed service in a socio-economic and demographic environment. Men looked at how they could best protect their families. The research avoids a mechanistic explanation, given the difficulty in establishing exact causes, but it is clear that men were inclined towards enlistment by conditions, opportunities and previous choices. The trends identified in this paper cannot eliminate enthusiasm or even accident from enlistment, and it is impossible to reconstruct enlistees' thoughts. However, this paper shows that a statistical analysis of variations in First World War enlistment *is* fruitful. This analysis moves research further away from a conception of the 'rush to the colours' in terms of spontaneity, patriotism and even fatalism, and allows a sophisticated view that involves calculation by individuals in response to identifiable external influences. Conditions did not rob men of the ability to decide whether to enlist or not, but they did limit their options, weighed their minds, and perhaps, at the crucial moment of choice, changed their lives.

## NOTES

1. J. Verhey, *The spirit of 1914* (Cambridge, 2000), 97–8; J. Gooch, 'The armed services,' in S. Constantine *et al.* eds, *The First World War in British history* (London, 1995), 187.
2. I. Bet-El, *Conscripts*, (Phoenix Mill, 1999), 1–13; R. Adams and P. Poirier, *The conscription controversy in Great Britain*, (London, 1987), 1. The Military Service Bill (No.2), which introduced conscription, was read by Prime Minister Asquith in the Commons on 5 January 1916. It called for the compulsory enlistment of unmarried men between 18 and 41. The Bill was passed and received royal assent three weeks later, ending the voluntary period of recruiting in Britain.
3. J. Horne, 'Introduction: mobilizing for total war', in J. Horne ed., *State, society and mobilization in Europe during the First World War* (Cambridge, 1997), 1–7.
4. J. Winter, *The Great War and the British people* (1985), 1–2.
5. For example: E. Spiers, *The army and society 1815–1914* (London, 1980), 46–51; J. Gooch, *The plans of war* (London, 1974); D. French, *British economic and strategic planning 1905–1915* (London, 1982); J. Turner, *British politics and the Great War* (London, 1992). Neither Spiers, Gooch, French or Turner used more quantitative means than the occasional table.
6. J. Winter, *The Great War and the British people*, 2–3.
7. P. Ward, *Red Flag and Union Jack* (Woodbridge, 1998), 119–141; A. Reid, 'Britain during the First World War', in S. Tolliday and J. Zeitlin (eds.), *Shop floor bargaining and the state* (Cambridge, 1985), 46–74; J. Horne, *Labour at war* (Oxford, 1991), 42–83; H. Strachan, *The First World War: Volume 1: To arms* (Oxford, 2001), 111–33.
8. Strachan, *The First World War*, 142–62.
9. N. Ferguson, *The pity of war* (London, 1998), 197; Verhey, *The spirit of 1914*, 97–8.
10. Strachan, *The First World War*, 162.
11. See J. Osborne, 'The voluntary recruiting movement in Britain, 1914–1916,' unpublished Ph.D. thesis, University of Stanford, 1979.
12. Winter, *The Great War and the British people*; J. Becker, *The Great War and the French people* (Leamington Spa, 1985); P. Dewey, 'Military recruiting and the British labour force during the First World War', *The Historical Journal*, 27 (1984), 199–223.
13. Becker, *The Great War and the French people*, e.g. 94–7, 194. See also J. Becker, 'That's the death



- knell of our boys', in P. Fridenson ed., *The French Home Front 1914–1918* (Oxford, 1992).
14. Becker, *The Great War and the French people*, 323–5.
  15. Dewey, 'Military recruiting', 199–223.
  16. Winter, *The Great War and the British people*, 1, Chapter 2.
  17. Winter, *The Great War and the British people*, 59. P. Simkins, *Kitchener's army* (Manchester, 1988), 106–12. Dewey, 'Military recruiting', 216
  18. Winter, *The Great War and the British people*, 25–39.
  19. I. Beckett, 'The British army, 1914–1918: the illusion of change', in J. Turner ed., *Britain and the First World War* (London, 1988), 104.
  20. D. Winter, *Death's men* (New York, 1987), 29–33.
  21. Ferguson, *The pity of war*, 200–207; Simkins, *Kitchener's army*, 19–20.
  22. M. Paris, *Warrior nation* (London, 2000), chapters 3 and 4, esp. 110–15, 144–5.
  23. Dewey, 'Military Recruiting', 206–19.
  24. For example Osborne, 'The voluntary recruiting movement'; Winter, *The Great War and the British people*; Dewey, 'Military recruiting', 206–19.
  25. Osborne, 'The voluntary recruiting movement,' especially 134–5.
  26. e.g. Public Records Office/National Archives (hereafter PRO), WO 161/82, *Statistical abstract of information regarding the armies at home and abroad 1914–20*, Population and recruiting, Part V, Recruiting, monthly recruiting figures 1914–1918, 363–6; PRO WO 394/1, Population and recruiting, Part V, Recruiting section 1; Population and recruiting in the Empire, 98–9. Both these documents date from August 1917.
  27. *Statistics of the military effort of the British Empire in the Great War* (1922), 363.
  28. Ferguson, *The pity of war*, 199–200.
  29. D. Lamm, 'British soldiers of the First World War: creation of a representative sample', *Historical Social Research*, 13 (1988), 55–98; G. Phillips, 'An army of giants: height and medical characteristics of Welsh soldiers, 1914–1918', *Archives*, xxii, 97 (1997), 141–6.
  30. Simkins, *Kitchener's army*, 61–2.
  31. Adams and Poirier, *The conscription controversy*, 74–5.
  32. PRO, WO 162/27, Memorandum on Compulsory Service 1915, Appendix Table B.
  33. PRO, WO 162/27, Appendix Table B.
  34. PRO, WO 162/27, Appendix Table B.
  35. Dewey, 'Military recruiting', 216–17.
  36. Microsoft Excel was employed for both correlation and multiple regression; statistical techniques measuring the linear association between two continuous variables, in this case the percentage of men enlisted (the dependent variable) and a second factor (the independent variable). Correlation measures the closeness of association between two variables while regression is used to calculate a straight line that best predicts the one variable from the values of the other. Possible variables and associations between them, measured by correlation coefficients, are discussed below. These coefficients will always be a number between +1 and -1, with +1 denoting a completely positive correlation (values of variables increase and decrease together) and -1 a completely negative correlation (one variable increases when the other decreases). A correlation coefficient close to 0 indicates that the variables are weakly related or unrelated. M. Campbell, and D. Machin, *Medical statistics* (Edinburgh, 1993), Chapter 9; B. Kirkwood, *Essentials of medical statistics* (Oxford, 1988), Chapter 7.
  37. Dewey, 'Military recruiting'.
  38. See Becker, 'Death knell', 18.
  39. M. Vovelle, 'Ideologies and mentalities', in R. Samuel and G. Stedman Jones eds, *Culture, ideology and politics* (London, 1982), 9.
  40. T. Wilson, *The myriad faces of war* (London, 1986), 2–3.
  41. See discussion by Phillips in Constantine et al., *The First World War in British history*, 106.
  42. Personal communication by Dr E. Garrett in January 2005. The Scottish census enumeration books did actually note how many individuals were absent from their normal place of residence on census night, but these were not tabulated in any meaningful way.
  43. Personal communication by Dr E. Garrett in November 2002.
  44. Three major issues also argue against trying to 'correct' county totals for male residents. First, we do not know the number or origin of men of military age migrating seasonally within pre-war

- Scotland. Second, the census only locates individuals on one night per decade. Third, there are no statistics to show where potential military recruits would have been in August 1914 or on any other date until April 1915, when the Memorandum on Compulsory Service ends.
45. Dewey, 'Military recruiting', 216–17. Based on Board of Trade, *Report on the state of employment ... July 1915*, 7–9. Dewey found that Scotland performed higher on average than other regions, at 24 per cent to an average of 20 per cent.
  46. The use of the term 'region' is taken to mean 'geographically contiguous collections of counties', but allows for the inclusion of islands with adjacent 'mainland' areas.
  47. PRO, WO 162/27, Appendix Table B; J. Bartholomew, *Philips' handy atlas of the counties of Scotland* (1902), 1.
  48. PRO, WO 162/27, Appendix Table B; W. Taylor, *The junior geography and atlas* (London, 1912), 16; Simkins, *Kitchener's army*, 59, 125.
  49. J. Brock, *The mobile Scot* (Edinburgh, 1999), 38, 178–205. Brock defines migration as 'movement outside the immediate area of birth, but within one's own country' and emigration as 'leaving one's country-of-birth.' Brock includes the movement of Scots to England, Wales or Ireland under emigration. For the purposes of this article, the term 'internal migration' is synonymous to Brock's 'migration' and includes movement inside one's county of birth. 'Out-migration' refers to movement outside the county-of-birth.
  50. T. Devine, *The Scottish nation, 1700–2000* (London, 1999), 252–3.
  51. Devine, *The Scottish nation*, 460–3. Brock, *The mobile Scot*, 11, 14, 32.
  52. Brock, *The mobile Scot*, 96–7, 178–205, especially 204.
  53. PRO, WO 162/27, Appendix Table B; *Census of Scotland, 1911, Report of the Twelfth Decennial Census of Scotland*, [hereafter *Census of Scotland, 1911*] (Volume II, 1913), Table A9.
  54. PRO, WO 162/27, Appendix Table B; *Census of Scotland, 1911* (Volume II, 1913), Tables A6, XLV.
  55. The same variable of intercensal population growth produces a coefficient of 0.2 in English and Welsh counties. Coefficient calculated using figures from: *Census of England and Wales, 1911, Summary Tables* (1915), Table 6; PRO, WO 162/27, Appendix Table B; Brock, *The mobile Scot*, 178–204.
  56. Brock, *The mobile Scot*, 30–1.
  57. T. Hatton and J. Williamson, *The age of mass migration* (Oxford, 1998), 10–11; D. Baines, *Migration in a mature economy* (Cambridge, 1985), 45–90.
  58. Simkins, *Kitchener's army*, 60, 104. On August 27 1914 the upper age limit for recruits was 35 for new recruits, 45 for ex-soldiers and 50 for ex-commissioned officers.
  59. See D. Coetzee, 'Factors accounting for variations in voluntary enlistment in Scotland, August 1914 – December 1915', unpublished Ph.D., Cambridge University, 2003, Appendix 1, for details. The coefficient was calculated using figures from: *Census of Scotland, 1911*, and County Reports, (1913), Tables A6, XLV, XIX; PRO, WO 162/27, Appendix Table B.
  60. Dewey, 'Military recruiting', 207, 210.
  61. As used in the census, the number of women per 100 men. *Census of Scotland, 1911*, (1911), Table 3; PRO, WO 162/27, Appendix Table B. The figures in Scotland represent all males and females, regardless of age. Linlithgow had 90.8 women per 100 men, and Stirling 95.5.
  62. Brock, *The mobile Scot*, 14, 37, 94–117. Like Dewey, Brock argues for variable gender ratios in industry by indicating how the economic profile of regions in Scotland attracted or shed male or female labour.
  63. *Census of Scotland, 1911*, (1911), Table 3; PRO, WO 162/27, Appendix Table B. The coefficient is 0.07 (0.05).
  64. Coefficient calculated using figures from: *Census of Scotland, 1911*, (1911), Table C12; PRO, WO 162/27, Appendix Table B. The counties are Perth, Sutherland, Inverness, Peebles, Ross and Cromarty, Elgin, Caithness, Midlothian and Argyll. Bachelors are defined in the census as unmarried men over 15 years of age, but excluding widowers.
  65. See A. Coale and R. Treadway, 'Summary of the changing distribution', in A. Coale and S. C. Watkins eds, *The decline of fertility in Europe* (Princeton, 1986), 33–5. Some familiarity with the terminology is assumed in this article.
  66. M. Anderson and D. Morse, 'High fertility, high emigration, low nuptiality: adjustment processes in Scotland's demographic experience, 1861–1914, Part I', *Population Studies*, 47 (1993), 5–25.
  67. M. Flinn ed., *Scottish population history from the 17<sup>th</sup> century to the 1930s* (Cambridge, 1977), 340–5.

68. Coale and Treadway, 'Changing distribution', 33–4.
69. Anderson and Morse, 'High fertility, high emigration', 6, 21.
70. M. Anderson, 'Why was Scottish nuptiality so depressed for so long?', in I. Devos and L. Kennedy eds, *Marriage and rural economy* (Brepols, 1999), 49–83.
71. T. Bengtsson and O. Saito eds, *Population and economy* (Oxford, 2000), 120.
72. Anderson, 'Scottish nuptiality', 63–8.
73. B. Waites, *A class society at war* (New York, 1987), 188, argues that 'nearly half the men aged 19–25 (83 per cent of whom were single) enlisted before the introduction of conscription' and that 'in December 1915 bachelors outnumbered married men in the army by more than two to one', based on War Office Records PRO MUN 5/65 322/131 and WO 162/28. See Lamm, 'British soldiers' 55–98 and Phillips, 'Army of giants, 141–6, for current attempts to statistically establish trends such as marital status in World War One British soldiers. Attestation forms held by the MOD/PRO and service records in the PRO suggest that recruits were more likely to be bachelors. Pilot studies in the World War 1 archives, by Dr E. Garrett, suggest that a 2:1 bachelor-married ratio is an underestimate.
74. Calculated from: Coale and Treadway, 'Changing distribution', 141–6; PRO, WO 162/27, Appendix Table B.
75. Coefficient calculated using figures from: *Census of Scotland, 1911*, County reports, Table XIX; PRO, WO 162/27, Appendix Table B.
76. See Coetzee, 'Variations in voluntary enlistment', Appendix 1, xvii–xviii. Coefficient calculated using figures from: *Census of Scotland, 1911*, Tables XXVII, A6, H2; PRO, WO 162/27, Appendix Table B.
77. See Coetzee, 'Variations in voluntary enlistment', Appendix 1, xvii. Coefficient calculated using figures from: *Census of Scotland, 1911*, Tables A6, A14, XXXVI; *Census of Scotland, 1911*, County reports, Table XIX; PRO, WO 162/27, Appendix Table B. Scottish Records Office, Edinburgh (hereafter SRO), HH 62/19–44, *Scottish Home Office, Annual report upon the health and sanitary condition of the county, 1900 to 1912*.
78. Coefficient calculated using figures from: SRO, HH 62/19–44, *Scottish Home Office, Annual report upon the health and sanitary condition of the county, 1900 to 1912*; PRO, WO 162/27, Appendix Table B. Commander-in-Chief and War Office: Adjutant General's Department – Papers, 'Memorandum on compulsory Service', 1915, Appendix Table B. These and other figures from the annual health reports are only broad aggregates for 1900 to 1913.
79. Coefficient calculated using figures from: PRO WO 162/27, Appendix Table B. *Census of Scotland, 1911* (1913), County Reports, Table XXa.
80. Calculated from: Coale and Treadway, 'Changing distribution', 141–6; PRO, WO 162/27, Appendix Table B.
81. Dr E. Garrett, personal communication, 8 November 2002. See Anderson, 'Scottish nuptiality', 63–8.
82. Calculated from: Coale and Treadway, 'Changing distribution', 141–6; PRO, WO 162/27, Appendix Table B.
83. Coefficient calculated using figures from: *Census of Scotland, 1911* (1911), Table H2; PRO, WO 162/27, Appendix Table B. See Coetzee, 'Variations in voluntary enlistment', Appendix 1, xxxi, xviii.
84. *Census of Scotland, 1911* (1911), Table XXXVI and County Reports Table XIX; PRO, WO 162/27, Appendix Table B.
85. See C. Withers, *Gaelic Scotland*, (London, 1988), 1–3 for definitions. Withers draws the geographic 'Highland Line' to include the historical counties of Caithness, Sutherland, Ross and Cromarty, Inverness, Nairn, Bute, Argyll and all except the extreme south of Perthshire, plus the westernmost parts of Forfar, Aberdeen, Banff and Elgin within the Highlands. This is the geographic definition. The cultural division defines the Highlands 'as the area within which the Gaelic language was spoken or the clan was the predominant social system' but is far more difficult to pin down.
86. C. Withers, *Urban Highlanders* (East Linton, 1998), 3–8. Brock, *The mobile Scot*, 32–3.
87. Withers, *Gaelic Scotland*, 310–14.
88. Withers, *Gaelic Scotland*, 310–14.
89. Anderson, 'Scottish nuptiality', 64. Brock, *The mobile Scot*, 14, 30–1, 99, 202.
90. Withers, *Urban Highlanders*, 50–1, 233. Withers, *Gaelic Scotland*, 246–55. Coefficients calculated

using figures from: *Census of Scotland*, 1911, (Volume II, 1913), Tables XXXVI and A6. This paper uses Withers's definition (cf. Withers, *Urban Highlanders*, 16–7) of Caithness, Sutherland, Ross and Cromarty, Inverness, Nairn, Bute, Argyll and Perth as the Highland counties, and Anderson's definition of the Crofting Counties as Inverness, Argyll, Ross and Cromarty and Sutherland (cf. Anderson and Morse, 'High fertility, high emigration, low nuptiality, 319–43.)

91. Brock, *The mobile Scot*, 14, 30–3, 99, 202.
92. Withers, *Urban Highlanders*, 66–7.
93. T. Devine, *Clanship to Crofters' War* (Manchester, 1994), 233–5.
94. Withers, *Gaelic Scotland*, 246–55, 388–91.
95. Phillips in Constantine *et al.*, *The First World War in British history*, 111.
96. Devine, *Clanship to Crofters' War*, 233–4.
97. French, *British economic and strategic planning 1905–1915*, 63; Ferguson, *The pity of war*, 206; Beckett, 'The British army', 103; Waites, *A class society at war*, 8; J. Lawrence, 'The transition to war in 1914', in J. Winter and J. Robert *et al.*, *Capital cities at war* (Cambridge, 1997), 156; 'Enlist', Cartoon in *Forward*, 5 December 1914, 1; 'What millworkers have to face', letter by 'Onlooker', *Galashiels, Galashiels Border Standard*, 8 August 1914, 34; 'To unemployed and half-employed mill workers', *Galashiels Border Standard*, 22 August 1914, 1; 'Selkirk and the War', *Galashiels Border Standard*, 22 August 1914, 8.
98. S. Szreter, *Fertility, class and gender in Britain* (Cambridge, 1996), 481–8. See Becker, *The Great War and the French people*, 325.
99. C. Lee, 'The Scottish economy,' in Macdonald and McFarland eds, *Scotland and the Great War*, 17–19; 'The nor' east in the war time – IV How the war has affected the fisherman' in *Scotsman*, 3 April 1915, 7; 'Aberdeen fishing – trawlers crews paid off', in *Daily Record and Mail* (Glasgow), 4 August 1914, 3; '15000 out of work – Scottish fishing industry paralyzed' in *Daily Record and Mail* (Glasgow), 13 August 1914, 4; 'Blown-up trawlers' in *Daily Record and Mail* (Glasgow), 29 August 1914, 4; 'Herring and the war' in *The Highland Leader and Northern Weekly* (Dingwall and Inverness), 27 August 1914, 3; 'Barra Fisherwomen and the war', letter by Marian Cassels, *Glasgow Herald*, 24 August 1914, 3.
100. 'Distillers' stocks of barley', in *The Highland Leader and Northern Weekly* (Dingwall and Inverness), 27 August 1914, 3.
101. SRO AF80.40, Board of Agriculture for Scotland – Monthly Agricultural Report, October 1914; Cameron and Robertson, 'Fighting and bleeding', 85; 'The war and the Great Powers – the Tweed trade', *Galashiels Border Standard*, 22 August 1914, 4; 'Border manufacturers and the war – Industry going to be badly hit', *Galashiels Border Standard*, 29 August 1914, 7.
102. Withers, *Urban Highlanders*, 78–9. Withers cites a decline in the circulation of Highland labour for Lowland harvest purposes by the late 1890s.
103. Anderson, 'Scottish nuptiality', 78; Glasgow Highlanders and the Wwr crisis', *Highland Times*, 15 October 1914, 2; 'Ross-shire Relief Fund – disbursement of money' in *The Highland Leader and Northern Weekly* (Dingwall and Inverness), 3 September 1914, 2. 'Highland societies and relief work' in *The Highland Leader and Northern Weekly* (Dingwall and Inverness), 22 October 1914, 2; 'The Highlands and the war – re-population of the Glens', letter by J. Campbell in *The Highland Leader and Northern Weekly* (Dingwall and Inverness), 29 October 1914, 2.
104. PRO LAB 41/81, Memorandum on the increase in wage rates during the war 1914–1918, 'The rise in the cost of living since the beginning of the war'.
105. Withers, *Gaelic Scotland*, 371. 'Lochiel and the Highlanders', letter by 'A Highlander' in *Highland Times*, 10 September 1914, 3; 'The Highland problem', letter by 'A Territorial' in *Highland Times*, 15 October 1914, 4; 'The Highlands and the war', letter by J. Campbell in *The Highland Leader and Northern Weekly* (Dingwall and Inverness), 29 October 1914, 2; E. Cameron and I. Robertson, 'Fighting and bleeding for the land' in C. Macdonald and E. McFarland eds, *Scotland and the Great War* (East Linton, 1999), 81.
106. See Coetzee, 'Variations in voluntary enlistment'.
107. Szreter, *Fertility, class and gender in Britain*, 342–6.
108. Winter, *The Great War and the British people*, 46; Reid, 'Britain during the First World War', in Tolliday and Zeitlin eds, *Shop floor bargaining and the state*, 50. Dewey, 'Military recruiting and the British labour force during the First World War', *Historical Journal*, 27 (1984), 220. Compare with Becker's observations on the French middle classes in Becker, *The Great War and the French people*, 325.