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Abstract

Costly administrative failures during the South African War were shown by several official investigations to be associated with ineffective and deceptive accounting systems administered from the War Office. They were regarded also as symptomatic of a deterioration in the efficiency of British business and government. To retrieve Britain's greatness a movement of national efficiency sought to raise efficiency levels in all areas of British national life. Fundamental to the reforms that they advocated were a strong British empire and an efficient army. Thus, military administrators were urged to apply the methods of commerce to the business of war. Amongst the most innovative strategies to raise the commercial awareness and accounting expertise of army administrators were the Army Class at the London School of Economics and Political Science (LSE) between 1906 and 1932 and the army cost accounting experiment (1919–1925) in which the LSE also played a role.

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**NATIONAL EFFICIENCY,
MILITARY ACCOUNTING
AND
THE BUSINESS OF WAR**

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NATIONAL EFFICIENCY, MILITARY ACCOUNTING AND THE BUSINESS OF WAR

Synopsis

Costly administrative failures during the South African War were shown to be associated with ineffective and deceptive accounting systems administered from the War Office. They were regarded also as symptomatic of a deterioration in the efficiency of British business and government which had left Britain vulnerable to the aggressive energies of Germany and the United States. To retrieve Britain's greatness, the former Liberal Prime Minister Lord Rosebery, other prominent Liberals, Conservatives and the Fabians Sidney and Beatrice Webb promoted a movement of national efficiency to raise efficiency levels in all areas of British national life. Fundamental to the reforms that they advocated were a strong British empire and an efficient army. Thus, military administrators were urged to apply the methods of commerce to the business of war. Amongst the most innovative strategies to raise the commercial awareness and accounting expertise of army administrators were the Army Class at the London School of Economics and Political Science (LSE) between 1906-1932 and the army cost accounting experiment (1919-25) in which the LSE also played a role. The aim of these innovations was to produce a 'soldier businessman'.

Key words: London School of Economics, British Army, national efficiency, army accounting, Fabians, cost accounting experiment

1. Introduction

Accounting historians investigating the evolution of cost accounting in large industries in Britain and the United States from the early industrial revolution to the early 20th century have developed an impressive body of work over the past two decades. Of particular interest to neo-classical and Foucauldian accounting historians have been the distribution of cost accounting practices between different types of businesses, the emergence of 'human accountability' as a defining feature of early management accounting and variations in the sophistication and applications of cost accounting between Britain and the United States (Boyns and Edwards 1996; Fleischman and Macve 2002; Fleischman, Hoskin and Macve 1995; Tyson 1993; Hoskin and Macve 2000; Locke 1979; Loft 1991; Johnson and Kaplan 1987). Although large businesses since the earliest days of the industrial revolution in Britain used some form of cost accounting tailored to their individual needs (Fleischman and Tyson 1993, p.503; Edwards 1937), evidence seems to suggest that it was only in the latter decades of the 19th century and the early decades of the 20th century that sophisticated forms of cost accounting which might constitute a form of management accounting¹ began to establish more than just a foothold in a greater range of businesses throughout Britain (see Fleischman and Tyson 1993; Edwards and Boyns 1995; Boyns and Edwards 1996; Fleischman and Macve 2002; Hoskin and Macve 2000; Armstrong 1987). Within these debates, the details of which are not the concern of this paper, World War I is now regarded as a watershed in the evolution of British cost accounting and the accounting profession (Miller 1990, p.315; Armstrong 1987, p.419; Locke 1979, p.15; Loft 1986). During this period the British Ministry of Munitions, which Loft (1991, p.35) refers to as the largest business in the world at the time, played a particularly prominent role in the refinement and subsequent spread of cost accounting practices to the wider business community (Loft 1986, 1994; Marriner 1994; Black 2001b; Locke 1979, p.15; Lloyd 1924).

Costing information required by the Ministry of Munitions of its contractors in the substantiation of their prices provided both the impetus and justification for the diffusion of cost accounting throughout many businesses which had only a minimal acquaintance with costing procedures. According to *The Accountant* (1 March 1919, p.150), until World War I most manufacturers had little or no appreciation of the importance of cost accounts, many of whom at the outbreak of war would have regarded the need for cost accounts as 'ridiculous'. One contributor to *The Accountant* in 1900 (30 June, p.600) found it "surprising how many manufacturers pay little attention" to cost accounts. J.M. Fells, famous for writing with Emile Garcke in 1887 the first book on cost accounting, observed in 1900 that "proper systems of cost accounting are the exception rather than the rule" (quoted in Locke 1979, p.6) while an American contributor to the *Journal of Accounting* in 1909 referred to cost accounting being in a "formative state" (Lybrand 1909, p.234). Meanwhile, Dicksee (1915b, p.19) criticized senior business managers for being "quite ignorant of the uses that accounts might have ...". Indeed, accounting as a tool of business was so poorly regarded by most business men that it was treated as a wasteful, necessary evil with accounting personnel to be merely tolerated rather than highly valued (Dicksee 1915b, p.20). One accountant at the beginning of the 20th century believed that part of the blame for Britain's decline as a world power lay with its reluctance to embrace cost

accounting practices. He referred to the humiliating way in which the absence of an "intelligent" system of cost accounting had most probably been the cause of English manufacturers being regularly defeated by foreign competitors in gaining new contracts (cited in Locke 1979, p.7).

Prior to World War I government departments of state were even more ignorant of cost accounting than the business sector, with the possible exception of government-owned armaments manufacturing and ship building establishments. Cost accounting systems, for example, were introduced in all War Office factories in 1890 mainly for the purpose of justifying the prices charged by contractors (Public Accounts Committee 1917, p.246). This paper will establish that the sources of this reluctance by departments of state to adopt cost accounting were entirely political and institutional, unlike the slow progress of cost accounting in business throughout the late 19th century which has been attributed to economic imperatives, a tendency to treat cost accounting procedures as trade secrets or because cost accounting did not appear to provide any commercial advantages (Armstrong 1987, p.419). While economic motivations were not entirely absent in the decision to experiment with the introduction of cost accounting in the early 20th century in departments of state, these were always secondary in the initial stages to motives of national interest and constitutional proprieties. Thus, the contribution of cost accounting to improved economy in the army, the first department of state allowed to experiment with cost accounting and the subject of this paper, was certainly recognized as a benefit to commend cost accounting. However, this had never been sufficient of itself to convince the British Government that cost accounting was either necessary or constitutionally appropriate. Instead, the potency of economic arguments for the adoption of cost accounting by the British Government in the decades spanning the close of the 19th century was entirely dependent upon circumstances providing sufficient political justification, in the form of military crises, and also the necessary assurance that there would be no threat to the constitutional protections provided by appropriation accounting (see for example the Public Accounts Committee 1924-5, Minutes of Evidence, Questions 6839,6884,6887). These political realities determined that the introduction of cost accounting at the War Office in the early 20th century was carried out through a staged process, with each stage preceded and precipitated by the crisis of war.

Although the stimulus to the development of business accounting which has ensued from economic crises in the early 20th century is well known in the accounting literature (Gallhofer and Haslam 1991; Armstrong 1987, p.419), the impact of political crises on the evolution of accounting in departments of state is still insufficiently appreciated by accounting historians. Notably, this was not the concern of Loft's (1986) examination of the impact of World War I on the professionalisation of cost accounting. Accordingly, this paper considers attempts by the British Government in the early 20th century, as a result of the experience derived from the political crisis of the South African War, to inculcate a business culture in army administration in which accounting was accorded a significant place. Apart from the Finance Department at the War Office, in the departments at the War Office which administered the largest business² in Britain, the army (Watt 1988, p.160; Mackinder 1907, p.2), it was rare at the end of the 19th century to find an appreciation of the relevance and the benefits which might be obtained in the field of battle from the most basic cost accounting practices. The administrative deficiencies exposed during the

South African War, however, compelled the army to remedy this situation by confirming the importance of accounting to the efficiency with which the British army was supplied in the field and upon which its success was heavily dependent (Royal Commission Appointed to Inquire into the Military Preparations and Other Matters Connected With the War in South Africa (hereafter the Elgin Commission) 1904; Royal Commission Appointed to Inquire into War Stores in South Africa (hereafter the War Stores Commission 1906)).

The modern army could no longer afford to deny its administrative officers an education in the ways and principles of business. This included a thorough working knowledge of accounting, both to promote the most advantageous use of public monies and, reflecting the problems encountered during the South African War, to prevent supply officers becoming the dupes of clever, scheming businessmen (War Stores Commission 1906, p.58). Particular prominence is given in this paper to the Army Class established at the London School of Economics and Political Science (LSE) from 1907 which was to be the means by which the army administrator would be transformed into a 'soldier businessman' (Mackinder 1907, p.5)³. In the latter sections of the paper the success of the Army Class is contrasted with the army cost accounting experiment, in which the LSE again played a prominent role, which was introduced in selected parts of the army in 1919 as a response to another political crisis, World War I. Unlike the Army Class, which worked within existing accounting systems, the success of the cost accounting experiment was wholly dependent upon the introduction of a new accounting system which challenged entrenched positions of influence in the major departments of state.

The political crisis of the South African War was but the final catalyst by which social and political anxieties and the persistent demands for the reform of military administration were finally able to gain expression. Thus, in the process of examining "underlying forces and processes ... (in) the wider economic and social context" (Loft 1991, p.25) at the time of, and in response to, the South African War, this paper establishes that the Army Class at the LSE was an innovative response to a coincident, pervasive pessimism at all levels of society about Britain's standing and future as an imperial power in a world in which Germany and the United States had emerged as formidable competitors. Efforts to confound the circumstances of Britain's loss of confidence found expression in the early 20th century in a movement of national efficiency, led by Lord Rosebery, other prominent Liberals and the Fabians, which called for all areas of British life to be reinvigorated with new purpose, energy and commitment to restore British prestige and prosperity. None was more important to restoring national efficiency than the efficiency of the army as the guarantor of the Empire.

2. The South African War and the Analogy of Business

The disappointing performance of the British army during the South African War precipitated the final, painful relinquishment of long outmoded forms of military organisation and administration. After the scathing condemnation of military administration and operational efficiency by the War Office (Reconstitution) Committee (hereafter the Esher Committee) in 1904, the Elgin Commission, also in 1904, and the War Stores Commission in 1906, public pressure ensured that successive governments prior to World War I would not be able conveniently to set

aside the hard-won lessons of the war (Semmel 1950, p.74; Watt 1988, p.156). Indeed, the administrative reforms demanded by these inquiries and by the public were to provide Britain with the modern army that it needed at the outset of World War I. The *Daily Telegraph* on the 6 January 1902 suggested that the South African War had brought about a 'profound transformation' in the political tenor of the nation which was manifested in a determination to ensure that the army in future would be well prepared for war and not be forsaken in the manner that it had been prior to, and during, every major and minor war in the 19th century (Searle 1971, p.41; Airey 1913a, p.466; Trevelyan 1856, p. A2). The public, informed Richard Haldane⁴ the new Secretary of State for War in 1906 (*Tribune* 29 October 1906), was "quivering with excitement over the spectacle of a great mass of very important work badly done to the detriment of the national purse".

The South African War belatedly confirmed what had become tragically obvious during the calamitous Crimean War; that qualities of individual heroism and military brilliance upon which the military had traditionally prided itself and which defined military culture would be no longer sufficient as a guarantee of success. The modern 'scientific' war, which had ceased to be the sport it had been once for gentlemen amateurs, allowed nothing to be left to chance or to personal eccentricities (Turner 1956). Bismark's easy success against the largest armies of Europe had accelerated Britain's insecurity by conclusively demonstrating the benefits of an efficient army organized and modelled on scientific principles (see H.G. Wells 1934, p.763; Searle 1971, p.6; Emy 1973, p.125). War now required a very different set of qualities and capacities; those which relied upon technical knowledge and scientific organisation to facilitate the "manipulation of material resources" (Anderson 1967, pp.101,104; Haldane in the *Tribune* 29 October 1906). War had become a 'commercial enterprise' (Gladstone in the *Quarterly Review* 1859, Vol.CVI, p.10) which required the manners of the gentleman soldier to be replaced by the expertise of the 'soldier businessman' (Mackinder 1907, p.5)⁵.

As a result of Leopold Amery's appointment during the South African War as *The Times*' war correspondent, the experience of which filled him with a deep disgust for military expertise and the personal qualities of the typical British senior officer, Amery demanded nothing less than a 'revolution' in army organisation and administration. Britain needed "an expert army", one in which "the whole caste system, the whole idea of the Army as a sort of puppet show where smartness, gilt braid ... must vanish and give place to something real, something business like" (Amery 9 January 1900, in Barnes and Nicholson 1980, p.33). The old amateurish military elite had become a dangerous anachronism which threatened not only Britain's pre-eminent imperial position but also its very existence in the presence of a militarily and industrially ascendant Germany (see the salutary report of the Royal Commission Appointed to inquire into the civil and professional administration of the navy and military departments and the relation of those departments to each other and to the Treasury (hereafter the Hartington Commission) (1890); Committee to Consider Decentralisation of War Office Business (hereafter the Brodrick Committee) (1898)).

As the South African War entered its second year the *Nineteenth Century* magazine (July 1900, p.1) emphasized the "need for conducting the business of the country, as administered by the various Departments of State, upon ordinary business principles

and methods". Army administration needed "to be as nearly as possible on all fours with the business arrangements which are understood in civil life" (Secretary of State for War Richard Haldane quoted in Watt 1988, p.158; Ormsby 1908a, p.846; Elgin Commission 1904, pp.128,129; Amery 1909, p.621). Indeed, suggested Captain Young (1906, p.1284), if the army's administrative departments in particular were to be operated in the best interests of military efficiency they must be led and administered by men who were trained as business men and had the values of business men (see also A Captain in the Regular Service 1906). In an age of modern warfare it was necessary to recognise the very different responsibilities, qualities and training of officers who were appointed to administrative posts. The "misfortune which has come to our Army of late", noted Haldane, "has been the revelation in South Africa of an altogether inadequate organization and training to cope with the great business of supply in time of war, and the disorganized period which follows upon war. Supply is one of the most difficult things anyone can tackle ... (It) is a science in itself which requires high training" (*Tribune* 29 October 1906; War Stores Commission). Army administrators needed to be trained in the ways of business so that they

should know how to have everything on the spot when wanted ...
 (Supply) was a science in itself which required high training, and ...
 (supply officers) should know how to organize the great masses of
 stuff and organize their lines of communication in a fashion that will
 make the military machine work without friction and difficulty
 (Haldane in *The Tribune*, 29 October 1906; see also Mitrany 1918,
 p.5).

According to the Director of the LSE, Halford Mackinder, the War Office and the Lords of the Admiralty were in reality boards of directors which sought to produce 'power' rather than profits (Mackinder 1907, p.2). The War Office was a "vast business organisation- a huge factory, whose output should be a number of efficient fighting units ... and whose managers are responsible to a nation of shareholders that these units are produced at the lowest possible cost" (Young 1906, p.1282; Searle 1970, p.87). The Committee on War Office Organization (hereafter the Dawkins Committee) in 1901 was convinced that

a general, if not a precise analogy, can be established between the conduct of large business undertakings and that of the War Office. There are certain well-defined principles of management in all well-conducted business corporations *and the more closely that the War Office can be brought into conformity with such principles, the more successful will be the administration.*

The vast extent and the great diversity of the work centred in the War Office differentiates it from that of a larger business undertaking only in degree, and there is no reason to doubt that the methods adopted in the latter for securing efficiency and economy could be employed in the former ... (The) present methods of the War Office are out of harmony with the best business practice (Dawkins Committee 1901, pp.182-3, emphasis added, and p.200; see similar comments by James Knowles in the *Nineteenth Century*, July 1900, pp.1-3; Spiers 1980, pp.241-2).

Although there were fundamental differences in aims between government and business, after the failures of the army in the South African War (Wilson 1973, p.53) these were deemed insufficient to refuse the army the opportunity to benefit from the methods of business, given the coincidence of intent of these organisations. If the army was to be successful at the business of war, the aim of the army

must be to produce the necessary amount of power at the least possible cost, and one of the main elements in a city business tending to produce profits is the saving of working expense. ... If you are to spend and yet be economical, you must spend with knowledge, and in accordance with policy, in other words your expenditure must be efficient (Mackinder 1907, p.3).

The enthusiastic commendation by the Dawkins Committee (1901, p.691)⁶ of the principles and practices upon which businesses relied, and the government's decision to appoint only businessmen to this committee chaired by Clinton Dawkins, a partner in the American banking firm J.P. Morgan⁷, demonstrated how it was no longer necessary to regard the ways of business as alien to the public services (Giffen 1901, p.1)⁸. This was soon to be confirmed by the findings of the War Stores Commission (1906) and later by the Select Committee on National Expenditure in 1918 and the Committee of Administration of, and Accounting for, Army Expenditure (hereafter the Lawrence Committee) in 1924. All sought control of the military's spending not through detailed financial regulations emanating from the War Office and the Treasury but through accounting reports which, as in business, would facilitate the most efficient use of available resources. The Dawkins Committee (1901, p.204, also see p.196), for example, wanted to reduce Treasury control to a minimum⁹. Control of military operations through negation and the denial of responsibility, the seeking of approval for virtually every action, either by reference to printed instructions or to a higher authority, needed to be replaced by a managerial form of accountability permitted by accounting systems which could monitor performance and apportion responsibility. The existing system, which assumed that "military officers of all ranks are, by the fact of wearing uniform, shorn of all business instincts" had resulted in the very deficiencies that it was meant to prevent (Esher Committee 1904, p.138). Government accounting systems had never been designed with the intention to promote military efficiency.

When pressed by the Select Committee on National Expenditure in 1918, Sir John Bradbury, Joint Permanent Secretary to the Treasury, agreed that only with great difficulty could the then present systems of appropriation accounting provide information to enhance military efficiency. He recognised that "the control of expenditure, in the sense of securing that various public services are efficiently administered at a reasonable cost, was no part of the object which the framers of the system ... (of accounting and accountability) had in view" (Report of the Select Committee on National Expenditure, 1918, para.16, p.157). The Comptroller and Auditor General, alluding to the tensions in military finance between military needs and constitutional proprieties, reminded the Public Accounts Committee that this was only to be expected for

the answer to many of the questions which may be raised by the accounts must depend not on considerations which can be measured in terms of money or of financial units but on general considerations of military necessity, to which accounting must be subordinate. ... There is this fundamental difference between Army expenditure and commercial expenditure; the first has as its main object the production of an efficient Army- and the factor of military efficiency is an abstract idea not susceptible to appraisal in terms of cash ... (Public Accounts Committee 1924-5, p.825; Clode 1869).

Irrespective of the criticisms of constitutional anachronisms, consideration of the contributions of business methods to military efficiency by army administrators and commanders was unlikely to gain any prominence while ever the middle classes, but especially the sons of businessmen, continued to be excluded from army commissions. Prior to the 20th century resistance to the adoption of business methods and a business mentality in army administration, sustained by government suspicion that an efficient army might also be a potential rival in the exercise of power (see for example Mackinder no date, pp.177-8), had been perpetuated by officer recruitment in the combatant forces almost exclusively from the upper and landed classes for whom the bourgeois ethic of business was anathema. Despite the rapid rise of middle class professionals and many new professions in the second half of the 19th century there continued a lingering admiration for the 'gentleman amateur' rather than trained professionals who were considered to be mere 'players' (Wilson 1995, p.116; Otley 1970, p.215; Turner 1956). From the Restoration of the Stuarts in 1660, parliament ensured that the army would be officered only by men of high social position who had the most to lose should the army threaten parliament. Through tightly guarded selection procedures throughout the 19th century and the prospect of low pay the army elite sought to deny the middle classes the representation that their influence in the wider society justified. The Crimean War may have marked the ascendancy of the professional values and working habits of the middle classes by exposing the aristocratic leaders of the army as incompetent bunglers "who should make way for the efficient, self-reliant men of the age" but this had had little lasting effect on army command and administration (Anderson 1967, p.109). Whatever change might occur could only ever be gradual in the absence of officers in large numbers from the middle classes who would bring with them the skills and attitudes of their class.

Research by Haye (in Otley 1970, p.229) suggests that prior to 1870 only one businessman's son had passed through the officer training college at Sandhurst with a steady, though minimal, rise in business representation thereafter. In 1912 the landed classes still accounted for 64% of new officers while the elite levels of command remained predominantly aristocratic. Competitive civil service examinations introduced progressively since the *Report on the Organization of the Permanent Civil Service* in 1854 had made little difference to opportunities to gain a commission in the army, for to be admitted to Sandhurst all applicants still had to be nominated by the Commander-in-Chief on the advice of his senior officers. They, of course, tended to nominate only sons of men of their own class¹⁰. This tight control of the gateway into Sandhurst generally ensured that wealthy business families, for whom the low officer pay was no impediment, would not obtain the social status that an infantry commission would bring to their sons (Otley 1970, p.214). The South African War,

however, forced a reappraisal of the wisdom of institutionalizing professional ignorance and arrogance in a haughty, proud and socially isolated military elite. The almost immediate effect that this had on officer recruitment was sufficiently noticeable for Richard Haldane, upon assuming office as Secretary of State for War in late 1905, to be impressed by the way in which a "a new school of officers has arisen since the South African War, a thinking school of officers who desire to see the full efficiency which comes from new organisation and no surplus energy running to waste" (quoted in Barnett 2000, p.362).

3. National Efficiency and the Business of War

By itself the South African War did not brought about an unprecedented appreciation of the world of business, rather the problems experienced in the South African War crystallized a pervasive anxiety and pessimism about Britain's declining industrial and political competitiveness in a movement calling for the promotion of national efficiency in all areas of government and business (Read 1972, p.13; White 1901). Efforts to 'commercialize' the training of army administrators were not merely isolated responses by reformist zealots to the practical difficulties experienced in the field in South Africa. Instead, they were symptoms of the far more serious malaise of inefficiency which was declared by both Liberals and Conservatives to be endemic to British society but especially to government. Given the perilous state of Britain, where "there was now not an inch of ground in any one of the international markets for which we were not fighting with all our available strength" (Lord Rosebery in Matthew 1973, p.224), Lord Rosebery warned Sidney Webb in 1901 that "(i)f we have not learned in this war that we have lagged behind in efficiency we have learned nothing" (quoted in Scally 1975, p.56). The ruling class, judged H.G. Wells (1934, p.764), was "profoundly lazy. The Edwardian monarchy, Court and society were amiable and slack". Thus, efforts to inculcate in the army the values and practices of business, in which accounting was to be accorded a prominent place, cannot be understood in isolation from an appreciation of the wider social and political frustrations which were intensified by the national soul-searching induced by the military and political failures of the South African War and the responses that these elicited. In particular, for a short, but crucial, period around the turn of the 20th century the movement of national efficiency, although ultimately politically moribund and surviving only until late 1903 (Emy 1973, p.129), provided a locus for the formation of more enduring efficacious relationships and networks of influence among prominent social and political activists from both the Liberal and Conservative parties who shared similar beliefs about the sources of Britain's decline and the importance of an efficient army in ensuring a strong empire (on the importance of the army to protecting the empire see Campbell-Bannerman in Wilson 1973, p.167).

Scally (1975, p.92) refers to calls for national efficiency during the Edwardian period as a "fashionable attitude" which defined the political tenor of government (see also Rose 1986, p.117). The *Spectator* in 1902 (16 August) suggested that "(a)t the present time and perhaps it is the most notable social fact of its age ... there is a universal outcry for efficiency in all departments of society, in all the aspects of life". The economist J.A. Hobson, for example, provided economic justifications for an approach to economics which sought to enhance human efficiency (Emy 1973, p.107). Soon the catholic appeal of national efficiency became a demand in the first decade of the 20th century for the establishment of a government of 'business men' to

allow government to take advantage of the superior practical abilities and efficiencies which were perceived to be associated with private businesses (Searle 1971, p.43; Anderson 1967, pp.104-5)¹¹.

Denunciations of the consequences of the complacent indolence of the British and exhortations of the need for a concerted, national effort to retrieve national efficiency were pre-eminently associated with Lord Rosebery (1847-1929) and the Fabians Sidney and Beatrice Webb. Lord Rosebery and the Webbs became synonymous with efforts in the pursuit of national efficiency to prise the British out of their self-satisfied, slothful acceptance of mediocrity and amateurism into which they were said to have fallen (Mackenzie and Mackenzie 1977, pp.286,7; James 1963; Bentley 1984, p.317). According to Sidney Webb the Edwardian Englishman was pre-occupied with a burning feeling of shame at the 'failure' of England- ... shame for the pompous inefficiency of every branch of our public administration, shame for the slackness of our merchants and traders that transfers our commercial supremacy to the United States, shame for the supineness of our race by drunkenness and gambling ... (Webb 1903, p.7; Read 1972, p.95).

From the late 1880s Rosebery had been advocating the urgent need to put all of Britain and its empire on a "business footing". Rosebery, who had been Foreign Secretary in Gladstone's Government in 1886, had learnt from Gladstone the importance to the successful politician of concentrating the public's attention on 'a single great question' rather than the plethora of small issues which "dazed and blunted" the nation's intelligence (Rosebery in Hamer 1972, pp.247,8; Bentley 1984, p.318). In Gladstone's case the single issue had been at various times the Irish Church, Home Rule for Ireland and British imperialism. For Rosebery, after the defeat of the Liberals in 1895 the great issue for 'concentration' was national efficiency, a policy which he believed would appeal "to the silent but supreme tribunal which shapes and controls in the long run the destinies of our people, the tribunal of public opinion and common sense" (quoted in James 1963, p.431). Efficiency, according to Rosebery and his acolytes, offered the only way in which the ills which now afflicted British society, politics and industry could be addressed. Unfortunately for Rosebery and his political career he was unable to convert his one big issue into a clear political program capable of gaining the support of the public (Webb 1975, p.223).

Rosebery defined the national efficiency which he sought as "a condition of national fitness equal to the demands of our Empire- administrative, parliamentary, commercial, educational, physical, moral, naval and military fitness ..." (Rosebery quoted in Semmel 1960, p.63). This national efficiency was not the sanctimonious parsimony of the Victorians in which retrenchment in government spending was valued of and by itself, rather than for the operational benefits it might provide (Funnell 2004). National efficiency was not to be about cheapness but instead the methodical, cool-headed weighing of the long term costs and benefits of government policies which were in the nation's best interests (Rose 1986, p.117). Coincidentally, the Fabians also believed that efficiency, not equality, was the means by which socially responsible government should seek to raise living standards. Soon after the end to Britain's ignoble war in South Africa, Sidney Webb indicated his belief that Britain was "ripe for a domestic programme, which shall breathe new life into the

administrative dry bones of our public offices ... (with) a policy of National Efficiency" (*Nineteenth Century*, September 1901 as reproduced in Webb 1903, p.7). With the publication of George Bernard Shaw's Fabian tract *Fabianism and Empire*¹² in 1900 the Fabians had made the achievement of national efficiency dependent upon a secure empire and social reform which would guarantee, according to Sidney Webb's description, a 'national minimum' in all areas of social activity (Mackenzie and Mackenzie 1977, pp.277-8).

The goal of national efficiency required "as the starting-point of industrial competition" the eradication of disease, the replacement of slums with good housing and the end to working class ignorance through educational reform (Webb 1903, p.8; Scally 1975, p.51; Semmel 1960, pp.62-34; correspondence of Sidney Webb, 20 March 1902, Mackenzie 1978, p.ix and p.146; Emy 1973, pp.108,130; Pease 1925). "What is the use of talking about an empire", demanded the Liberal Prime Minister Herbert Asquith (1908-16), "if here ... there is always to be found a mass of people, stunted in education, a prey to intemperance, huddled and congested ..." (quoted in Webb 1975, p.223; see also Mackinder in Parker 1982, pp.62,64). Belying their earlier championing of the rights of the individual and their condemnation of the evils of state interference, Rosebery's Liberal Imperialists now saw that the national interest demanded that the poor and the ignorant be raised from their impoverishment through government programs to a position where they could enhance national efficiency. Both Liberals and Fabians accepted that social and imperial efficiency were entirely dependent upon extensive and sustained domestic reform (Asquith in the Matthew 1973, pp.71-2). This was best achieved, suggested the Webbs in their book *Constitution for a Socialist Commonwealth of Great Britain*, by the creation of an elite corps of social engineers; a civil bureaucracy, whose aim was efficiency and who would be independent of politics (Scally 1975, p.83; Rose 1986, pp.122-3; Amery 1953, p.223; Webb 1975, p.xxv).

At times some members of the movement for national efficiency, notably the Fabians and Lord Rosebery, were so dismayed at the poor quality and, therefore, the inefficiency of the British working man and woman that they were tempted to stray into Social Darwinism by offering eugenic solutions to resurrect national efficiency. Rosebery criticized the "physical degeneracy of our race" (quoted in Matthew 1973, p.80) while Beatrice Webb referred at one point during the South African War to "breeding the right sort of man" (Mackenzie 1977, p.291). Hence, the Webbs were easily attracted to their fellow Fabian George Bernard Shaw's prescriptions for society's ills in *Man and Superman* and those of Herbert Spencer (1960; for details of the Webbs' friendship with Spencer and his influence see correspondence 16 May 1899 in Mackenzie and Mackenzie 1983, p.159 and Nolan 1988, pp.38,39).

Not surprisingly, given the importance of a large, secure and productive empire to Britain's well-being, Rosebery's and the Webbs' conception of national efficiency as the source of the resurrection of British imperial prestige and power was dependent upon a strong and efficient army (Semmel 1960, p.72; Matthew 1973, pp.80,215,225). According to Sidney Webb and the Liberals, the essential requirement for an 'efficient army' which would allow "scientific fighting to replace soldiering" (Webb quoted in Scally 1975, p.52; Webb 1903, pp.13,15; Matthew 1973, p.94) was improvements to general education, technical education and military education. "Nothing", assured Webb (1903, p.15), "is more calculated to promote National

Efficiency, than a large policy of Government aid to the highest technical colleges and the universities". Not only was the great majority of young men who had offered themselves for service during the South African War in poor health and of stunted physique, they were also invariably illiterate (Mackenzie 1978, p.169; Emy 1973, p.132)¹³. Under these circumstances, Britain was at a considerable disadvantage in modern warfare when compared to the higher quality, better educated recruits available to the French and German armies. Thus, after the South African War the German obsession for rigour, detail, efficiency and excellence became the model upon which Richard Haldane (1856-1928) based his vision for a modern British army¹⁴ (Editor 1907, p.304; Haldane 1929). As Secretary of State for War between 1905-12 Haldane had a singular influence on the reform of the British army prior to World War I. Some historians have referred to Haldane as the greatest army reformer in British history, surpassing even the attainments of Lord Cardwell in the early 1870s (Watt 1988, p.157; Koss 1969).

Well before he entered politics Haldane had established a formidable reputation as a lawyer, an educational reformer, an implacable defender of the empire and as an expert in German philosophy¹⁵ (*Dictionary of National Biography*, Vol.1922-30, pp.380-6; Webb 1975, pp.95,98,217). H.G. Wells (1934, p.766), who came to hold opposing views to Haldane on imperialism, described Haldane as "a self-indulgent man, with a large white face and an urbane voice that carried his words as it were on a salver, so that they seemed good even when they were not so ... I think he floated on strange compensatory clouds of his own exhalation. He rejoiced visibly in the smooth movements of his mind" (for more complimentary assessments of Haldane see: Webb 1975, p.95; Wilson 1973, p.220; Matthew 1973, pp.3-6; Koss 1969, chapter 1). Before entering politics Haldane's interest in educational reform and his work in helping the Webbs establish the LSE in 1895¹⁶, and later in 1901 the reorganisation of the University of London, provided the basis for a long-standing and close friendship with Sidney and Beatrice Webb¹⁷ (see correspondence by Beatrice Webb in September 1892 in Mackenzie 1978, pp.2-3 and Sidney to Beatrice Webb 22 April 1899 p.99; Webb 1975, p.97; McBriar 1966, p.221). Thus, it was not surprising that he was also an early member recruited for the small dining club called the 'Co-Efficients' formed by Leopold Amery and Beatrice Webb in November 1902 to promote, as the name selected for the group suggested, the coincident social aims of the Fabians and those of the national efficiency movement¹⁸. Amongst the first beneficiaries of their strivings for efficiency were the administrative departments of the British army.

The Co-Efficients was composed of a maximum of twelve prominent individuals, each a recognised expert in his discipline, who met once a month for dinner from late 1902 until 1908 when disagreements over tariffs proved too divisive for the Co-Efficients to continue. H.G. Wells (1934, p.761) refers to the Co-Efficients as "a curious little dining club" of like-minded imperialists which at various times included amongst its members, with their specialisation: Richard Haldane (law); Sir Edward Grey (foreign affairs); Leopold Amery (the army); Clinton Dawkins (banking); Bertrand Russell¹⁹ (philosophy and science); Halford Mackinder who, like Haldane, was well known for his strong imperialist opinions and his support for a strong army to preserve the Empire (geography) (Parker 1982, pp.57,60)²⁰; H.G. Wells (literature)²¹; George Bernard Shaw (the arts) and Sidney and Beatrice Webb (social policy) (Barnes and Nicholson 1980, p.41; Amery 1953, p.224; Blouet 1987, p.135;

Mackenzie 1978, p.170; Radice 1984, p.146). Unfortunately, with no minutes taken of its meetings, the only records that survive are the isolated snapshots provided by members such as Wells, Sidney Webb and Amery.

With the Co-Efficients being drawn from both the Liberal and Conservative sides of politics as well as the Fabians, there was no intention to use the meetings to form a new political party, although the Co-Efficients was often referred to as a shadow cabinet. Instead, the meetings were to provide a forum whereby strategies could be aired with which to influence eminent people to promote national efficiency (Searle 1971, p.150). The Co-Efficients was but another way in which the Webbs used their tactic of 'permeation' to gain access to those in government and on the fringes of government who were most likely to be able to influence policy²². Ultimately, according to Mackenzie (1977, pp.290-1) the Co-Efficients was little more than one minor expression of a change in the national mood which cut across the parties and social classes, a mood rather different from the jingoism of the Boer War. For the first time in a century there was a sense of national danger, of a need for forthright leadership which could stiffen the country's moral fibre and strengthen its ability to fend off foreign threats and competition.

In a letter to George Bernard Shaw in September 1902 Sidney Webb established that each meeting of the Co-Efficients would be structured around a short paper written by one of the nominated members, the subject of which would be centred on "the aims, policy and methods of Imperial Efficiency at home and abroad" (Mackenzie 1978, p.170; for a report of one meeting see Sidney to Beatrice Webb 18 June 1907 in Mackenzie 1978, p.265; Wilson 1973, p.382). Reflecting this primary impetus for the formation of the Co-Efficients, Wells (1934, p.764) describes the first meetings at St. Ermin's Hotel as 'wrangles' between "Amery and Mackinder, all stung by the small but humiliating tale of disasters in the South African War"²³ (for Mackinder's account of the first meeting see Parker 1982, p.30).

The Co-Efficients was notable, if not for its political accomplishments, for the opportunities that were provided for its members to develop personal and professional associations which could be carried into other spheres of their lives. Most important for the purposes of this paper, the association that developed between Mackinder (1961-1947) and Haldane, who were recognised by the other Co-Efficients as the main intellectual forces behind their discussions (Amery 1953, p.228; Semmel 1960, p.61), provided the means by which the business education of army administrators could begin. Their friendship owed much to a shared passionate commitment to educational reform, to their Liberal loyalties and the close friendship that both enjoyed with the Webbs (Gilbert 1961, pp.19,21). Mackinder, who had achieved fame as the founder of the modern discipline of geography and the creation of the new field of historical geography, was also a well-known economic theorist (Semmel 1960, p.166; *Dictionary of National Biography 1941-1950*, pp.556-7; Cantor 1960; Gilbert 1961; Parker 1982). While a member of the Co-Efficients and a member of the Liberal Party, Mackinder was appointed Director of the LSE in 1903, succeeding W.A.S. Hewins who had also been a member of the Co-Efficients, holding the post until June 1908. This appointment, soon to converge with Haldane's own appointment as Secretary of State for War, proved fortuitous for the introduction of business education to the administrators of the British army.

During Mackinder's term as Director of the LSE Haldane took advantage of his friendship with the Webbs and the momentum for reform created by the damning report of the Elgin Commission in 1904 on army administration during the South African War to approve the commencement in 1907 of formal business training for army administrators with a Course for the training of Officers for the Higher Appointments in the Administrative Staff of the Army at the LSE, most often referred to as the 'Army Class' (see the entry in Beatrice Webb's diary for the 21 November 1906 in Mackenzie and Mackenzie 1984, Vol.3). Haldane's political assistant, Sir Edward Ward, referred to the "practical experience in recent campaigns ..." which had demonstrated the need for specialized administrative officer's whose training should include "(f)inancial, commercial and legal qualifications" (Ward quoted in Watt 1988, p.157)²⁴. Haldane seized the opportunity, for which he, Rosebery and the Webbs had been preparing, to create the efficient army upon which the proselytizers of national efficiency believed that Britain's future as an imperial power depended. The Army Class allowed Haldane to give further effect to the intention to "put education first ..., other interests second" and to apply business methods to domestic and imperial policies (Haldane quoted in Matthew 1973, pp.94,149).

4. The LSE and the 'Soldier Business Man'

Ever since the foundation of the LSE in 1895, through the Webbs and Haldane it had enjoyed a strategic association with Lord Rosebery and the movement for national efficiency (Matthew 1973, p.68). Indeed, Rosebery had used his influence with his brother-in-law, Lord Rothschild, to secure the necessary funding for the foundation of the LSE. In addition, from his time in power during Gladstone's last ministry, Haldane also had enjoyed close personal and political connections with Lord Rosebery (Matthew 1973, pp.17,19). Thus, in effect, post-Gladstonian Liberalism and the decade-long preparations of the advocates of national efficiency converged in 1907 on the LSE in the form of the Army Class.

As Britain's first dedicated business school, prior to the Army Class the LSE had provided business training for eight of the largest railway companies in Britain and several water authorities (Mackinder 1907, p.4; Searle 1975, pp.90,124; Rose 1986, p.125). The directors of the LSE believed that administration, whether in business or government, required dedicated professional training; "the old way of blundering into the position of a responsible administrator will no longer do" (Mackinder 1907, p.4). Accordingly, it was Beatrice Webb's aim to make sure that "no young man or woman who is anxious to study or to work in public affairs can fail to come under our influence" (quoted in Webb 1975, p.xxx), starting with the army whose officers at the opening of the South African War had managed to keep at bay the training and educational requirements of modern war.

Consistent with the determination of senior military officers to ensure that commissions in the army remained the domain of the landed classes, throughout the 19th century the education of army officers had changed little. The Duke of Wellington's belief that "the best education for an officer is whatever may be considered the fittest education for a gentleman" (quoted in Slessor 1901, p.516; Editor 1905, p.416; Russell 1902) remained the touchstone for the training and the qualities sought of officers, the majority of whom were still drawn from the propertied

classes (Bond 1972, p.20). The result was a body of officers whose education was perceived at the close of the 19th century to be significantly deficient when compared to that of leaders in the professions and business. It was particularly unsatisfactory and found wanting in comparison to German military education, against which the British appeared amateurish and dissolute (Searle 1971, pp.14-15; Wells 1934, p.763; Esher 1910, pp.46-9). At the time of the South African War, instruction for British officers had deviated little from military law, basic mathematics necessary for surveying, military history and fortifications which had been favoured in Wellington's time. Nor was there any incentive to change during long periods of peace after the Crimean War when the deadening routine of military life demanded by unchanging regulations denied officers the opportunity or encouragement to improve their skills and to use their initiative to do so (Slessor 1901, pp.516-7). The plight of administrative officers, but especially those engaged in supplying the army with its material needs, when compared to the training of their brother officers in command positions was even more parlous. Secretary of State for War Haldane when introducing the new Army Class at the LSE reminded his audience how

(u)p to now no step has been taken to give a higher training to certain officers who may be experts in connection with the administrative side of war. You want those experts in the whole mechanism of modern business, in accounts, in supply, organization, and transport ... (W)e have never trained our officers designated for that work ... (but) we have already decided that we will train a school of administrative officers on the same high level that we try to train our staff officers (T)rained business experts; soldiers but soldiers trained in the highest civilian principles so far as is administrative business is concerned, who would be fixed with the responsibility for what they did, and made accountable for the highest service (Haldane in the *Tribune* 29 October 1906).

Haldane regarded the Army Class at the LSE as the means, if only experimental at first, of getting the army on "a sound business footing" (quoted in Watt 1988, p.159; Mackinder 1907, p.5). At the opening ceremony of the new class in January 1907 Mackinder (1907, pp.5,7,10) emphasized the importance of understanding the ways of "civilian business and ... working the people according to their habits What we require as business men is such working knowledge as will enable us to do our business safely and in order We wish to obtain for you the experience of practical business men". With the benefit of the recent findings of the War Stores Commission, Haldane (quoted in Watt 1988, p.159) expected instruction at the LSE to ensure that

never again shall a state of things occur in which officers placed in charge of the business of dealing with local contractors are unable to make or even to understand the nature of the contracts involved-never again shall we have officers unable to keep their company accounts and ignorant of questions of currency, or familiar with the general processes governing the management of markets

The creation of an Advisory Board for Haldane's new Army Class at the LSE, on which sat some of the most senior officers of the various army departments, was a clear indication of the importance with which the army, the War Office and the government regarded the new Army Class (see Advisory Board 1912). The success of this essentially revolutionary innovation in the education of British army officers and

in the approach of the War Office to army administration depended upon a visible commitment at the very top levels in each of the army's departments. Each year the Advisory Board provided a detailed report to the government and to the War Office in which the Board outlined the accomplishments of the Army Class and gave its recommendation that the class be allowed to continue. In its 1911 Report, for example, the Advisory Board commended the way in which the class provided "the general working knowledge which enables an officer to conduct business matters in safety and in order ..." (Advisory Board 1911, p.3). Indeed, there was no shortage of graduates who believed that the course appreciably enhanced the value of army administrators (Airey 1913b, p.457).

Each year 30 students in the latter part of their careers²⁵ were selected to begin their 20 week course in October, finishing in the following March. The students, who were affectionately referred to as the 'Mackindergarten' after the Director of the LSE, were most often officers of the rank of captain and above selected from line commands and most of the administrative departments, with the Army Service Corps providing each year the largest number of students; ten out of 30 in 1911 and eight in 1912 (Gilbert 1961, p.21; Dahrendorf. 1995, p.89; Amery 1909, p.620; Advisory Board 1911, p.3 and 1912, p.3; LSE Archives, File 232/B; "B" 1907, p.673). Other departments which were eligible to provide students included the Royal Artillery, Royal Engineers, Infantry, Medical Corps, Ordnance Corps and the Indian Army (Badcock 1926, p.104, Badcock 1925). The students were instructed by eminent experts in their fields who were drawn from business, the universities and government. Haldane was a frequent lecturer and Sir Charles Harris and Colonel Grimwood of the Finance Department at the War Office, who had been implacable critics of army accounting systems (Harris 1911, pp.65, 67; Harris 1931, p.314; Brodrick Committee 1898, Questions 484-487, p.21), took an active interest in the success of the Army Class with Harris appearing often as a guest lecturer (Letter from Lawrence Dicksee to LSE, 14 June 1919, LSE Archives, File 232/C and 232/D; Grimwood 1919). Indeed, the army class signified the beginnings of the convergence of Harris's perennial agitation for business enhancements to the army's accounting systems and the national efficiency movement which would finally come to full, if temporary, fruition with the cost accounting experiment in 1919. Haldane's (1929, p.186) high regard for Harris, leading him to describe Harris as a 'very remarkable man', was borne out of a close professional association between Harris and Haldane at the War Office. Thus, from the first Haldane as Secretary of State for War had at the War Office an unwavering champion for his reform plans. For Harris, the Army Class was but a preliminary step in the importation of cost accounting from business to provide Britain with a highly efficient and cost-effective army (see below).

Lectures were given on 14 subjects with numerous 'observation visits' to complement the material delivered at the LSE. These visits included the offices of *The Times* newspaper, the Great Western Railway Works, the London Docks, the London Omnibus Works, the Railway Clearing House, the Royal Arsenal at Woolwich, the House of Parliament and Lloyds (Badcock 1926, p.106, 1925). Typically the curriculum was weighted heavily towards commercial law and accounting, the latter delivered by Lawrence Dicksee three mornings a week both prior to World War I, when classes ceased, and thereafter when the class resumed in 1924 (Badcock 1926, pp.104-5; Advisory Board 1912, p.5). These two subjects were recognised by Mackinder (1907, p.6) as constituting the core of the new course, providing many of

the basic essentials of business upon which the other subjects would need to draw²⁶. The accounting course sought to provide

a thorough explanation of the principles upon which business systems of Accounting are founded, with a view to enabling officers to understand any accounts that may be present to them ... The manner in which these principles are applied to meet the varying requirements of businesses will be fully considered, together with the organisation of systems of control. Attention will also be directed to the various uses made of accounting records by business men (Advisory Board 1912, p.5).

Captain Airey of the Army Service Corps, who had completed the Army Class in 1912, recommended accounting as the subject of the most practical value for the Army Service Corps officer (Airey 1913, pp.465,6) while Lieutenant Colonel Badcock (1925, p.140), another graduate, praised the way in which students were taught how to keep accounts and to understand how these accounts might be used to ascertain whether money had been wisely spent (for a copy of the accounting syllabus see LSE Archives, File 232/A). Captain Airey (1913, p.466) was particularly impressed with the way in which knowledge of balance sheets would allow officers to choose contractors more wisely and to be better informed in any fights with the War Office's Finance Department. Most of this praise was for the teaching of Lawrence Dicksee whose books were in constant use as the sole accounting texts for the entire history of the Army Class²⁷. After Dicksee's classes students found that "every account becomes an interesting statement of fact rather than an irritating collection of figures, so much despised because so little understood" (Airey 1913, p.466).

The Army Class continued to operate until 1914 when the need for war economies induced the War Office to refuse further funding²⁸, by which time nearly 300 officers had passed through the class²⁹. The success of the Army Class in improving military efficiency, suggested Dicksee (1915b, p.2), was clearly evident in the early part of World War I by the "wonderful success" of transport and supply. When the LSE sought to resurrect the Army Class in 1919 it also sought to support its case with the boast that "its value has been testified to be very satisfactory, in the War just ended, by the work done by many officers who had gone through the course" (*Notes on the Course established at the LSE in the Session 1906-7 for the Training of Officers for the higher administrative appointments on the Administrative Staff for the Army and for the charge of Departmental Services*, LSE Archives, File 232/C). The army course was eventually resurrected in 1924 after much lobbying by the LSE, continuing until 1932 when the need for economies during the Great Depression again saw the War Office and the Treasury withdraw financial support (see Dahrendorf 1995, p.89; Wallas 1925, p.2; Watt 1988, pp166,170; Beveridge 1960, p.32). However, between the end of World War I and the resumption of the Army Class, the LSE was able to take advantage of the considerable experience it had acquired in teaching accounting to army officers in the Army Class by providing the formal accounting training to the soldiers recruited to implement the army cost accounting experiment between 1919 and 1925.

5. Political Limits to Administrative Reform and the Army Cost Accounting Experiment (1919-25)

Although like its predecessor, the Army Class, the cost accounting experiment sought to raise the business efficiency of army administrators and commanders, this would not be achieved without political cost. The Army Class involved no changes to the army's accounting systems and, therefore, presented no threat to the organizational basis of existing networks of power and influence or to the role performed by the 'subject-based' form of accounting constitutionally required by appropriation accounting. The cost accounting experiment, with its perceived challenge to a system of accounting from which political power and influence derived much of its nourishment, was a very different proposition. Accordingly, whereas the Army Class was widely praised and supported, the cost accounting experiment was the progeny of a few visionary financial administrators who were opposed, either out of ignorance or self-interest, by numerous powerful adversaries determined to ensure the demise of the experiment.

The army cost accounting experiment which commenced in April 1919, at a time when there was a surge in cost accounting interest in private industry, was the ultimate manifestation of the army's flirtation with business methods and culture and another example of the nexus between government accounting reform and political crisis. It arose most immediately out of the financial extravagance of World War I, the extent of which was revealed in the First Report of the Select Committee on National Expenditure in 1918. According to the Select Committee, during the war the national debt had been increasing by £1000m every six months and by the close of fighting war expenditure had accounted for 72% of all government expenditures (Hinchliffe 1983, p.70). The idea for the experiment had emerged from conversations between Sir Charles Harris at the War Office, members of parliament and Sir Henry Gibson, then Comptroller and Auditor General, who had been "impressed by the uncontrolled extravagance proceeding in all directions and in the absence of any machinery whatever for seeing that financial considerations received attention ..." (Sir Charles Harris, Public Accounts Committee 1924-5, Appendix 33, p.826). Those advocating the introduction of cost accounting also had on their side the very persuasive recommendations in favour of cost accounting by the Royal Commission on War Stores in South Africa (1906).

During the short few years in which the cost accounting experiment struggled for survival, the LSE, mainly through Lawrence Dicksee, became an important ally through the provision of short courses in accounting to hundreds of army personnel who had been entrusted with the success of the experiment. Dicksee referred to these courses as the "Army Accountants' Course", the first of which had 82 students enrolled (Dicksee in a letter to the War Office 8 July 1919, LSE Archives, File 232/C). Dicksee, who had been approached to provide these accounting courses by Colonel Grimwood representing the War Office, urged the LSE governors to "make every effort to provide what he wants ..." (Dicksee to the Secretary of the LSE, 5 March 1919, LSE Archives, File 232/C). The LSE took his advice, securing responsibility for the course at £11 per student, based upon a minimum of 60 students for each class. Dicksee, who was at the same time a partner in Sellars, Dicksee and

Co. in London, was then contracted to teach the new course for a fee of £300. The salient difference between the Army Class and the cost accounting experiment was that the Army Class was outward looking to the army's dealings with contractors, in the commercial world. The cost accounting experiment in contrast was for the purpose of providing information which would be useful for internal decision making, for example the running of a military unit in a cost effective manner (War Office Cost Accounting Committee 1918, p.3).

According to Sir Charles Harris, the most vigorous and influential advocate of the cost accounting experiment, cost accounts were to "become the main channel of administration and the main channel of parliamentary control" (Select Committee on National Expenditure 1918, Minutes of Evidence, Question 220 and 248, pp.334-6; Harris 1911, pp.65, 67, 1931; *The Balance*³⁰, Vol.2, Spring 1924). In his evidence before the Select Committee on National Expenditure in 1918 Harris told the Committee, how "thirty years' experience of the actual working of the present system of external control of War Office expenditure, in peace and war, has convinced me that it fails to produce real economy" (Evidence, p.391). In the last days of the experiment when Harris appeared before the Public Accounts Committee in 1924 he referred to the way in which army cost accounting if allowed to persist would be the means of achieving impressive economy in military spending by providing information on the costs of operating army units and allow officers greater opportunity to make decisions to enhance economy. After the experiment had been approved in 1918 the War Office Cost Accounting Committee³¹ (1918, p.2; Ellison 1918), which had been established by the Army Council to superintend the experiment, had also praised cost accounts for the way in which they would "fix responsibility ... and secure economy ... while increasing efficiency" (for details of these arguments in support of the experiment see War Office Cost Accounting Committee 1918 pp.2,4, Ellison 1918 and Minutes of Evidence before the Public Accounts Committee 1924-5, Questions 6721,6722). In his last appearance before the Public Accounts Committee Harris again emphasized the way in which a cost accounting system would allow officers

to manage expenditure properly. (I)t is the difference between a system of account which is designed to control expenditures and a system of account that has nothing to do ... with seeing whether the Public Services are being carried on efficiently and administered with reasonable care for economy. The present system has nothing to do with that question at all ... This new system is intended, in particular, to take into account the psychological factor and produce economy ... by showing people the results of their actions and appealing to their reason (Public Accounts Committee 1924-5, Minutes of Evidence, Question 7206; for contradictions to these arguments see Public Accounts Committee 1924-5, Appendix 30B, from p.815).

Recruitment of students who might be suitable for the Army Accountants' Course at the LSE began with the issue of *Army Council Instruction No.113 of 1919* which, in "connection with the introduction into the Army of a new system of accounts of a costing type", sought expressions of interest from officers, warrant officers and N.C.O.s who in civilian life had practiced as a chartered or incorporated accountant. The army was interested also in soldiers of any rank who in civilian life had been

audit clerks for at least two years and any soldiers with a good education and with some knowledge of accounts. Once they had completed their training at the LSE they would be then assigned to units within army establishments where, apart from matters which affected their technical competence and duties, they would be under the usual authority of the officer commanding. The *Army Council Instruction* also referred to the possibility of the formation of a special Corps of Army Accountants. This Corps was eventually formed in November 1919 as part of the Army Service Corps under the Quartermaster-General while Sir Charles Harris was Assistant Financial Secretary and Accounting Officer in the War Office.

At the outset of the experiment, it was readily appreciated that the success of such a massive and profound undertaking depended upon the goodwill and enthusiastic co-operation of all departments concerned. Unfortunately, the dictates of a rigid interpretation of the constitutional function of government accounting (Clode 1869; Durell 1917; Einzig 1959; Select Committee on National Expenditure 1902) and thinly disguised Treasury self-interest denied the cost accounting experiment the opportunity to become anything other than a tenuous expression of hope on the part of its most committed advocates, thereby precluding the adoption of cost accounting throughout departments of state as a decision making tool, effectively until the latter decades of the 20th century. From the inception of the experiment in 1919 and the confinement of its application to just 14 sites distributed throughout the army (see War Office Cost Accounting Committee 1918, pp.1-2), the Treasury had no intention of allowing it to be successful. The Treasury made sure that the new system of cost accounting would be adopted as a trial, an experiment with all the connotations of impermanence that this implied. The new system of cost accounting would be given six years to prove itself but would have to do so alongside the existing the system of accounting. The government, with the support of parliament which was yet to be convinced of the need for cost accounting throughout all government departments, had no intention of relinquishing the existing system of accounting without convincing, cumulative evidence of the advantages of the new system.

These institutionalised impediments to the assumption of cost accounting by government departments which thwarted Sir Charles Harris were compounded and perpetuated by the education, class prejudices and social insularity of senior civil servants. At a time when, as a body, members of the accounting profession remained mostly oblivious to the benefits of cost accounting, deeming it as irrelevant to the professional concerns of chartered and incorporated accountants³² (see Fells 1900 in Locke 1979, p.6; Armstrong 1987, p.419; Loft 1986, p.143), there was even less opportunity for senior civil servants recruited with a classics education from Oxford and Cambridge (Finer 1937; Skidelsky 1983; Cohen 1965) to be acquainted with the existence, developments in, and the possibilities of cost accounting. Besides, ignorance of commercial practices was still a cherished characteristic of the British civil service (Marriner 1994, p.454). Even if this knowledge had been available to civil servants, evidence before the Public Accounts Committee as late as 1924 made it clear that cost accounting practices developed in the private sector for private purposes, and therefore tainted by the 'base' motives of commerce, were not deemed appropriate by many in government and in the senior departments of state, especially the Treasury, for the different roles and accountabilities of government. Thus, prior to the arrival of the 20th century cost accounting was not allowed to intrude in the administration³³ of departments of state.

Like any experiment, the cost accounting experiment would have to satisfy conditions of success far more onerous than those expected of well-tried incumbent systems. Not only did it have to prove that it was *at least* as good as the existing system but that it was superior to the existing system according to a number of criteria. These included the cost of implementing the experiment, enhancements to the economy and the financial and operational efficiency of the army and, most crucially, the ability of parliament to continue to exercise its constitutional powers of accountability over the army with the cash-based system of appropriation accounting. The Secretary of State for War, Sir Herbert Creedy, when expressing his opposition to the continuance of the experiment before the Public Accounts Committee in 1924³⁴, gave some idea of the prejudices that from the beginning had ensured its demise and which had exaggerated the requirements of what were in reality complementary additions, rather than replacements, to the existing cash-based appropriation system. He firstly expressed concern to the Public Accounts Committee that to move to the new system of cost accounting in preference to existing systems of accounting would require the entire reorganisation of all levels of army administration, from the War Office down, which were presently organized on a 'subject basis', and the attendant costs and dislocations that this would involve. Such an undertaking "could only be carried out if there were very, very great and assured advantages, both in efficiency and cost, and I was not satisfied that either of those advantages was inevitable" (Public Accounts Committee 1924-5, Minutes of Evidence, Questions 6839,6884,6887). More fundamentally, his opposition suggested that retaining the new system in the army and extending it to all government departments represented a dramatic innovation in constitutional practices, the merits of which had yet to be proved. Even if savings were to be obtained, and the performance of the trials in this regard had been far from convincing, this should not come at the expense of constitutional protections as embodied in the system of appropriation accounting. The *possibility* of improvements to military efficiency was again insufficient to counter latent, and misplaced, constitutional apprehensions. It wasn't enough just to save money.

Unfortunately for Sir Charles Harris and the supporters of the cost accounting experiment the Comptroller and Auditor General was also not convinced of the wisdom of continuing the experiment. He was concerned about the vast number of errors that his office was finding year after year in the new cost accounts, which had rendered the accounts virtually worthless, but more importantly he believed that any attempt to widen the experiment to other departments, irrespective of whether the accuracy of the cost accounts improved, would fatally interfere with the system of Treasury control on which the government and parliament relied for the administration of policy (Public Accounts Committee 1924-5, Appendix 32, pp.823-4). He also criticized the new accounts required for the experiment for being too complicated for parliament, thereby confusing most members and inhibiting effective parliamentary criticism.

Thus, the Treasury's strategy to undermine the experiment by sowing seeds of doubt about its constitutional credentials had worked. It implanted the erroneous presumption, which angered Harris and others associated with the cost accounting experiment, that should cost accounting ultimately be allowed to spread from the army to all government departments it would replace the cash accounts upon which appropriation accounting was dependent (Ormsby 1908b, p.1533; Marriner 1994,

p.467). Opponents of the experiment were successful in creating confusion, apparently even with the Comptroller and Auditor General, between cost accounting for management purposes *within* government departments and the cash accounting systems used by departments of state to acquit themselves of their constitutional accountability obligations to parliament. Thus, not surprisingly Harris believed that the experiment had not been given a fair chance and that its future was prejudiced from the start by constant Treasury sniping and innuendo (Public Accounts Committee 1924-5, Question 6708). Indeed, he complained after being drawn from retirement to appear before the Public Accounts Committee that calling the new system of accounting 'cost accounting' was a mistake for it played into the hands of the Treasury and the unease that they were able to foment about possible threats to parliament's constitutional supremacy. Political pressures had both ushered in the experiment and ensured its demise, irrespective of economy considerations.

In contrast to beliefs which were actively encouraged by the Treasury, none of the major inquiries into army organisation in the early 20th century saw any contradiction between providing constitutional protections and the aims and practices of a system of army cost accounting (see Young in Wright 1956, p.465; Mackinder 1907, p.5; "Colonel" 1914, p.72; War Stores Commission 1906). Instead, the Treasury, as the major financial adviser to parliament, was accused of perpetuating the existing structure of financial control largely because of motives of self-interest. The then present structure suited the Treasury because of the considerable power and influence it afforded. It was feared that extension of the cost accounting experiment to all departments of state, and the resulting substitution of subject-based accounts by object-based accounts, would greatly diminish the Treasury's importance by allowing the devolution of authority and responsibility for spending away from the centre (Select Committee on National Expenditure 1918, Minutes of Evidence, Sir Charles Harris, also Seventh Report, pp.157,163; see also Grimwood 1919, p.114; Public Accounts Committee 1924-5, Appendix 30B, *Memorandum by the Accounting Officer, War Office*, p.814). Surrender of its pivotal position in military finance was not something the Treasury promoted (Wright 1956, p.465). Keenly aware of Treasury deceptions, witnesses before the Public Accounts Committee in 1924 attempted to reassure the Committee that when the conventional accounting system which had been running parallel to the cost accounting experiment was removed there would be no diminution of Treasury control and, therefore, no threat to parliament's constitutional oversight of army expenditure (Public Accounts Committee 1924-25, Minutes of Evidence, Question 6748, also Appendix 33, p.826). Unfortunately, these and Harris' arguments were not sufficient to neutralize Treasury opposition and, thereby, to convince the Public Accounts Committee to find in favour of the experiment's continuance³⁵. Harris' retirement in 1924 signalled the loss of the experiment's most influential champion who had fought for many years against the unrelenting opposition of the Treasury (see reference to this opposition by the Public Accounts Committee 1924-5, Minutes of Evidence, Question 6878).

6. Conclusion

Until well into the 20th century political crises were the major determinants of government accounting reforms. The introduction of modern appropriation accounting in the late 17th century was a direct outcome of the English Civil War and the Glorious Revolution of 1688 while appearance of the first outlines of modern

audit with the creation of the Commissioners of Audit in 1785 was a response to the loss of Britain's American Colonies. Similarly, the first tentative steps to modernize British military accounting in the first decades of the 20th century owed much to the crises of war. The problems of the army in South Africa were also further confirmation for the supporters of Lord Rosebery's movement of national efficiency that British inefficiency had placed Britain in a vulnerable state which needed to be urgently addressed by measures designed to elevate the efficiency of all aspects of British life, which depended upon preserving the empire. If Britain were to regain the levels of efficiency in government that it needed to meet the commercial and political challenges of its competitors then it needed to fashion itself more in the image of business. Britain's empire would be secure only with an army which assumed many of the characteristics of a business and the administrative officer the guise of a 'soldier business man'. The Army Class at the LSE provided the means by which the army could begin this transformation while the cost accounting experiment promised that the innovations in cost accounting in the army might be extended to all departments. However, the reactionary impediment of Britain's 'ancient' constitution proved far stronger than any professed financial advantages in

For most departments, whose performance was evaluated according to their ability to respect spending limits contained in the annual appropriations and for the purposes approved by parliament, the system of accounting required of them, while at times frustrating to the more able civil servants, presented few problems and even less reason to ferment change. The British army, however, operated under a very different set of circumstances from most government departments. Not only as the largest spending department would its activities attract attention but its responsibilities to defend the liberty, rights and dignity of Britain meant that its performance in times of extreme crisis would be of paramount interest to all British citizens. While the army was expected to be always victorious, the nation also required the army to achieve its victories in the most financially efficient manner. This could only be achieved if the army was well led and expertly administered. Deficiencies in command and administration could remain hidden, as in other government departments, for many years in times of peace. However, in the panic of war any weaknesses were soon exposed in stark relief. Thus, when the British army experienced great difficulty in defeating an ill-disciplined group of farmers in South Africa between 1899-1902, both its command and administrative arrangements became the targets of intense scrutiny. From these inquiries the British people learnt of the commercial ineptitude of War Office administrators responsible for the supply of the army and of their subordinates in the field. This determined the government that amateurism and ignorance in those services with the ability to spend very large amounts of money with few controls in times of war could be no longer tolerated.

Notes

¹ For a discussion of the definitional issues surrounding the designation of accounting practices as management accounting see Edwards *et al.* 1995, p.7 and Boyns and Edwards 1996, p.46. Armstrong (1987, p.418) notes how management accounting practices used for the purposes of controlling various parts of an organisation arose from cost accounting as it developed mainly in the 19th century.

² The army was a business in the sense that in order to achieve its purposes it entered a large number of different markets to buy, and sometimes sell, vast quantities of goods and services both in Britain and

in many other locations throughout the world. Indeed, it was not uncommon in many cities in Britain for the army to be the single most important contributor to the local economy.

³ Although Loft (1986, p.146) made a brief reference to the introduction of cost accounting in the LSE curriculum in the early 20th century, there is no specific mention of the LSE Army Class.

⁴ Haldane (1856-1928) was Secretary of State for War between 1905-12 (see *Dictionary of National Biography*, Vol.1922-30, pp.380-6).

⁵ Dicksee (1915a,1915b) believed that the business world could also learn a great deal from the way in which soldiers managed the 'business of war'.

⁶ An overarching purpose of the Dawkins Committee (1901, p.180) was to determine how the work of the War Office could be brought "more into harmony with that of large business undertakings"

⁷ Previous to this appointment Dawkins had a long public sector career in India,

⁸ Not all were as sanguine and convinced of an essential sympathy and coincidence between military values and objects and those of business and the desirability of fostering commercial values in the military. In a clever morality tale designed to show how military officers, who were noted for their honesty, integrity and sense of duty, were easy prey to the deceptions of business men in the City who were characterised as having none of these noble virtues, the fictitious Colonel Smith upon retirement is duped into joining the board of a new co-operative stores business (Coward 1891). Unbeknown to Colonel Smith the sole purpose of his recruitment is to allow the unprincipled promoters of the new venture to take advantage of the integrity and high standards of honesty for which Colonel Smith is well known, thereby giving the new venture the respectability and legitimacy it needs to induce others to invest. Unfortunately, the easily deceived Colonel loses all his money as do many of his friends who he encouraged to invest. Full of shame and guilt, Smith is forced to spend his final days as a recluse should he meet those who had relied upon his advice. Thus, Colonel Smith's destruction demonstrated that no military man would be able to cope with the cunning ways and sharp practices of devious business men. Colonel Smith had made the mistake of judging others by the standards that he applied to himself and by which his military colleagues lived.

⁹ Included in the Terms of Reference of the Dawkins Committee (1901, p.180) was the requirement to consider whether "existing checks at the War Office hinder the efficient transaction of business".

¹⁰ Apart from protecting the purity of their class and the privileges that attended their class, the exclusion of middle and lower classes from the officer class was also sometimes seen as an important accounting control. One officer who had attended the LSE Army Class

learned the organizational value of that dual control of money, where the accountant and the cashier are of a different social status, of which we have such an admirable example in the Army- the captain and the colour-sergeant. The chance of fraudulent collusion between these two is extremely remote (Airey 1913, p.467).

¹¹ Although the goal of national efficiency and advocacy of private sector remedies may have seemed particularly apposite and innovative at the time of the South African War, the same concerns had been the stimulus for the formation of the Administrative Reform Association in 1855 and the Liverpool Financial Reform Association at the time of the Crimean War, both of which sought to "bring up the public management to the level of private management ..." (Constitution of the Administrative Reform Association quoted in Anderson 1967, p.114, see also Anderson 1965).

¹² Rosebery and Haldane wrote to Shaw expressing their delight with his "brilliant and decisive analyses" (Haldane quoted in Matthew 1973, p.183).

¹³ Little had changed in the physical and educational quality of army recruits at the time of World War I when the government had been shocked at the high rejection rate in the early days of the war. Thus, immediately after the war major reforms were instituted in the education of army recruits with a heavy emphasis on basic reading, writing and arithmetic skills, so great was the educational need of the army ("Report on Educational Training in the British Army" 1920, *British Parliamentary Papers*, Cmd.568, XXVII, p.301).

¹⁴ Amongst the most important reforms forced upon the army by Haldane was the establishment of the Army General Staff, the brains of the army, an idea borrowed directly from the Germans.

¹⁵ Haldane's admiration for German education developed during his youth when he spent several years studying philosophy at Gottingen University.

¹⁶ Lord Rosebery also was at one time a member of the LSE's Court of Governors and the President of the LSE in 1901.

¹⁷ In one letter to Sidney Webb, Beatrice refers to Haldane as "our dear friend" (Webb 1975, p.182). As Secretary of State for War Haldane appointed Sidney Webb to his committee to consider army reforms (McBriar 1966, p.257).

¹⁸ Mackinder claimed to be present when, while out cycling, Sidney Webb came up with the name (Parker 1982, p.30).

¹⁹ After one visit with Bertrand Russell and his wife, Beatrice Webb described the way "he lives for efficiency" (Mackenzie and Mackenzie 1983, p.209).

²⁰ For Mackinder's views on the political importance of the study of geography see "On the Scope and Methods of Geography" in Mackinder's *Democratic Ideals and Reality*.

²¹ The Co-Efficients appeared in Wells' *The New Machiavelli* as the Pentagonam Circle.

²² Mackenzie (1978, p.ix) notes that the Webbs were notorious for their incessant influence peddling; for seeming to be prepared to do whatever it took to get their own way. Ultimately, their attempts to insinuate themselves into the Liberal Party and to take advantage of the schism in the Liberal Party during the South African War saw them flounder in their attempt to influence social policy. On the strategy of 'permeation' see Read 1972, p.94.

²³ Both Amery and Mackinder supported the South African War (Parker 1982, p.29).

²⁴ Ward believed that other government departments would soon follow the army's example and adopt instruction in business administration as the preferred means to train their senior staff (Watt 1988, p.159).

²⁵ The average age of the first intake of students in 1907 was 39 years and 2 months.

²⁶ The full curriculum for the army course was: Public Administration; the British Constitution; Economic Problems of War; Accounting and Business Methods; Inland Transport; Sea Transport; Transport in War; Commercial Law; Economic Geography; Banking and Currency; International Institutions; Social Institutions, and Army Control. Haldane appeared often to deliver guest lectures on "Organisation for War". Accounting and commercial law were each allotted more than three times the number of lectures allowed most of the other subjects (Badcock 1926, pp.104-5).

²⁷ Dicksee's accounting texts included: *Bookkeeping for Accounting Students*, *Fraud in Accounts*, *The ABC of Bookkeeping*, *Depreciation*, *Office Organisation and Management*, *Advanced Accounting* (LSE Archives, File 232/A).

²⁸ The LSE was paid a fixed annual subsidy of £1900 plus £30 per student for each student above a class of 30. The subsidy was later reduced to £600 plus £30 for each student in the class (*Letter from the War Office to the LSE, 20 January 1912*, LSE Archives, File 232/A; *Notes on the Course established at the LSE in the Session 1906-7 for the Training of Officers for the higher administrative appointments on the Administrative Staff for the Army and for the charge of Departmental Services*, LSE Archives, File 232/C).

²⁹ On 11 October 1934 in reply to inquiries from the LSE about the future of the Army Class, the government's Emergency Committee wrote on behalf of the Secretary of State for War, Lord Hailsham, informing the LSE that the Army Class would not receive any further funding (LSE Archives, *LSE History Collection*, Box 1).

³⁰ The journal of the Corps of Military Accountants 1923-5.

³¹ The Cost Accounting Committee brought together several of the more prominent advocates of cost accounting: Major General Sir G. Ellison, Deputy Quartermaster-General who was also chairman of the committee; Colonel E. Allen, Assistant Director of Supplies; Mr. J. Crosland, Director of Finance at the War Office; J. Fells (F.S.A.A.), a co-author with Garcke of the famous *Factory accounts, their principle and practice*, Lieutenant Colonel J. Grimwood (F.S.A.A.) and Lieutenant Colonel J. Keane.

³² The first British professional association of accountants skilled in cost accounting, the Institute of Cost and Works Accountants, was not founded until 1919.

³³ Throughout the 19th century and most of the 20th century senior civil servants carried out their duties as administrators rather than as managers. It is only since the latter decades of the 20th century that civil servants have assumed an identity which closely approximates that of private sector managers. As administrators they were expected to do little beyond ensuring that money raised by government according to parliamentary approvals was used only for the purposes allowed by parliament, that spending limits set by parliament were not exceeded and mandated processes had been rigorously followed. Their responsibilities and accountabilities were almost entirely defined with reference to these input measures. Although there was an enduring expectation that government should not be wasteful, accountability for the efficiency with which government programs were achieved, that is how well money was managed, was not a core responsibility of civil servants. This was not only seen as

beneath the standing of senior civil servants but also an undesirable interference by parliament in the affairs of the executive.

³⁴ Prior to the hearings of the Public Accounts Committee in 1924, the Lawrence Committee appointed in 1922 by the Secretary of State for War, under General Herbert Lawrence, recommended: that the new system of cost accounting be fully implemented across the army and not just the 14 sites that had been chosen for the experiment; that cost accounting was essential to securing an efficient army and, most controversially, that a complete reorganisation in army administration was needed to allow administrative responsibility and accounting to be decentralized as far as possible (Public Accounts Committee 1924-5, Appendix 32, p.822). This would allow administration according to the objects of expenditure rather than subjects (Lawrence Committee 1924, p.717). This report was considered by the Army Council which had then established the Crosland Committee to examine detailed implementation of the Lawrence recommendations. Soon after the Army Council changed its mind. For details of the evaluations and reviews of the experiment prior to its demise see Hinchliffe 1983, pp.71-8.

³⁵ In the early years of the experiment the Public Accounts Committee was full of praise, noting in its 1923 Report (p.36) how the new information provided by the cost accounts were "very illuminating" (see also Public Accounts Committee 1922, pp.28-9). It also referred to the large number of errors found in the accounts.

References

- A Captain in the Regular Service (1906), "The Business Man of the Army", *The Journal of Accountancy*, Vol. I, November 1905- April 1906, pp.112-117.
- Advisory Board (1911), *Report of the Advisory Board, London School of Economics, on the Fifth Course at the London School of Economics, 3rd October 1910 to 22 March 1911, for the Training of Officers for the Higher Appointments on the Administrative Staff of the 'army and for the Charge of Departmental Services*, London, HMSO.
- Advisory Board (1912), *Report of the Advisory Board, London School of Economics, on the Fifth Course at the London School of Economics, 5th October 1911 to 27 March 1912, for the Training of Officers for the Higher Appointments on the Administrative Staff of the 'army and for the Charge of Departmental Services*, London, HMSO.
- Armstrong, P. (1987), "The Rise of Accounting Controls in British Capitalist Enterprises", *Accounting, Organizations and Society*, Vol.12, No.5, pp.415-36.
- Airey, R. (1913a), "Supply Accounts on Manoeuvres and Training", *Army Service Corps Quarterly*, January, pp. 40-51.
- Airey, R. (1913b), "The London School of Economics and the Army", *Army Review*, Vol. IV, April, pp. 465-473.
- Amery, L. (1900-1909), *The Times History of the War in South Africa*, (7 Vols), London: Sampson Low & Co.
- Amery, L. (1953), *My Political Life*, London: Hutchinson.
- Amos, S. (1880), *Fifty Years of the English Constitution, 1830-1880*, London: Longmans, Green & Co.
- An Officer (1901), 'Army Reform', *Contemporary Review*, Vol. 77, May, pp. 750-760.

- Anderson, O. (1965), "The Administrative Reform Association of 1855", *Victorian Studies*, March, Vol.VIII, No.3, pp.231-42.
- Anderson, O. (1967), *A Liberal State at War*, New York: Macmillan,.
- Badcock, G. (Lt.-Col) (1925), *The Army Course at the London School of Economics*, LSE Archives, Unregistered Documents 20/5/36.
- Badcock, G. (Lt.-Col.) (1926), "The London School of Economics", *The R.A.S.C. Quarterly*, July, pp.104-106.
- Barnett, C. (2000), *Britain and Her Army*, London: Cassell and Co.
- Barnes, J. and Nicholson, D. (1980), *The Leo Amery Diaries: Volume I, 1896-1929*, London: Hutchinson.
- Bentley, M. (1984), *Politics Without Democracy 1815-1914*, London: Fontana.
- Beveridge, S. (1960), *The London School of Economics and Political Science 1919—37*, London: George Allen and Unwin.
- Black, J. (2001a), "Full Circle: The Cost Accounting Experiment in the British Army 1917-25 and the Corps of Military Accountants", *Journal of the Society for Army Historical Research*, 79(318), pp.145-162.
- Black, J. (2001b), "A more vigorous prosecution of public works: the reforms of the Indian Public Works Department", *Accounting History*, NS, Vol.6, No.2, pp.91-119.
- Blouet, B. (1987), *Halford Mackinder: A Biography*, Houston: Texas A&M Press.
- Bond, B. (1972), *The Victorian Army and the Staff College 1854-1914*, London: Eyre Methuen.
- Boyns, T. and Edwards, J. (1996), "The development of accounting in mid-nineteenth century Britain: a non-disciplinary view", *Accounting, Auditing and Accountability Journal*, Vol.9, No.3, pp.40-60.
- Cantor, L. (1960), "Halford Mackinder: pioneer of adult education", *Rewley House Papers iii*, 9, pp.24-9.
- Churchill, R. (1959), *Lord Derby: 'King of Lancashire'*, London: Heinemann.
- Churchill, W., *Lord Randolph Churchill*, 2 Vols., London: John Murray, 1906.
- Clode, C. (1869), *The Military Forces of the Crown; Their Administration and Government*, Vols. I & II, London: John Murray.
- Cohen, E. (1965), *The Growth of the British Civil Service 1780-1939*, London: Frank Cass & Co.
- Committee to Consider Decentralisation of War Office Business (Brodrick Committee) (1898), *British Parliamentary Papers*, (C.8934) XII, p.123.
- Committee of Administration of, and Accounting for, Army Expenditure (Lawrence Committee) (1924), *British Parliamentary Papers*, (Cmd.2073) VII, p.707.
- Coward, E. (1891), "The British Army in the City", *The United Services Magazine*, Vol.XXII, pp.417-434.
- Dahrendorf, R. (1995), *A History of the London School of Economics and Political Science*, Oxford: Oxford University Press.

- Dicksee, L. (1915a), "Business Methods and the War", *The Accountant*, January 30, February 6, February 13, February 20.
- Dicksee, L. (1915b), *Business Methods and the War*, Cambridge: Cambridge University Press.
- Dictionary of National Biography* 1922-30, Oxford: Oxford University Press.
- Dictionary of National Biography* 1941-1950, Oxford: Oxford University Press.
- Durell, A. (Col.) (1917), *The Principles and Practice of the System of Control Over Parliamentary Grants*, Portsmouth: Gieves Publishing.
- Editor (1907), "The Experimental Course at the London School of Economics and Political Science", *Army Service Corps Quarterly*, October, pp.304-320.
- Edwards, R. (1937), "Some Notes on the Early Literature and Development of Cost Accounting in Great Britain" I, II, III, IV, V, VI, *The Accountant*, 7th August, pp. 193-195; 14th August, pp. 225-231 291; August, pp. 253-255; 28th August, pp. 283-287; 4th September, pp. 313-316; 11th September, pp. 343-344.
- Einzig, P. (1959), *The Control of the Purse*, London: Secker and Warburg.
- Ellison, G. (Gen). (1921), "Army Administration", *The Army Quarterly*, Vol. III, October, pp. 9-22.
- Ellison, G. (Maj.-Gen) (1918), "Cost Accounting Committee Address", in War Office Cost Accounting Committee (1918), *Addresses and Explanatory Remarks to Officers and N.C.Os Charged with the Preparation of Cost Accounts in Certain Units, 26th to 29th June 1918*, London: War Office.
- Emy, H. (1973), *Liberals, Radicals and Social Politics*, Cambridge: Cambridge University Press.
- Esher, Viscount (1910), *To-day and To-morrow, and Other Essays*, London: John Murray.
- Finer, A. (1937), *The British Civil Service*, London: George Allen & Unwin.
- Fleischman, R. and Tyson, T. (1993), "Cost accounting during the industrial revolution: the present state of historical knowledge", *The Economic History Review*, Vol.XLVI, No.3, pp.503-17.
- Fleischman, R., Hoskin, K. and Macve, R. (1995), "The Boulton & Watt Case: The Crux of Alternative Approaches to Accounting History?", *Accounting and Business Research*, Vo.25, No.99, pp.162-76.
- Fleischman, R. and Macve, R. (2002), "Coals from Newcastle: an evaluation of alternative frameworks for interpreting the development of cost and management accounting in Northeast coal mining during the British Industrial Revolution", *Accounting and Business Research*, Vol.32, No.3, pp.133-52.
- Funnell, W. (2004), "Victorian Parsimony and the Early Champions of Modern Public Sector Audit", *Accounting History*,
- Gallhofer, S. and Haslam, J. (1991), "The Aura of Accounting in the Context of a Crisis: Germany and the First World War", *Accounting, Organizations and Society*, Vol.16, No.5/6: 487-520.

- Garke, E. and Fells, J. (1887), *Factory Accounts, Their Principles and Practice*, London: C. Lockwood and Son.
- Giffen, R. (1901), "A Business War Office", *The Nineteenth Century*, No. 193, July, pp. 1-11.
- Gilbert, E. (1961), *Sir Halford Mackinder 1861-1947: an appreciation of his life and work*, London: G. Bell and Sons.
- Grimwood, J., (Lieut-Col.) (1919), "Costing in Relation to Government Control, Efficiency and Economy", *The Incorporated Accountants Journal*, March 1919, pp. 114-120; April, pp. 133-138; May 1919, pp. 156-161.
- Haldane, R., *Richard Burdon Haldane: An Autobiography*, New York, Doubleday, Doran & Co., 1929.
- Hamer, D. (1972), *Liberal Politics in the Age of Gladstone and Rosebery: A Study in Leadership and Policy*, Oxford: Clarendon Press.
- Harris, C. (1911), "Army Finance", *Army Review*, Vol. I, July, pp. 55-76.
- Harris, C. (1931), "Financial Control in Administration", *Public Administration*, Vol. 9, pp. 312-322.
- Hinchliffe, L. (1983), *Trust and Be Trusted: The Royal Army Pay Corps and its Origins*, London: Royal Army Pay Corps.
- Hoskin, K. and Macve, R. (1988), "The Genesis of Accountability: The West Point Connections", *Accounting, Organizations and Society*, Vol.13, No.1, pp.37-73.
- Hoskin, K. and Macve, R. (1994), "Reappraising the Genesis of Managerialism: A Re-examination of the Role of Accounting at the Springfield Amory 1815-1845", *Accounting, Auditing and Accountability Journal*, Vol.7, No.2, pp.4-29.
- James, R. (1963), *Rosebery*, London: Weidenfeld and Nicolson.
- Johnson, H. and Kaplan, R. (1987), *Relevance Lost*, Boston, Harvard Business School Press.
- Koss, S. (1969), *Lord Haldane: Scapegoat for Liberalism*, New York: Columbia University Press.
- Lloyd, E. (1924), *Experiments in State Control At the War Office and the Ministry of Food*, Oxford: Clarendon Press.
- Locke, R. (1979), "Cost Accounting: An Institutional Yardstick for Measuring British Entrepreneurial Performance circa 1914", *The Accounting Historians' Journal*, Fall, pp.1-22.
- Loft, A. (1986), "Towards a Critical Understanding of Accounting; The Case of Cost Accounting in the U.K., 1914-1925", *Accounting, Organizations and Society*, Vol.11, No.2, pp.137-169.
- Loft, A. (1991), "The History of Management Accounting: Relevance Found", in Ashton D., Hopper T. and Scapens R., (1991), *Issues in Management Accounting*, New York, Prentice Hall.
- Loft, A. (1994), "Accountancy and the First World War", in Hopwood A. (1994), *Accounting as Social and Institutional Practice*, Cambridge: Cambridge University Press.

- Lybrand, W. (1909), "The Accounting of Industrial Enterprises", *The Journal of Accountancy*, Vol.VII, November 1908- April 1909, pp.224-36.
- Mackenzie, N. and Mackenzie, J. (1977), *The First Fabians*, London: Weidenfeld and Nicolson.
- Mackenzie, N. (1978), *The Letters of Sidney and Beatrice Webb, Volume II Partnership 1892-1912*, Cambridge: Cambridge University Press.
- Mackenzie, N and Mackenzie, J. (1983), *The Diary of Beatrice Webb*, Vol.2, London: Virago.
- Mackenzie, N and Mackenzie, J. (1984), *The Diary of Beatrice Webb*, Vol.3, London: Virago.
- Mackinder, H. (no date), *The Modern British State: An Introduction to the Study of Civics*, London: George Philip and Son.
- Mackinder, H. (1907), *Address Delivered on the 10th January, 1907, on the Occasion of the Opening of the Class for the Administrative Training of Army Officers*, London: HSO.
- Mackinder, H. (1962), *Democratic Ideals and Reality*, New York: W.W. Norton.
- Marriner, S. (1994), "The Ministry of Munitions 1915-1919 and Government Accounting Procedures", in Parker R. and Yamey B. (1994), *Accounting History: Some British Contributions*, Oxford: Clevedon Press.
- Matthew, H. (1973), *The Liberal Imperialists: The ideas and politics of a post-Gladstonian elite*, Oxford: Oxford University Press.
- McBriar, A. (1966), *Fabian Socialism and English Politics 1884-1918*, Cambridge: Cambridge University Press.
- Miller, P. (1990), "On the Interrelations Between Accounting and the State", *Accounting, Organizations and Society*, Vol.15, No.4, pp.315-38.
- Mitrany, D. (1918), "The London School of Economics and Political Science", *The Clare Market Review Series*, No.1, pp.5-8.
- Ormsby, T. (Captain) (1908a), "Army Finance as a Military Science Part I", *Journal of the Royal United Services Institute*, Vol.LII, pp.836-846.
- Ormsby, T. (Captain) (1908b), "Army Finance as a Military Science", *Journal of the Royal United Services Institute*, Vol.LII, pp.1532-1540.
- Otley, C. (1970), "The Social Origins of British Army Officers", *Sociological Review*, Vol. 18, No. 2, , pp. 213-234.
- Parker, W. (1982), *Mackinder: Geography as an Aid to Statecraft*, Oxford: Clarendon Press.
- Pease, E. (1925), *The History of the Fabian Society*, London: Allen & Unwin.
- Public Accounts Committee (1917-18), "Appendix 9, Use of Cost Accounts by the War Office (Sir Charles Harris)", *British Parliamentary Papers*, (123) III, p.1.
- Public Accounts Committee (1924-5), "First and Second Reports with Proceedings, Evidence, Appendices and Index", *British Parliamentary Papers*, (33, 138), V, p.1.

- Public Accounts Committee (1924-5), "Appendix 30B to the Report of the Public Accounts Committee: Memorandum by the Accounting Officer, War Office", *British Parliamentary Papers*, (196), VI, p.815.
- Public Accounts Committee (1924-5), "Appendix 31 to the Report of the Public Accounts Committee; Report of the Treasury Officers of Accounts to the Lords Commissioners of the Treasury in Regard to the proposed Change in Army Estimates and Accounts", *British Parliamentary Papers*, (196), VI, p.816.
- Public Accounts Committee (1924-5), "Appendix 32 to the Report of the Public Accounts Committee; Memorandum by the Comptroller and Auditor General (F. Phillips) in Regard to the Proposed Change in the Form of Army Estimates and Accounts", *British Parliamentary Papers*, (196), VI, p.820.
- Public Accounts Committee (1924-5), "Appendix 33 to the Report of the Public Accounts Committee: Paper by Sir Charles Harris, Notes on the Proposed Changes in the Form of Army Estimates and Accounts", *British Parliamentary Papers*, VI, p.826.
- Radice, L. (1984), *Beatrice and Sidney Webb: Fabian Socialists*, London: Macmillan.
- Read, D. (1972), *Edwardian England 1901-15: Society and Politics*, London: Harrap.
- Report on the Organisation of the Permanent Civil Service (1854), *British Parliamentary Papers*, Vol. XXVII, pp. 1-31, 1854-1855; (439) Vol. XXX, pp. 375-376.
- Royal Commission on War Stores in South Africa (1906), 'Report with Appendices of Messrs. Annan, Kirby, Dexter & Co., Chartered Accountants', *British Parliamentary Papers*, (Cd.3130) LVIII: 1,73.
- Report on Educational Training in the British Army (1920), *British Parliamentary Papers*, (Cmd.568) XXVIII, p.301.
- Rose, J. (1986), *The Edwardian Temperament, 1895-1919*, Athens, Ohio: Ohio University Press.
- Royal Commission Appointed to inquire into the civil and professional administration of the navy and military departments and the relation of those departments to each other and to the Treasury (1890) (Hartington Commission), *British Parliamentary Papers*, (Cd.5979) XIX, Report with Appendices, p.1.
- Royal Commission Appointed to Inquire into the Military Preparations and Other Matters Connected With the War in South Africa (Elgin Commission) (1904), *British Parliamentary Papers*, (Cd.1789) XL, p.1.
- Royal Commission Appointed to Inquire into the Military Preparations and Other Matters Connected With the War in South Africa (Elgin Commission) (1904), *British Parliamentary Papers*, (Cd.154) XLI, p.1.
- Royal Commission Appointed to Inquire into the Military Preparations and Other Matters Connected With the War in South Africa (Elgin Commission) (1904), *British Parliamentary Papers*, (1790) Vol.XL, "Minutes of Evidence", p.325.
- Royal Commission Appointed to Inquire into War Stores in South Africa (1906), *British Parliamentary Papers*, (Cd.3127) Vol.III, LVIII, p.1.
- Russell, F. (1902), "Our Uneducated Officers", *The Nineteenth Century*, Vol. 52, July, pp. 84-93.

- Scally, R. (1975), *The Origins of the Lloyd George Coalition: The Politics of Social Imperialism, 1900-1918*, Princeton: Princeton University Press.
- Searle, G. (1971), *The Quest for National Efficiency*, Berkeley: University of California Press.
- Select Committee on National Expenditure (1902) *British Parliamentary Papers*, (387) VII, Appendix No. 13, Memorandum by Lord Welby- "The Control of the House of Commons Over Public Expenditure", pp. 228-231.
- Select Committee on National Expenditure (1918), *British Parliamentary Papers*, (23,30,59,80,92,97,98,111,121,132) IV, "First to Tenth Reports", p.95.
- Select Committee on National Expenditure (Sub-Committee on the Form of Public Accounts) (1918), *British Parliamentary Papers*, (HC 98) IV, "Seventh Report", Appendix 2 "Note on the External Control of War Office Expenditure", p.155 and p.391.
- Semmel, B. (1960), *Imperialism and Social Reform*, New York: Anchor Books.
- Skidelsky, R., (1983), *John Maynard Keynes*, Vol.1, London: Macmillan.
- Slessor, A. (Captain) (1900-01), "The Universities and the Army", *United Services Magazine*, Vol.22, N.S., October 1900- March 1901, pp.516-526.
- Spencer, H. (1960), *The Man Versus the State*, Ohio: Caxton.
- Treasury (1855), *Civil Administration of the Army*, A Confidential Memorandum, 1 May 1855 (Written by Sir Charles Trevelyan), Trevelyan Papers, CET 82/8.
- Trevelyan, C. (1856), *Memorandum on the Civil Administration of the British Army by Sir C.E. Trevelyan, Written in May 1855, With Observations by Commissary General Sir Edward Coffin*, London: HMSO.
- Turner, E. (1956), *Gallant Gentlemen: A Portrait of the British Officer 1600-1956*, London: Michael Joseph.
- Tyson, T. (1990), "Accounting for Labor in the Early 19th century: The U.S. Arms Making Experience", *The Accounting Historians' Journal*, Vol.17, No.1, pp.47-59.
- Tyson, T. (1993), "Keeping the Record Straight: Foucauldian Revisionism and Nineteenth Century United States Cost Accounting History", *Accounting, Auditing and Accountability Journal*, Vol.6, No.2, pp.4-16.
- Wallas, G. (1925), *An Historical Note on the School*, London School of Economics and Political Science Archives, File 20/2/6.
- War Office (Reconstitution) Committee (Esher Committee) (1904), *British Parliamentary Papers*, Part I (Cd.1932) VIII, p.102, Part II (Cd.1968) VIII, Part III (Cd.2002) VIII, p.121.
- War Office Cost Accounting Committee (1918), *Instructions Relating to Experimental Cost Accounting in Selected Units*, London: War Office.
- War Office, "Army Cost Accounts", *The Incorporated Accountant's Journal*, April 1919, p.139.

- Watt, D. (1988), "The London University Class for Military Administrators, 1906-31: A Study of British Approach to Civil-Military Relations", *LSE Quarterly*, Vol.2, No.2, Summer, pp.155-171.
- Webb, B. (1975), *Our Partnership*, Edited by B. Drake and M. Cole, London School of Economics and Political Science: Cambridge University Press.
- Webb S. (1903), *Twentieth Century Politics: A Policy of National Efficiency*, Fabian Tract No.108, London: The Fabian Society.
- Wells, H.G. (1934), *Experiment in Autobiography: Discoveries and Conclusions of a Very Ordinary Brain (Since 1866)*, London: Victor Gollancz.
- White A. (1901), *Efficiency and Empire*, ##
- Wilson, J. (1973), *CB: A Life of Sir Henry Campbell-Bannerman*, London: Constable.
- Wilson, J. (1995), *British business history 1720-1994*, Manchester: Manchester University Press.
- Wright, F. (1956), "The British Army Cost Accounting Experiment 1919-1925", *The Australian Accountant*, November, pp.463-70.
- Young, H. (Captain) (1906), "Practical Economy in the Army", *The Journal of the Royal United Services Institute*, Vol.L, pp.1281-1285.