

The Origins of British Military Psychiatry Before the First World War

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Military psychiatry in the United Kingdom is generally regarded as having begun in the First World War.¹ Certainly, it then became an important service designed in the main to treat troops suffering from shell shock and battle exhaustion so that they could be returned to their units as quickly as possible. However, a significant developmental phase pre-dated this conflict when physicians were presented with servicemen suffering from a range of unexplained, somatic disorders, including Disordered Action of the Heart (DAH) and psychogenic rheumatism. These arose in a context of 'palpitation' seen during the Crimean War and irritable heart described by Da Costa in the American Civil War. In addition, military doctors encountered cases whose symptomatology suggested a neurological cause. These were both acute (cases of exhaustion after combat) and chronic (servicemen who remained debilitated for years after their discharge).

Although the discipline of psychiatry remained embryonic in the UK divided between alienists, who treated so-called lunatics in asylums,² and physicians with an interest in psychological matters, there was a small but growing debate about medically unexplained disorders. Neurasthenia and the phenomenon of railway spine tended to divide doctors into those who sought an organic explanation and those who interpreted these as psychological disorders. Furthermore, the rapidly filling asylums encouraged ideas of degeneracy in which the masses were wrecking civilisation with their mental imbecility or savagery, pre-

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Unless stated otherwise, all archival references are from the Public Record Office, Kew.

1. Martin Stone, 'Shellshock and the psychologists', in W.F. Bynum, Roy Porter and Michael Shepherd (eds), *The Anatomy of Madness, Essays in the History of Psychiatry*, vol. 2 (London: Tavistock Publications, 1985), 242–71; Hans Binnevelde, *From Shell Shock to Combat Stress, A Comparative History of Military Psychiatry* (Amsterdam: Amsterdam University Press, 1997); Ben Shephard, *A War of Nerves* (London: Jonathan Cape, 2000).
2. Kathleen Jones, 'The culture of the mental hospital', in German E. Berrios and Hugh Freeman (eds), *150 Years of British Psychiatry, 1841–1991* (London: Gaskell, 1991), 20–5.

cisely when Darwinism was dictating that only fit societies would survive.³ Debilitated servicemen fuelled fears of an irreversible hereditary decline. Set against this pessimism a few clinicians, such as Daniel Hack Tuke, attempted to introduce psychological explanations and therapies.⁴ However, most physicians simply regarded abnormal mental phenomena as indicators of pathological processes in the central nervous system rather than important clues to changing states of mind. Psychological approaches were still regarded with suspicion in that they might encourage morbid introspection and egoism, heightened suggestibility and aggravate an existing deficiency of willpower. It was against this complex background of medical and cultural forces that military psychiatry began to evolve and consider the difficult questions of treatment and prevention.

In the First World War, it was the scale, rather than the nature, of the problem that caught the military medical services unaware.⁵ In November 1914 Dr Albert Wilson, who had worked in a French military hospital during the opening phase of the war, observed: 'I do not think psychologists will get many cases'.⁶ Yet in the same month the *British Medical Journal* reported that 'there are a good many men suffering from mental and nervous shock, and it is true that such cases are not suitable for general hospitals'.⁷ Although facilities were woefully inadequate in the early phases of the war, there had been sufficient preliminary study and accumulated clinical experience to provide the Royal Army Medical Corps (RAMC) with some form of mental framework to approach the problem.

IRRITABLE HEART AND THE CRIMEA

By the mid nineteenth century, nostalgia, a form of melancholia precipitated by homesickness, had become a recognised hazard of troops on campaign.⁸ Less well understood was the idea that the stress of combat could manifest itself in disguised form as a physical disorder. The hardships of the Crimean War saw soldiers

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3. Roy Porter, *A Social History of Madness* (London: Weidenfeld and Nicolson, 1987), 21; see also Edward Shorter, *A History of Psychiatry: From the Era of Asylum to the Age of Prozac* (New York: John Wiley & Sons, 1997), 47–8, 97.
 4. Michael J. Clark, 'Rejection of psychological approaches', in Andrew Scull (ed.), *Madhouses, Mad-Doctors and Madmen: The Social History of Psychiatry in the Victorian Era* (London: Athlone Press, 1981), 281, 283, 299.
 5. F.H. Garrison, *Notes on the History of Military Medicine* (Washington DC: Association of Military Surgeons, 1922), 196.
 6. Albert Wilson, 'Notes on 150 cases of wounded French, Belgians and Germans', *British Medical Journal* 2 (7 November 1914): 807.
 7. 'Mental and nervous shock among the wounded', *ibid.*, 802.
 8. George Rosen, 'Nostalgia: a "forgotten" psychological disorder', *Psychological Medicine* 5 (1975): 346–51; Willis H. McCann, 'Nostalgia: a review of the literature', *Psychological Bulletin* 38 (1941): 165–82.

admitted for 'palpitation', which when investigated showed no underlying cardiac pathology. Recorded in the *British Blue Book of the Crimean War (1854–56)* and in the *Report of the Hospitals of the Army in the East*, these cases were characterised by irregular heartbeat, chest pain, shortness of breath and general debility, leading to invalidity and discharge from the forces.⁹ Troops were also affected by combat in other unexplained ways. Lieutenant Lleuellyn of the 46 Regiment, who arrived in the Crimea two days after the battle of Inkermann, entered the trenches to join his unit's survivors. He was unprepared for their condition:

The poor fellows seem half ashamed to claim our acquaintance and indeed it is difficult to recognise in their haggard faces and ragged clothing the gay soldiers who left us the other day. Every general and staff officer in our division was killed or wounded. The people who are left appear dazed and stupified and unable to give us any idea of our position or chances.¹⁰

Furthermore, Dr Handfield Jones, a physician at St Mary's, London, reported a puzzling case of 'Crimean fever' in a Captain 'much tasked both in mental and bodily exertion'.¹¹ Evacuated to the UK, he suffered from 'pains in all the limbs, clammy sweats, parched tongue', irritable heart, dizziness, headache and diarrhoea, while being 'utterly unnerved and agitated violently by the merest trifles'. All treatments failed until Jones suggested that his patient take the air of Hampstead Heath. This led to a steady recovery completed by convalescence on the south coast. Significantly, Jones explained the officer's invalidity wholly in terms of physical illness, suggesting that he had succumbed to a succession of diseases including 'remittent fever with cerebral determination, dysentery and diarrhoea with variations of vomiting, rheumatism and cardiac paralysis'.¹²

Sergeant Charles Dawes, who spent six months in the Crimea and then took part in the suppression of the Indian Mutiny, subsequently developed symptoms (notably exhaustion, pains in joints and legs, tremor and weakness) that today would qualify for the diagnosis of chronic fatigue syndrome.¹³ A conscientious NCO, he was awarded in 1872 a permanent disability pension for debility. The military physicians who examined him concluded that his 'service of seventeen years in Turkey, India and home, and the general hardships of a

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9. J.M. Da Costa, 'On Irritable Heart: a clinical study of a form of functional cardiac disorder and its consequences', *American Journal of Medical Sciences* 121 (January 1871): 17–52; see also Thomas Lewis, 'Report on neuro-circulatory asthenia and its management', *Military Surgeon* 42 (1918): 410; Samuel A. Levine, 'The origin of the term neurocirculatory asthenia', *New England Journal of Medicine* 273 (1965): 604–5.
 10. Brian Cooke, 'Crimean Shell-shock', *War Correspondent, Journal of the Crimean War Research Society* 17 (1999): 34.
 11. C. Handfield Jones, 'Record of a case of Crimean fever', *Lancet* 2 (17 November 1855): 461.
 12. *Ibid.*, 462.
 13. Edgar Jones and Simon Wessely, 'Case of chronic fatigue syndrome after Crimean war and Indian mutiny', *British Medical Journal* 319 (1999): 1645–7.

soldier's life during the Indian Mutiny' had led to his declining health.¹⁴ It was speculated that cold and general exposure in a country in which malaria was endemic may have been the cause, though there was no clinical evidence to suggest that Dawes had contracted the disease. This anecdotal evidence suggests that the stress of combat tended to be expressed in bodily symptoms during the Victorian period, and that neither doctors nor their veteran patients were ready to think in psychological terms.

Ironically improvements in the treatment of wounds and disease in the Crimea may have inadvertently increased the potential for chronic psychiatric disorders. During the Napoleonic Wars, Sir James McGrigor, Director-General of the Army Medical Department, kept the sick and wounded with their regiments against the wishes of Wellington, who favoured their rapid evacuation.¹⁵ This prevented base hospitals from becoming overcrowded and forced combat units to recruit surgeons. However, the Crimean War showed that facilities in the field were often inadequate and that hygiene and diet could be more effectively controlled in purpose-built, base hospitals.¹⁶ A report on British medical services in the Crimea, published in 1855, concluded that 'the sick and wounded should, with the exception of very slight cases be at once removed from the field to the rear, the practice pursued by the French'.¹⁷ Whilst this was, and is, the basis for good practice for the treatment of physical wounds, it is far from certain that some psychological disorders responded equally effectively. During the Russo-Japanese War, for example, it was observed that evacuation to a base hospital served to reinforce symptoms and impeded the natural process of recovery (see below). Early in 1917, Lieutenant Colonel Charles Myers (1873–1946), consulting psychologist to the British Expeditionary Force, attempted to prevent these so-called evacuation syndromes by setting up treatment centres close to the trenches so that soldiers could be treated rapidly and in a manner that preserved 'the mental atmosphere of the Front'.¹⁸

DISORDERED ACTION OF THE HEART

The incidence of functional heart disorders in the British Army leading to invalidity became a serious cause for concern in 1864 following a presentation at

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14. Sergeant Charles Dawes, war pension file, PIN 71/2260.
 15. H.A.L. Howell, 'The British Medical Arrangements during the Waterloo Campaign', *Proceedings of the Royal Society of Medicine, Section of the History of Medicine* 17 (1924): 42.
 16. Douglas A. Reid, *Memories of the Crimean War January 1855 to June 1856* (London: St Catherine Press, 1911), 40–1.
 17. A. Cumming, P. Benson Maxwell and P. Sinclair Laing, *Report upon the state of the hospital in the British Army in the Crimea and Scutari* (23 February 1855), 47, WO33/1.
 18. Charles S. Myers, *Shell Shock in France 1914–18: Based on a War Diary* (Cambridge: Cambridge University Press, 1940), 107, 52.

the Royal United Service Institution by W.C. Maclean (d. 1898), professor of military medicine at the Army Medical School, Netley. Having excluded rheumatism, excessive alcohol consumption, heavy smoking or over exertion as causes, Maclean considered that the weight and distribution of the soldier's equipment were responsible: 'the present accoutrements are highly injurious to the health of infantry soldiers and have a large share in producing many affections of the lungs and heart common among them'.¹⁹ The marked differences in incidence between units, he explained by *esprit de corps*, suggesting that 'in well-disciplined regiments the practice of falling out at drill or on the line of march is discouraged, and men will bear and suffer much, rather than incur the imputation of being "soft"'.²⁰ These observations were supported by Edmund Parkes, professor of military hygiene, who argued that the causal association between equipment and heart disorders had been overlooked because a large portion of the British army was deployed in India 'where packs are never carried, and only put on for inspection'.²¹

These studies prompted the War Office to set up a committee under the chairmanship of Earl de Grey composed of three generals and two doctors. Its report, published in 1865, relied on the testimony of Professor Maclean and ruled out basic training as the cause. It was 'to the subsequent time, when the recruit has joined the ranks and performs the same duties as the older soldiers, that we must look for the causes affecting him, if these are to be found in overwork or in the use of improper accoutrements and weights'.²² Accordingly, improvements in clothing and equipment were recommended so that 'the accoutrements and packs should be free from all chance of medical objection on the score of pressure or constriction on the chest, or on muscles, or blood vessels'.²³

Subsequently, Maclean surveyed 5500 soldiers admitted to the Royal Victoria Hospital, Netley, who had served overseas between 1863 and 1866, and found that almost ten per cent had been discharged with a heart disorder.²⁴ Yet, as he reported,

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19. W.C. Maclean, 'The influence of the present knapsack and accoutrements on the health of the infantry soldier', *Journal of the Royal United Service Institution* 8 (1864): 105–15.
 20. *Ibid.*, 111.
 21. Edmund A. Parkes, *Manual of Practical Hygiene prepared especially for use in the medical service of the army* (London: John Churchill & Sons, 1864), 379.
 22. *Report of the Committee appointed to inquire into the Effect on the Health of the Present System of carrying the Accoutrements, Ammunition, and Kit of Infantry Soldiers, and Drill &c. of Recruits* (London: HMSO, 1865), 7.
 23. *Ibid.*, 9.
 24. W.C. Maclean, 'Diseases of the heart in the British Army: The cause and the remedy', *British Medical Journal* 1 (16 February 1867): 161–4.

the great majority of these men had none of the signs of valvular disease at all. No murmurs! Why is this? The official nomenclature in use in the service has no heading under which to include what may be called 'irritable heart'—that rapid, often tumultuous action so common among soldiers; and, which, once established, is never got rid of so long as a man remains in the army and wears the dress and accoutrements of the infantry soldier.²⁵

He reiterated his earlier finding that 'the belts are so disposed as to press most injuriously on the chest ... and the pack-straps press on important muscles, arteries, veins and nerves' leading to a 'most injudicious system of constriction'.²⁶ This explanation had a considerable impact on the government's second official inquiry. Because modern warfare demanded 'that the marching powers and endurance of the soldier must not be lessened by unnecessary weight or by a defective mode of carrying that weight', the committee sought to reduce the burden carried by infantrymen.²⁷ A survey of 1635 cardiac admissions to Netley Hospital between 1863 and 1869 by A.B.R. Myers, assistant surgeon to the Coldstream Guards, found that 1322 (80.9 per cent) had been discharged from the forces and only 276 (16.9 per cent) returned to duty.²⁸ Having concluded that heart disorders were 'more prevalent in the army than the civil population', Myers concluded that three factors accounted for this difference: rheumatic fever, Bright's disease and violent manual labour. He argued that the impact of the last was intensified by the soldier's equipment:

His waist-belt adds to the constriction below the chest, and his tunic collar above it ... and then, to complete the artificial chest case, the knapsack straps supply all that is requisite, whilst the pouch-belt adds its share to the general compression. The chest, thus fixed as it were in a vice, has little or no power of expansion, and the circulation through the heart, lungs and great vessels is proportionately impeded.²⁹

Important new evidence arrived from the United States where the Civil War of 1861–65 saw large numbers of infantry report sick with symptoms that appeared to point to a cardiac weakness. Henry Hartshorne, who had treated soldiers from the Army of the Potomac, classified such cases as 'cardiac muscular exhaustion'.³⁰ Unable to find evidence of an organic lesion, he proposed that 'an increase or excess of exertion without sufficient repose, food or other healthy con-

25. *Ibid.*, 161.

26. *Ibid.*, 162.

27. *Second report of the committee appointed to inquire into the effect of the present system of accoutrements and knapsacks on the health of the infantry soldier* (London: HMSO, 1868), 1.

28. Arthur B.R. Myers, *On the Etiology and Prevalence of Diseases of the Heart among Soldiers* (London: John Churchill & Sons, 1870), 4.

29. *Ibid.*, 81.

30. Henry Hartshorne, 'On heart disease in the army', *American Journal of Medical Science* 48 (1864): 89.

ditions' had led to fatigue and atrophy. Secondary factors proposed by Hartshorne included 'excessive use of alcohol, tobacco, coffee or self-abuse'. Treatment was rest and recuperation to allow the muscles of the heart to recover.

Dr Jacob Da Costa (1833–1900), who studied cases of heart disorder at the US Army Hospital for Injuries and Diseases of the Nervous System, Turner's Lane, Philadelphia,³¹ concluded that there was no clear-cut cause, though the greatest number (38.5 per cent) had been subject to 'hard field service and excessive marching', a further 30.5 per cent had previously suffered from diarrhoea.³² Since 'irritable heart', as Da Costa termed the disorder, was not confined to the infantry but affected the cavalry and artillery, he argued that the webbing and packs, which varied between these arms, could not have been the primary cause. Although this was widely regarded as a disorder suffered by soldiers in wartime, Da Costa had observed that the clinical presentation in troops could be duplicated in civilians 'from the experience of private practice'.³³ Da Costa then followed up these veterans, identifying 15 cases that showed signs of cardiac atrophy.³⁴ This led him to conclude that disordered action could ultimately lead to organic disease, though subsequent research by others failed to confirm his hypothesis.

Concern in the UK mounted in 1876 when re-designed equipment failed to prevent new cases of irritable heart. Indeed, the Royal Hospital, Chelsea, awarded some ex-servicemen disability pensions for 'palpitation' after the Afghan War of 1879 and the various campaigns in Egypt (1882–89) and the Sudan (1896–97).³⁵ Despite this evidence that there was a connection with combat, Surgeon Arthur Davy suggested that the setting-up drill caused an over expansion the chest, which in turn produced dilatation of the heart thereby inducing 'irritability'.³⁶ The Irish Surgeon Major, William Riordan, also believed that the heart was displaced during drills by former labourers accustomed to a different way of standing. The palpitation that followed, he argued, could lead to an aneurism. The *Fourth Report of the Committee on the Physiological Effects of Food, Training and Clothing on the Soldier*

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31. Charles F. Wooley, 'Jacob Mendez DaCosta: medical teacher, clinician and clinical investigator', *American Journal of Cardiology* 50 (1982): 1145–8.
 32. Da Costa, 'On Irritable Heart', 37; see also Eric T. Dean, *Shook over Hell, Post-Traumatic Stress, Vietnam and the Civil War* (Cambridge MA: Harvard University Press, 1997), 130–1.
 33. *Ibid.*, 17.
 34. Bernard S. Oppenheimer, 'Neurocirculatory asthenia and related problems in military medicine', *Bulletin of the New York Academy of Medicine* (1942): 369.
 35. Frederick Dickerson, PIN 71/257; Robert McLaughlin, PIN 71/588; Charles East, PIN 71/2446; Harry Haslop, PIN 71/3142; Bishop, PIN 71/1424; and A. Grubb, PIN 71/2972.
 36. R. McNair Wilson, 'The irritable heart of soldiers', *British Medical Journal* 1 (22 January 1916): 119–20.

led in 1908 to the introduction of a new design of uniform and pack.³⁷ This, too, failed to stem the flow of functional cardiac disorders. Hence most late nineteenth- and early twentieth-century studies of DAH attempted to identify a mechanical pathology, whether hypertrophy, valvular lesion or aortic dilatation, and proposed mechanical causes, commonly an obstruction of the heart's outflow.³⁸ Because there was no effective treatment of these supposed organic conditions, servicemen were simply discharged, while investigators continued to look for ways of preventing new cases.

THE BOER WAR (1899–1902)

Irritable heart, now termed disordered action of the heart (DAH), was regularly diagnosed during the South African campaign. Anthony Bowlby (1855–1929), a civil surgeon, who worked at the Portland Hospital in Rondebosch and Bloemfontein during 1900, was surprised by the apparent absence of mental disorders 'considering the extremely harassing nature of the military operations'.³⁹ He attributed this to the 'stolid disposition' of the average soldier, who showed no 'imagination, curiosity as to the future and even recollection of past stirring events'. Yet, Bowlby identified a range of functional somatic presentations, which suggested that troops were not as immune to the effects of battle as he believed. 'Among the symptoms we find prominently', Bowlby recalled, 'in the foreground pain, in the form of headache, generally posterior, pains in the neck, pains in the back and limbs, so that these cases are generally sent back as cases of rheumatism; general feebleness of the muscular system amounting to paralysis more or less pronounced'.⁴⁰ He attributed DAH to the generally debilitated and sometimes anaemic state to which men succumbed after hard campaigning. Bowlby was perhaps not aware that cases of DAH occurred in troops never exposed to combat.

Indeed, the incidence of DAH was reported as being highest in the orderlies of the RAMC, non-combatant troops. An official report concluded that the high wastage of such personnel was a result of the great distances that field units were

37. F.E. Mulcahy, Memorandum by the Director of Equipment and Ordnance Stores on the Fourth Report of the Committee on the Physiological Effects of Food, Training and Clothing on the Soldier (London: War Office, 28 August 1909).

38. Joel D. Howell, 'Soldier's Heart: the redefinition of heart disease and speciality formation in early twentieth century Great Britain', in Roger Cooter, Mark Harrison and Steve Sturdy (eds), *War, Medicine and Modernity* (Thrupp, Stroud: Sutton Publishing, 1998), 86–7.

39. Anthony A. Bowlby, Howard H. Tooth, Cuthbert Wallace, John E. Calverley and Surgeon-Major Kilkelly, *A Civilian War Hospital, Being an account of the work of the Portland Hospital, and of experience of wounds and sickness in South Africa, 1900* (London: John Murray, 1901), 130.

40. *Ibid.*, 129.

required to march to support fighting units.⁴¹ In the latter stages of the war, a large number of small columns were deployed against the Boers so that medical units had long periods of continuous marching to keep up with the widely spread engagements. It was concluded that the prolonged strain of carrying heavy weights and the pressure of straps on the chest damaged the heart. The report also argued that 'cardiac exhaustion cases were much more frequent among men of volunteer companies than the regulars, probably due to the great difference of their usual daily occupation from the life of a soldier on active service'⁴²—an observation that would be repeated during the next century. Once a soldier had succumbed to DAH, it was noticed that the symptoms returned if he had to 'undergo any extra exertion, or from the excitement or nervousness of going under fire'. These cases also increased 'if the physical strength of the men cannot be kept up by good and sufficient food and the necessary amount of sleep and rest'.⁴³ Thus, the important connection between battle fatigue and continuous exposure to combat had been observed but its implications not fully understood.

According to official statistics, 3631 servicemen were hospitalised with DAH, and of these 41 per cent were invalided to the UK where they were generally discharged.⁴⁴ Over the nine years from 1902, the British army rejected 1553 recruits (nine per cent of those considered unfit for military service) for non-valvular diseases of the heart.⁴⁵ Medical officers were at a loss to explain the phenomenon as it seemed that the initial training was too short for a soldier's equipment to have affected his heart. An investigation by the Professor of Tropical Medicine at the Royal Army Medical College revealed that the rate of rejections for DAH had risen four-fold over ten years. Further analysis showed that most of the increase could be explained by the effect of the Boer War and that there had been a modest fall in the rate from 1908 to 1910, which was attributed to the introduction of the new methods of physical training.

Although heavy smoking was thought to play a contributory part in DAH, the trend from rural to industrial recruits was identified as a significant cause: 'the ill-fed, anaemic, under-sized and somewhat neurotic lads, of which the larger cities produce so plentiful a supply as compared with the sturdy, somewhat lethargic

41. Sir W.D. Wilson, *Report on the Medical Arrangements in the South African War* (London: HMSO, 1904), 71.

42. *Ibid.*, 73.

43. *Ibid.*

44. T.J. Mitchell and G.M. Smith, *Medical Services, Casualties and Medical Statistics of the Great War* (London: HMSO 1931), 273. During the First World War, Arthur Hurst, who treated similar cases at Seale Hayne Military Hospital, argued that a few were malingerers: men who had 'purposely produced cardiac symptoms by eating cordite': Arthur Hurst, *Medical Diseases of the War* (London: E. Arnold, 1918), 285–6.

45. *Report of the Army Medical Department* (London: HMSO, 1912), 6–7.

country lad'.⁴⁶ Indeed, the scandal, much canvassed by politicians and journalists, over the apparently poor physique of potential recruits during the Boer War led to the setting up of the Inter-Departmental Committee on Physical Deterioration in 1904.⁴⁷ Its *Report* argued that the problem was bound geographically and socially to the poor of the slums and that the principal cause was overcrowding.⁴⁸ Ironically, it was the widespread nature of shell shock and other war syndromes during the First World War that helped to undermine the traditional distinction between the hereditarily fit and unfit. When officers were found to suffer disproportionately from the disorder, mental illness could no longer be conceived in the restricted realm of degenerates with weak hereditary constitutions.⁴⁹

In addition, the Boer War saw 24,460 troops admitted to hospital with rheumatic fever or rheumatism, of whom 4305 were evacuated home. However, an investigation of the war pension files administered by the Royal Hospital, Chelsea, has shown that most who had been awarded a pension showed no objective signs of disease within a few years of discharge. Dr J.W. Washbourn, who ran the Imperial Yeomanry Hospital at Pretoria in the latter stages of the war, treated 296 cases of chronic muscular rheumatism (the fourth most common medical disorder there) but could establish no connection with rheumatic fever. At a loss to explain the phenomenon, Washbourn considered that it was the result of 'the men's food and especially the want of fresh vegetables'.⁵⁰ A more common explanation offered by both men and RAMC doctors was that exposure to cold and wet on the veldt was the primary cause of rheumatic pains. A further 20,767 servicemen were hospitalised with debility, many of whom had no demonstrable organic cause.⁵¹ Of these 26 per cent were subsequently evacuated to the UK and commonly discharged with a *prima facie* claim for a pension.

It is possible that what would later be termed battle exhaustion or today acute combat stress reaction manifested itself as 'simple continued fever'. As Sir William Wilson (1843–1921), the Surgeon-General, observed, such cases 'were undoubtedly due to fatigue, exposure, and other transient causes; this is shown by the numbers who returned to duty in a few days, which would have been materially increased had the transport available allowed their being carried for a

46. *Ibid.*, 9.

47. Daniel Pick, *Faces of Degeneration, A European Disorder c. 1848–c. 1918* (Cambridge: Cambridge University Press, 1989), 185.

48. Inter-Departmental Committee on Physical Deterioration, *Report* (1904), in *Reports from Commissioners, Inspectors and other series*, XXXII, 17.

49. Pick, *Faces of Degeneration*, 231–2.

50. J.W. Washbourn, 'Some of the principal diseases met with among the troops in South Africa during the present war', *Lancet* 2 (10 August 1901): 394.

51. Mitchell & Smith, *Medical Services, Casualties and Medical Statistics*, 273.

day or two'.⁵² The fact that they had remained with their units and recovered spontaneously after a respite from action accords with the treatment successfully employed by the British army from early 1917.

Although most of the war pensions awarded by the Royal Hospital, Chelsea, to Boer War veterans were for the effects of wounds and disease, a small number were for psychiatric disorders. An analysis of the surviving 6276 files revealed 27 cases of psychosis, 23 of depression and 20 psychological disorders, including nervous debility and neurasthenia.⁵³ In addition, there were 199 cases of DAH, 272 of rheumatism in the absence of objective signs, 392 of debility and 21 cases of sunstroke with no organic sequelae. This evidence suggests that the stress of combat was typically expressed in somatic form during the Boer War, though in a few cases emerged in undisguised psychiatric form.

D BLOCK, ROYAL VICTORIA HOSPITAL, NETLEY

The Royal Victoria Hospital, opened at Netley on Southampton Water in March 1863, was designed to treat recognised illnesses and wounds, no provision being made for psychiatric cases. Somatic disorders found their way to Netley and their functional nature became apparent when investigations failed to find an organic lesion or when disability endured beyond the recovery of wounds. Innumerable cases of DAH were discharged from Netley.⁵⁴ When the Commissioners in Lunacy decided that the army's existing facilities at Fort Pitt, Chatham, were inadequate, a purpose-built psychiatric block, called the 'Military Lunatic Asylum', was constructed in the grounds at Netley and opened in July 1870.⁵⁵ Symbolically, it was tucked away in woods behind the main hospital buildings and surrounded by a high wall. The aftermath of the Boer War saw increased numbers referred to 'D Block' as it was now called, and an extension was constructed in 1908.⁵⁶ The loss or destruction of detailed medical records has prevented an analysis of admissions to discover diagnostic categories, treatments and outcomes.

RAILWAY SPINE

As well as these unexplained, somatic disorders, physicians encountered servicemen whose disturbed behaviour and agitated mental state suggested a neurological interpretation. This observation had in fact been made during the American Civil War by Weir Mitchell, G.R. Moorhouse and W.W. Keen who had segregated

52. Wilson, *Medical Arrangements*, 41.

53. Pension files of the Royal Hospital, Chelsea, from 1854 to 1913, PIN 71/1-6200.

54. Charles F. Wooley, 'From irritable heart to mitral valve prolapse: British army medical reports 1860 to 1870', *American Journal of Cardiology* 55 (1985): 1107.

55. Philip Hoare, *Spike Island, The Memory of a Military Hospital* (London: Fourth Estate, 2001), 217.

56. *Ibid.*, 222.

neurological cases at the Turner's Lane Hospital for special study.⁵⁷ At Aldershot during the Boer War, Dr Morgan Finucane, a civil surgeon attached to the Connaught Hospital, described servicemen whose gunshot wounds had healed successfully but who remained so debilitated that they had to be invalided to the UK. 'The clinical fact of most interest', he observed,

is the large number of cases of functional impairment of nerve sense and motor power, associated with psychological symptoms akin to nervous shock of those observed after railway accidents. These nerve symptoms do not bear any ratio to the extent or size of the wounds inflicted ... A large number of such cases have come before me, where after six months or shorter periods of complete rest and every care, the patient's nervous system shows no signs of recovering its former steadiness and there is nothing for it but to invalid them out of the service as permanently unfit.⁵⁸

Thus soldiers suffering from functional somatic disorders were sometimes understood in terms of the civilian disorder 'railway spine'. This was said to affect passengers who had been involved in serious train accidents.⁵⁹ Left in a debilitated state with a range of unexplained somatic symptoms, it was initially hypothesised by John Eric Erichsen (1818–1896) that concussion had led to chronic inflammation of the spinal cord, producing a general disturbance of the central nervous system.⁶⁰ The symptoms that could result were myriad, including back pain, motor and sensory disturbances in the extremities, ataxia, spinal rigidity, confusion, lassitude, insomnia and visual impairment.⁶¹ Erichsen did concede that the psychological state induced by the accident could influence the course of the disorder, noting that 'the helplessness of the sufferers, and the natural perturbation of mind which must

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57. Wilder Penfield and W.V. Cone, 'The special hospital in time of war', *Archives of Neurology and Psychiatry* 50 (1943): 196.
58. Morgan I. Finucane, 'General nervous shock, immediate and remote, after gunshot and shell injuries in the South African campaign', *Lancet* 2 (15 September 1900): 807–9.
59. Ralph Harrington, 'The Neuroses of the Railway: Trains, Travel and Trauma in Britain, c. 1850–1900' (DPhil dissertation, Oxford University, 1999); idem, 'The railway journey and the neuroses of modernity', in Richard Wrigley and George Reville (eds), *Pathologies of Travel* (Amsterdam: Rodopi, 2000); Harold Merskey, 'Shell-shock', in Berrios & Freeman (eds), *150 Years of British Psychiatry*, 246–7.
60. John Eric Erichsen, *On Concussion of the Spine, Nervous Shock and other obscure injuries of the Nervous System* (London: Longmans Green & Co., 1882); see also Michael R. Trimble, *Post-Traumatic Neurosis: From Railway Spine to the Whiplash* (Chichester: John Wiley & Sons, 1981), 9–13; Eric M. Caplan, 'Trains, brains and sprains: railway spine and the origins of psychoneuroses', *Bulletin of Medical History* 69 (1995): 390–4.
61. Thomas Keller, 'Railway spine revisited: traumatic neurosis or neurotrauma?' *Journal of the History of Medicine and Allied Sciences*, 50 (1995): 511.

disturb the bravest, are ... circumstances that of a necessity greatly increase the severity of the resulting injury to the nervous system'.⁶²

Yet, not all physicians were convinced by Erichsen's organic explanation. In 1883, Dr Herbert Page (1845–1926), surgeon to the London & North Western Railway, demonstrated that in many cases no damage had been sustained to the spinal cord. He proposed 'some functional disturbance to the whole nervous balance or tone' and that 'fright alone' could account for the 'immediate collapse' and subsequent symptoms.⁶³ Millais Culpin, who published his experiences of treating psychological disorders during the First World War,⁶⁴ recalled receiving a letter from Page in 1920 in which the latter declared that 'all the symptoms of shell shock would be found in his book *Railway Injuries* (1891) but that the lesson he had tried to teach had been forgotten'.⁶⁵ Whereas Erichsen had rejected any association between railway spine and traumatic hysteria, Page argued that they were forms of the same phenomenon. F.X. Dercum supported Page's psychological interpretation of railway spine, writing in 1889 that:

The vastness of the destructive forces, the magnitude of the results, the imminent danger to the lives of the human beings, and the hopelessness of escape from the danger gives rise to emotions which in themselves are quite sufficient to produce shock or even death. The sudden, excessive, exhausting discharge of nervous energy in the excitement, the fright, the horror of the moment, must certainly result in the general weakness more or less marked, more or less enduring.⁶⁶

TRAUMATIC NEURASTHENIA

The New York neurologist, George Beard, is widely credited with introducing the term 'neurasthenia' in a brief paper presented to the *Boston Medical and Surgical Journal* in 1869.⁶⁷ However, E. Van Deusen, an alienist in Kalamazoo, has an equal claim to its authorship. Neurasthenia was defined as 'a disease of the nervous system, without organic lesion, which may attack any or all parts of the system, and

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62. John Eric Erichson, *On Railway and other Injuries of the Nervous System* (London: Walton & Maberly, 1866), 9; Ralph Harrington, 'The "Railway Spine" diagnosis and Victorian responses to PTSD', *Journal of Psychosomatic Research* 40 (1996): 12.
 63. Herbert W. Page, *Injuries of the Spine and Spinal Cord without apparent mechanical lesion and Nervous Shock* (London: J. & A. Churchill, 1885); Trimble, *Post-Traumatic Neurosis*, 26.
 64. Millais Culpin, *Psychoneuroses of War and Peace* (Cambridge: Cambridge University Press, 1920).
 65. Millais Culpin, 'Clinical psychology and some forgotten episodes', *British Medical Journal* 2 (1 November 1952): 956.
 66. F.X. Dercum, 'Railway shock and its treatment', *Therapeutic Gazette* 13 (1889): 654.
 67. George Beard, 'Neurasthenia and nervous exhaustion', *Boston Medical and Surgical Journal* 3 (1869): 217–21.

characterised by enfeeblement of the nervous force, which may have all degrees of severity'.⁶⁸ A bewildering variety of causes was proposed. Excessive irritation of the nervous system soon gave way to the idea of 'cortical weakness', that is an exhaustion of the supply of energy within the central nervous system. Causes proposed were either local to the brain (a failure of cerebral blood flow or deficiency of energy sources) or arose from external sources such as overwork, infections or the stresses of industrial life. Traumatic events, such as railway accidents, were also thought to trigger neurasthenia.⁶⁹ In 1910 Thomas Glynn (d. 1931), professor of medicine at Liverpool University, interpreted railway spine as a form of 'traumatic neurosis',⁷⁰ arguing that the degree of 'emotional disturbance' which followed the event was of greater importance than the actual physical injury. This, Glynn suggested, was the result of predisposition: 'a weakened nervous organisation, brought about by the abuse of tobacco and alcohol, and further exhausted by unhealthy or arduous occupations and unhygienic surroundings'.⁷¹

Hence by 1900 the two poles of the debate had been established. [Sir] William Thorburn (d.1923), later professor of surgery at Manchester University, could show that medical opinion was divided between those who believed railway spine was the result of 'some unrecognised but mechanical injury to cerebral cells or their connections' and those who regarded it as a psychical phenomenon 'reflecting certain mental impressions mainly of a subjective origin'.⁷² The similarity between civilian and military traumatic responses became clear, suggested Culpin, in the aftermath of the Boer War when physicians were presented with veterans awarded pensions 'called by other and varied names'.⁷³

A report on Boer War veterans by Dr Charles Morris, surgeon to King Edward's Hospital in London, identified further cases of neurasthenia. 'It was really terrible', he commented,

to see the condition of fine, strapping men ... which led them to shrink from the slightest touch and shed tears like children ... Another patient took part in the memorable fight of Paardeberg ... When I saw him first he could not move the right leg or flex any of its joints, and if they were flexed by force it caused great

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68. Quoted from Simon Wessely, 'Neurasthenia and fatigue syndromes', in German Berrios and Roy Porter (eds), *A History of Clinical Psychiatry: The Origin and History of Disorders* (London: Athlone, 1995), 510.
69. Janet Oppenheim, *"Shattered Nerves": Doctors, Patients and Depression in Victorian England* (New York: Oxford University Press, 1991), 97–8.
70. Thomas R. Glynn, 'The traumatic neuroses', *Lancet* 2 (5 November 1910): 1332–6.
71. *Ibid.*, 1333.
72. William Thorburn, 'The traumatic neuroses', *Proceedings of the Royal Society of Medicine, Neurological Section* 7 (1913–14): 4.
73. Millais Culpin, 'The problem of the neurasthenic pensioner', *British Journal of Psychology, Medical Section* 1 (1920–21): 317.

pain. There was a loss of sensation below the knee and slightly above it. Dr Ferrier [probably Sir David Ferrier, professor of neuropathology at King's] saw him and considered it to be a case of functional paralysis, but treatment had no effect; he seemed to glory in having the battery applied so strong ... and he left for his home unimproved.⁷⁴

An early example of a post-combat syndrome with a neurological, if not a psychological, explanation was provided by the case of Private John Lyons of the Royal West Sussex Regiment. Briefly concussed at the battle of Colenso in December 1899 by an exploding shell, though not wounded, he became fatigued and weak with a functional paralysis of his right arm and leg.⁷⁵ Unable to undertake military duties, he was discharged from the army with a pension for 'neurasthenia and nervous shock'. It was argued that the concussive effect of the shell was responsible for his symptoms and disability. At this point, medical interest in the case largely ceased. [Sir] Arthur Hurst recalled that, in his student days at Guy's Hospital, London, in the early 1900s, 'if no evidence of organic disease was discovered, it was assumed that the symptoms were functional or nervous in origin' and 'the possible cause of the illness and its treatment were not discussed'.⁷⁶

THE RUSSO-JAPANESE WAR (1904-05)

A year before this conflict began, Dr Paul Jacoby, physician-in-charge of the Provincial Asylum of Orel in Russia, called for the provision of 'a special psychiatric service for soldiers on campaign'.⁷⁷ He argued that the 'privations and fatigues of active service, the nervous tension caused by ever-present danger, the frequent mental shocks, alcoholism, and wounds, all predispose to madness'. He quoted the evidence of Russian medical officers who reported large numbers of acute psychoses during the war with Turkey in 1877-78 and against China in 1900. Jacoby concluded:

the novelty of the conditions under which modern warfare is conducted adds greatly to the strain on the nervous system of the combatants ... that these new forms of shock will produce new forms of neurosis and mental disorder ... [and] if arrangements could be made for the immediate treatment of insane soldiers in separate tents under special care then they would have a good chance of recovery.⁷⁸

74. Charles A. Morris, 'Some war sequelae', *Lancet* 1 (7 December 1901): 1559-64.

75. Private John Lyons, war pension file, PIN 71/3959.

76. Quoted from Oppenheim, *Shattered Nerves*, 295.

77. 'Madness in Armies in the Field', *British Medical Journal* 2 (2 July 1904): 30-1.

78. *Ibid.*; see also R.L. Richards, 'Mental and nervous disorders in the Russo-Japanese War', *Military Surgeon* 26 (1910): 177-93.

This plea for the provision of rapid treatment also related to the identification of evacuation syndromes. It was noticed that symptoms were more likely to become fixed, or resistant to change, the further a soldier was invalided from the front line.⁷⁹ However, this important observation went unheeded by Western observers and British medical services continued to evacuate psychological cases to rear hospitals.

Reports from the conflict produced a number of unusual psychological presentations of interest to British physicians. A case of neurasthenia appeared in the *Lancet* for March 1905 which involved a Russian naval officer who had survived an attempt by two Japanese sailors to strangle him. Admitted to hospital, the officer suffered from 'marked spasm of the respiratory muscles, fainting fits and hystero-epileptic convulsions'. As his difficulty in breathing worsened and appeared to threaten his life, a tracheotomy was performed and his respiration at once returned to normal.⁸⁰ A German physician, Dr Honigmann, thought that some Russian officers who had recovered from wounds subsequently exhibited symptoms similar to traumatic neuroses, such as railway spine, observed in civilians. These disorders he termed 'kriegsneurosen'.⁸¹

Although the British Army sent medical observers to the Russo-Japanese War, their extensive report made no mention of psychological issues apart from the sole comment that 'special care will be taken in the transfer of insanes [sic] or persons mentally afflicted'.⁸² Night blindness, mainly among the artillery, was thought to be the result of 'the heavy work that had to be done at night in making gun positions'.⁸³ In the First World War many similar cases were found to be without organic basis and had provided an unconscious route from the front.

BALKAN WARS (1912–13)

To learn more about the treatment of wounds and prevention of disease, the British army had sent a small medical team under Major E.T.F. Birrell, RAMC, to run Red Cross services in Bulgaria.⁸⁴ Although their report made no mention of war syndromes, the conflict itself provided further warning of the epidemic that was to break out in 1914. A Brussels physician, Dr Octave Laurent, who observed the conflict, coined the term 'cerebro-medullary shock' to describe cases of torpor and

79. P.M. Awtokratow, 'Die Geisteskranken im Russischen Heere während des Japanischen Krieges', *Allgemeine Zeitschrift für Psychiatrie* 64 (1907): 286–319.

80. 'Neurasthenia in a Russian Naval Officer', *Lancet* 1 (4 March 1905): 609.

81. 'Neuroses of Military Men after a Campaign', *Lancet* 1 (22 June 1907): 1740.

82. W.G. Macpherson, *The Russo-Japanese War, Medical and Sanitary Reports from Officers attached to the Japanese and Russian Forces in the Field* (London: HMSO, 1908), 59.

83. *Ibid.*, 198.

84. 'United Services Medical Society', *Lancet* 1 (28 March 1914): 897.

functional paralysis seen in some soldiers who had been close to a shell burst but not wounded. Laurent identified a range of symptoms including tingling, twitching and even partial paralysis, while the severest cases induced a cataleptic condition.⁸⁵ Unable to find any nerve lesion, Laurent hypothesised that the speeding projectile vibrated the air violently so that sudden variations of atmospheric pressure acted on the middle ear.⁸⁶ Indeed, during the Napoleonic Wars, soldiers suffering from similar symptoms and who had been close to the passage of cannon balls were said to suffer from 'wind contusions'. 'Commotion from the aerial compression' was later famously proposed by [Sir] Frederick Mott (1853–1926), pathologist to the London County Asylums,⁸⁷ when presented with soldiers suffering from shell shock in 1916.⁸⁸ Although he did not refer directly to Laurent, Mott was familiar with the argument and quoted André Léri, the neurologist attached to the French Second Army, who suggested in 1916 that shell shock was the result of 'vent du projectile' or windage.⁸⁹ Seeking a causal explanation, Mott proposed that 'mere proximity to the explosion is sufficient to cause organic changes in the brain and spinal cord by the atmospheric compression and decompression'.⁹⁰ By 1919 Mott had revised this hypothesis, arguing that 'undoubtedly the vast majority of non-fatal cases of shell shock are more emotional in origin than commotional, and occur especially in subjects of an inborn neurotic or neuropathic temperament; but the two conditions may be associated'.⁹¹

Hence, shell shock was not a phenomenon that had gone undetected until the First World War. Indeed, Charles Myers, who wrote the first paper on shell shock in a recognised medical journal,⁹² acknowledged that he had not invented the term.⁹³ Drawing on prewar experiences, it appears to have come into popular

85. 'Wind contusions', *Lancet* 1 (16 May 1914): 1423; 'Casualties in modern war', *British Medical Journal* 2 (19 September 1914): 514–15.

86. Octave Laurent, *La Guerre en Bulgarie et en Turquie* (Paris: A. Maloine, 1914); see also A.A. Roberts, *The Poison War* (London: William Heinemann, 1915), 24–6.

87. Alfred Meyer, 'Frederick Mott, founder of the Maudsley Laboratories', *British Journal of Psychiatry* 122 (1973): 507.

88. Frederick W. Mott, 'The effects of high explosives upon the central nervous system', *Lancet* 1 (12 February 1916): 331–8; 1 (26 February 1916): 441–9.

89. Frederick W. Mott, *War Neuroses and Shell Shock* (London: Henry Froude and Hodder & Stoughton, 1919), 67.

90. *Ibid.*

91. *Ibid.*, 68.

92. Charles S. Myers, 'A contribution to the study of shell shock', *Lancet* 1 (13 February 1915): 316–20.

93. C.S. Myers, *Shell Shock in France 1914–18, Based on a War Diary* (Cambridge: Cambridge University Press, 1940), 12–14.

usage by word of mouth because it so effectively expressed both the disorder and nature of war.⁹⁴

CONCLUSION

Important foundations were laid for military psychiatry before the First World War. A small number of physicians introduced psychological concepts to explain functional symptoms and devise treatments. Irritable heart in the Crimea, for example, was viewed as a serious cardiac disorder for which no organic cause could be found, and treatment remained rest and a lifestyle that involved only light labour. By the Boer War, some physicians believed that DAH had a constitutional element, which could be addressed by pampering the nervous system and encouraging discharged veterans to take up graduated employment. The link between these unexplained disorders of war and civilian railway spine was drawn. By 1900 the two poles of the debate had been established: organic versus psychological. They were to remain in a constant two-way interchange for the rest of the century without an hypothesis that would resolve them effectively.

A report in the *Lancet* for July 1902, which examined the psychological impact of the battle of Magersfontein, was considered newsworthy because it looked at troops in combat from 'a new and interesting point of view'.⁹⁵ War, like traumatic train accidents, advanced psychological understanding because it subjected individuals to intolerable levels of stress in the absence of an acceptable emotional outlet. Symptoms emerged often in disguised form, forcing physicians to re-evaluate their aetiological models and propose new processes.

Karl Jaspers wrote of the First World War that 'the effects of psychic attrition, fright and exhaustion were seen more drastically and in far larger numbers than before'.⁹⁶ This reflected not just an increase in absolute numbers (the result of mass mobilisation) but also the perception that industrial production had intensified the character of combat through the artillery barrage and use of machine guns. We suggest that psychiatric casualties had in fact occurred before 1914, if only partially recognised as such. Furthermore, the necessary observations and hypotheses that achieved prominence during the First World War were already in place and had been subject to a limited but influential debate.

94. Jay Winter, 'Shell-shock in the cultural history of the Great War', *Journal of Contemporary History* 35 (2000): 7–8.

95. 'Magersfontein: a psychological study of war', *Lancet* 2 (19 July 1902): 181.

96. Karl Jaspers, *General Psychopathology* (Manchester: Manchester University Press, 1963), 719.