Creating a Sanitary Bureaucracy: Sickness, Pensions and Public Service in the nineteenth-century British Post Office

The State, the Post Office and the Growth of Bureaucracy

Throughout western Europe during the nineteenth century, as populations increased, economies developed and empires grew, the size and scope of the state expanded. With that growth came the development of large bureaucracies to coordinate the complex and inter-related activities of the modern state.[1] As Max Weber noted 'Everywhere the modern state is undergoing bureaucratization'.[2] Such bureaucracies depended on the implementation of standardised, written rules by trained and salaried officials, operating according to rational criteria. Civil servants were recruited in growing numbers and as the size and reach of these state bureaucracies increased, ideas about how this body of workers should be managed changed.

In Britain, reforming governments from the early nineteenth-century onwards sought to build public trust and move away from the perceived parasitical and corrupt practices of what became known as 'Old Corruption' – a state that revolved around patronage and privilege, rather than rationality and merit.[3] As Weber and others since have noted, the modern state sought to adopt more rational and accountable means of achieving its aims, drawing on public trust, wider forms of representation and a more equitable distribution of the tax burden. To achieve these aims, states everywhere began to employ large numbers of salaried and tenured civil servants, recruited on merit and expected to remain in their careers for life. It is the management of this group of state employees in the British Post Office that is the focus of this article.

The Post Office is an important case study for several reasons. First, in terms of employment, it was by far the largest government department in the United Kingdom. In 1851, of around 40,000 civil servants identified in the census, 25 per cent were employed in the Post Office.[4] By 1902, the number of civil servants had grown to nearly 106,000 of which 77,000 were employed in the Post Office and by 1911 the figures were 133,000 and 99,000 respectively.[5] In addition to the permanent, established Post Office workforce a large number of part-time or 'unestablished' workers were also employed. Although these workers had different contracts, and less access initially to non-wage benefits, such as free medical care and sick pay, over time their conditions at work became more similar to the

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[1] See Michae Mann, *The Sources of Social Power: volume 2, the rise of classes and nation-states 1760-1914* (2nd edition, Cambridge University Press, Cambridge, 2012), especially chapter 13 'The rise of the modern state III: bureaucratization.

[2] Max Weber, 'Bureaucracy', in Hans Gerth and Charles Mills (ed). *From Max Weber: Essays in Sociology* (Oxford University Press, Oxford, 1958, 232.

[3] See Philip Harling, *The Waning of 'Old Corruption': the politics of economic reform in Britain, 1779-1846* (Clarendon Press, Oxford, 1996); P Harling, 'The Powers of the Victorian State', in Peter Mandler (ed.), *Liberty and Authority in Victorian Britain* (Oxford University Press, Oxford, 2006), .26.

[4] Moses Abramovitz and Vera Eliasberg, *Government in Nineteenth Century Britain* (NBER, 1957), 17, https://www.nber.org/system/files/chapters/c2653/c2653.pdf

[5] Ibid, 37.

established workforce.[6] Postal services expanded in other European countries as states extended their reach across increasingly integrated national territories and empires, linked by road, rail, post and the telegraph, but the sheer size and scale of the British Post Office was exceptional. [7]

Secondly, the Post Office came to occupy a central position in the British state not just because of its size but also because of the costs involved in its operations and the revenue it generated for the government. The rapid expansion of the British state involved a significant increase in government expenditure which was particularly marked in what Michael Mann has described as 'infrastructural functions' that enabled governments to extend their communicative reach across their geographical territories.[8] In order to achieve this, the state was drawn into new sectors of activity, notably education, transport, postal and telegraph services as well as a range of other functions, including public health.[9] Britain was by no means the only country in which this took place but in the later nineteenth century it was there that state involvement in education, the Post Office and the telegraph expanded most rapidly.[10] By 1901 these three activities comprised at least 70 per cent of total civil expenditure of the British state.[11] Of these activities, it was the Post Office, which took over the private telegraph companies in 1870, that generated significant amounts of money for the government. In 1860 it had a turnover of over £3.5 million which, after taking costs into account, amounted to a profit of over £700,000 and by the end of the century these figures had risen fivefold to over £16.8 million and £3.4 million respectively.[12] The growing financial importance of the Post Office for the Treasury is reflected in its annual share of government income: the annual turnover figures represented around five per cent of the total gross public income in 1860, rising to over 13 per cent by 1900. [13] As an important revenue generating government department, controlling costs and maximising revenue, therefore, were paramount concerns and successive governments took a keen interest in the way the service was run. [14] In this context, managing pension payments and sick pay for the thousands of Post Office workers who became entitled to benefits during the course of the nineteenth century was crucial to the financial success of the institution.

The importance of pensions and sick pay came to the fore with changes in the way that the Civil Service was organised. Over the course of the nineteenth century in Britain the management of the Civil Service changed in three key ways. First, from 1855 the Civil Service Commission was created to oversee the introduction of examinations during recruitment as part of efforts to move to a system of

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[6] See Alan Clinton, *Post Office Workers: a trade union and social history* (Unwin, London, 1984).

[7] See Muriel Le Roux (ed), *Postes d'Europe, XVIII^e siècle - XXI^e siècle, jalons d'une histoire comparée,* Paris, Comité pour l'histoire de La Poste, 2007.

[8] Michael Mann, *The Sources of Social Power: vol 2: the rise of classes and nation-states, 1760-1914* (Cambridge University Press, Cambridge, 1993), 358-401; Robert Schwartz, 'Mail, rail and legwork: State and nation building through postal service in France and Great Britain, 1830-1914', *Social Science History*, 45 (2021), 291-316.

[9] See Timothy Crook, *Governing Systems: modernity and the making of public health in England 1830-1910* (University of California Press, 2016, Oakland, CA).

[10] For the growth of postal services in other European states see Muriel Le Roux (ed.), *Postes d'Europe, XVIII^e siècle - XXI^e siècle, jalons d'une histoire comparée,* Paris, Comité pour l'histoire de La Poste, 2007.

[11] Mann, *Sources of Social Power*, 378.

[12] These figures come from the annual reports of the Postmaster General which are published in the British Parliamentary Papers (subsequently BPP). See 16th (1860) and 46th (1900) annual reports of the Postmaster General.

[13] Figures for gross public income are derived from Brian Mitchell and Phylis Deane, Abstract of British Historical Statistics (Cambridge University Press, London, 1962), 393-394.

[14] See Patrick Joyce, *The State of Freedom: a social history of the British State since* 1800 (Cambridge University Press, Cambridge, 2013), 111-117.

meritocracy rather than patronage. The Post Master General, a political appointee responsible for overseeing the operation of the postal service, emphasised this in his first annual report, stating that promotion within the Post Office would be based 'on no other claims than those of meritorious conduct and proved good service'. [15] Secondly, from 1859 'established' civil servants who had worked for at least ten years became eligible to claim a pension, either because they were too unwell to continue or because they had reached a pensionable age of sixty years old.[16] The pension itself was non-contributory and paid by the Treasury from a consolidated superannuation fund with pensions calculated on the length of service and the rate of pay. Workers could receive one-fortieth of their wages for each year worked, and after forty years employment they could receive a maximum pension equivalent to two-thirds of their final salary, though in the Post Office relatively few workers continued for that long. This superannuation scheme standardised a wide range of different pension systems across the service: some required contributions from employees, some did not, some were administered centrally, some were organised locally more akin to friendly society pensions.[17] Finally, from 1872 sick pay was introduced for workers certified as too unwell to fulfil their role. These policies, which in some cases were also mirrored by large private firms that sought to introduce paternalistic practices to manage the workforce, were part of an increasing bureaucratisation of employment relationships, which Hannah has described as 'attempts to create a stronger identity of interest of capital and labour in large organisations'.[18] The state led the way in this respect and the payment of sick pay and the implementation of a standardised pension system became an important model for other forms of employments.[19]

Monitoring and evaluating the way that pensions and sick pay were managed depended on the creation of an efficient bureaucracy staffed by well qualified state officials. An important aspect of this state bureaucracy was the implementation of standardised responses that were recorded, often in meticulous detail, on written forms. As Patrick Joyce notes in his analysis of the British state, the day to day life of civil servants involved the creation of intricate chains of paperwork in which decisions were recorded and made public.[20] These chains of paperwork, studied here in the context of monitoring and managing sickness and providing pensions in the British Post Office, provide an

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[15] Parliamentary Paper (PP) 1854-55 XX First report of the Postmaster General, 34.

[16] Up to 1892 workers became eligible for retirement at the age of sixty. After this date, workers had to retire at age sixty five. Established workers were defined as workers who had passed the Civil Service examination and were employed full time.

[17] For more information on civil service pensions prior to 1859 see Christopher Lewin, *Pensions and Insurance before 1800: A Social History* (Tuckwell Press, East Linton, 2003), Raphael Marios, *Pensions and Public Servants: A Study of the Origins of the British System* (Mouton, Paris, 1964), and for pension systems within the Post Office see Kathleen Mcilvenna, *From the civil list to deferred pay : the British government, superannuation and pensions 1810-1909,* Doctoral thesis, University of London, 2019, 94-126.

[18] Leslie Hannah*, Inventing Retirement: The Development of Occupational Pensions in Britain* (Cambridge University Press, Cambridge, 2009), 22. For other examples of similar practices see Eugene McCreary, 'Social welfare and Business: the Krupp Welfare Program 1860-1914', *Business History Review*, 42(1) 1968: 24-49; Joseph Melling, 'Industrial Strife and Business Welfare Philosophy: The Case of the South Metropolitan Gas Company from the 1880s to the War', *Business History*, 21/2 (1979), 163-79; Helen Jones, 'Employers' Welfare Schemes and Industrial Relations in Inter-War Britain', *Business History*, 25/1 (1983), 61-75; Robert Fitzgerald, 'Employers' Labour Strategies, Industrial Welfare, and the Response to New Unionism at Bryant and May, 1888-1930', *Business History*, 31/2 (1989), 48-65; Joseph Melling, 'Welfare capitalism and the origins of welfare states: British industry, workplace welfare and social reform, c. 1870-1914', *Social History*, 17/3 (1992), 453-78; Jakub Kastl and Lyndon Moore, 'Wily welfare capitalist: Werner von Siemens and the pension plan', *Cliometrica* 4 (2010): 321-348.

[19] Hannah, *Inventing Retirement*, 9.

[20] Joyce, *The State of Freedom*, 187-228.

opportunity to explore the strategies used to manage the growing number of employees in this large state bureaucracy. It was not sufficient merely to introduce meritocratic entry to state employment: it was also necessary to ensure that once there, workers were managed in rational ways that would help to maintain their loyalty as well as their efficiency. Sick pay and pensions were important elements in this strategy and for that reason are the focus of attention in this article. While the creation of occupational pensions has been discussed in the academic literature, the introduction and regulation of sick pay has received less attention.[21] This is an important omission if we are to try to understand how the growing body of civil servants was managed in ways compatible with modern and rational governance.

Given the significance of the Post Office in relation to its size, financial arrangements and impact on the economic development, it is therefore important to understand the ways in which it managed its labour force and in particular the non-wage benefits associated with sick pay and pensions. In this article we first explore the nature of those benefits and the sanitary bureaucracy that was created to monitor sickness in the workforce. We then examine the specific relationships between sickness absence and retirement, noting how those shifted over time and the policies designed to cope with the changes. Finally, we consider the ways in which exiting the workforce was managed and the difficulties involved in balancing efficiency against economy.

Working in the Post Office

The laborious task of collecting and sorting the millions of items posted each day, and of delivering them in a timely manner to the correct recipients, relied entirely on the labour of postal workers and this, in turn, depended on their health. Having to sort huge volumes of mail in short periods of time, often during the night, meant working at high speed and at great intensity. Plagued by constant shortage of space in the main London headquarters, the Post Office responded in various ways: introducing sorting on specially designed rail carriages, known as the Travelling Post Office, that ran overnight to and from London and most major cities; adding new buildings to separate different functions, including a large parcel sorting office at Mount Pleasant which opened in 1890, and increasing the number of deliveries to and from London in order to prevent the build-up of mail. [22] Such was the speed of posting that it was said that a letter posted in Paris in the evening would arrive at its destination in England by noon the next day, and the reply would be delivered back the following morning. In London, a letter posted in the central districts by 7 pm would be delivered on the same night while any letter for the rest of the country posted by 6 pm would be delivered by the first

[21] For works on the changes in the Civil Service and the State in the nineteenth century see Peter Mandler (ed.), *Liberty and Authority in Victorian Britain* (Oxford, 2006), Peter Jupp, 'The Landed Elite and Political Authority in Britain, ca. 1760- 1850', *Journal of British Studies*, 29:1 (1990), 53-79, Oliver MacDonagh, 'The Nineteenth-Century Revolution in Government: A Reappraisal', *Historical Journal*, 1:1 (1958), 52-67, William Rubinstein, 'The End of "Old Corruption" in Britain 1780-1860', *Past & Present*, 101:1 (1983), 55-86; Norman Chester, *The English Administrative System 1780-1870* (Oxford University Press, Oxford, 1981); Philip Harling, *The Waning of 'Old Corruption': The Politics of Economic Reform in Britain 1779-1846* (Clarendon Press, Oxford, 1996). For works on the Civil Service and occupational pensions see Leslie Hannah, *Inventing Retirement: The Development of Occupational Pensions in Britain* (Cambridge University Press, Cambridge, 2009); Raphael Marios, *Pensions and Public Servants: A Study of the Origins of the British System* (Mounton, Paris, 1964); Gerald Rhodes, *Public Sector Pensions* (Allen & Unwin, London, 1965); Kathleen Mcilvenna, Doctoral thesis, University of London, 2019.

[22] See Martin Daunton, *Royal Mail: the Post Office since 1840* (Athlone, London, 1985), 119-145.

morning post the next day.[23] By 1901 in London, which accounted for around a third of all postal employees and a similar proportion of mail, there were up to twelve deliveries a day in the central districts and six in the suburbs. [24]

The impact of working in such a pressured environment was of particular concern for London workers, where much of the sorting was done at night. During the 1860s and 1870s, the Postmaster General's annual reports consistently record the increase in 'midnight despatches', with more mail trains each year leaving London later at night resulting in more night time working for sorters and those in the Travelling Post Office. Sorters and postmen interviewed by the Tweedmouth Committee into working practices in the Post Office, which took place between 1895 and 1897, recounted the pressures involved in ensuring that mail posted in London at the last collection at 6 pm was sorted and ready to be loaded on to night trains that left from 8 pm bound for the rest of the country.[25] To achieve this demanding schedule, workers often toiled through the night and into the early morning, sometimes working split shifts in order to keep the mail moving. In rural areas, although the intensity of work was less pronounced, the physical demands were no less taxing. The amount of walking required to deliver the mail could be immense. In one notable, though not isolated, case a female letter carrier called Hannah Brewer, who retired aged 72 in 1897 having worked for the Post Office for 54 years, was said to have walked over a quarter of a million miles delivering mail in the rural area of Bitton in Gloucestershire.[26] Although not as dangerous, perhaps, as working in mines or chemical factories, nevertheless working for the Post Office generated significant mental and physical demands on employee's health and therefore monitoring and managing sickness absence in the workforce became a key priority for the authorities.

Civil Service Pension Reforms and Medical Surveillance

In 1854 the Northcote-Trevelyan act, also known as the Civil Service Act, was passed – a significant step in the reform of the Civil Service.[27] It introduced competitive entry into public service, overseen by a new Civil Service Commission set up to coordinate examinations and appointments to office. Although it took several years for entry to all departments to be based on competitive examinations, from that time merit rather than patronage became the prime reason for appointment to the Civil Service. The Northcote-Trevelyan report on which the legislation was based also recognised that that a job in the Civil Service was a job for life and therefore, in order to limit the costs of ill health and the payment of premature pensions, the employment of 'sickly youths' should be avoided.[28] However, while the report recognised that applicants should provide a medical certificate to confirm their fitness

[23] PP 1884-85 XXII Thirty First Report of the Postmaster General 3.
[24] This information comes from the Post Office London Directory, 1901 which lists the first and last times of deliveries. Similar information is provided for other years.
[25] PP XLIV 1897 Inter-Dept. Committee on Post Office Establishments: Minutes of Evidence, Indices, Summaries, Appendices, evidence of Frederick Milton (q. 190), Henry Horsfall (q. 294). P B Hayman (q. 3443), D S Boston (q. 8192-3).
[26] Robert Tombs, *The Bristol Royal Mail* (No publisher, 1899), 276-279. Accessed at https://www.gutenberg.org/files/34197/34197-h/34197-h.htm) 3 January 2024. Her pension record is available at https://data.addressinghealth.org.uk/person/?id=1897030120
[27] Oliver McGregor, 'Civil servants and the Civil Service, 1850-1950', *Political Science Quarterly* 22 (1951), 117-216.
[28] PP 1854 XXVII Report on the Organization of the Permanent Civil Service, 4.

to serve, it made no recommendations as to how this should be implemented and instead left the decision to individual departments.

The need to weed out 'sickly youths' became even more pressing a few years later, when the system of pensions for Civil Servants was reformed by the Superannuation Act of 1859. Pensions had existed in the Civil Service prior to the Act but these had been discretionary and linked more to 'Old Corruption' and the payment of sinecures than to any standardised system of rewards for long and faithful service to the state.[29] Following piecemeal reforms and a concerted campaign by civil servants, a select committee and then a Royal Commission into superannuation resulted in the 1859 Act which introduced non-contributory pensions for all civil servants who had passed the Civil Service examination, been employed at least ten years and who had served 'with diligence and fidelity'.[30] The Act also stated that workers should would become eligible for retirement upon reaching the age of sixty (raised to sixty-five in 1892) unless a suitably qualified medical doctor certified that they were no longer able to perform their job because of ill health or incapacity. The value of the pension was calculated as a percentage of the wage and was based on the number of years the worker had been employed. For those who had served at least ten years, typically this was the equivalent to one-sixtieth of pay per year of service up to a maximum of forty sixtieth. For those who had served less than ten years, and who were forced to retire because of injury or ill health, a gratuity of one month's pay for each year of service was paid.[31]

The Superannuation Act drew to a close a period of significant transformation in the Civil Service in which recruitment came to depend on merit rather than patronage, and employment was assumed to be for an entire working life. These two transformations were accompanied by the creation of what can best be described as a sanitary bureaucracy in which doctors were employed to manage recruitment and monitor sickness with a view to maintaining the efficiency of the workforce.

As the largest branch of the Civil Service, the Post Office is necessarily at the centre of attention but it was by no means the first or indeed the only branch of government in which employee's health was seen as important. In 1847 the Customs service was the first department to employ a medical officer, Dr James Ormiston McWilliams, a distinguished surgeon in the Royal Navy, to monitor the health of the workforce and examine new recruits.[32] From 1854, in conjunction with the reforms of that year, all lower grade officers, numbering around a thousand men in London and Gravesend, came under the direct care of Dr McWilliams.[33] In London, each applicant was examined by McWilliams, who commented not just on the presence or absence of actual disease but also took note of 'delicacy of constitution, slightness of frame, and other matters of the same nature', when reaching a decision to appoint and his opinion was invariably accepted by the Commissioners of Customs.[34] Candidates for a position elsewhere had to furnish a medical certificate from a qualified medical practitioner stating that the applicant was 'free from any physical defect or disease which would be likely to interfere with the proper discharge of his duties' – repeating the phrase that the Northcote-Trevelyan report had used when discussing entry to the Civil Service.[35] The medical officer's duties also extended to visiting workers in their own homes who reported sick. In 1863, Dr Walter Dickson, who succeeded

[29] 22 & 23 Vict. c. 26 Superannuation Act 1859.
[30] See McIlvenna, *From the Civil List to Deferred Pay*, 42-65.
[31] Ibid., 33.
[32] Dictionary of National Biography (Oxford University Press, London), vol 22, 825.
[33] Walter Dickson, 'On the numerical ratio of disease in the adult male community', *British Medical Journal* (*BMJ*), 8 April 1876, 442.
[34] PP 1861 XLI Sixth report of Her Majesty's Civil Service Commission, 190.
[35] PP 1857 Sess. 1 XV First Report of the Commissioners of Her Majesty's Customs, 90.

McWilliams following his accidental death in the preceding year, noted that he had made over 1400 home visits in addition to providing assistance to between 15 and 30 patients who attended his house each day.[36] This inspectorial duty became even more important when in 1864 sick pay was introduced, providing full pay for the first six months followed by half pay until superannuation. Dr Dickson was of the view that:

> 'This privilege, although sometimes liable to be abused by the indolent and unscrupulous, and necessitating unremitting vigilance on the part of the medical officers, has unquestionably been highly beneficial in enabling officers, who could otherwise ill afford a pecuniary sacrifice, to avail themselves of timely remedial measures, and to produce rest at home, and such other comforts as their condition might require, to the great alleviation of disease and better prospect of recovery.'[37]

The number of workers reporting sick after the change rose but, as Dickson noted, the amount of serious illness appeared to diminish resulting in fewer workers being pensioned off early. Though greater vigilance was required to prevent malingering, the overall outcome appeared to have been beneficial in retaining staff for longer.

The measures adopted by the Customs service were recognised by the Post Office, which was rapidly becoming the largest department in the Civil Service and the most expensive. A committee appointed to report on appointments to the Post Office in 1854 noted that it would be desirable for a medical examination to take place 'in order to ascertain that the candidate has no physical or mental defect or disease which is likely to incapacitate him for the public service".[38] The report also specifically recommended that similar arrangements to those that existed in the Customs should be introduced. As a result, a Chief Medical Officer to the Post Office, Dr Augustus Waller Lewis, who was a well-known public health reformer, was appointed in 1855. [39] The role involved a range of duties: the examination of candidates; checking suspected cases of malingering; providing advice and medicine for workers at the General Post Office; visiting workers who earned below £150 a year and who lived within four miles but were too ill to leave their home; advising on the sanitary condition of the main office; and deciding on cases of medical retirement. In return for performing the role and for giving up his private practice, Dr Lewis was to receive a salary of £600, rising to £800 – the amount paid to Dr McWilliams at the Customs and to John Simon, medical officer to the City of London.[40]

The appointment of Dr Waller Lewis paved the way for the subsequent creation of an integrated medical service that expanded rapidly in parallel with the Post Office's operations. Arrangements were soon made in some of the larger cities, including Liverpool, Edinburgh, Glasgow and Dublin, to employ doctors either on a full time basis or paid a capitation fee dependent on the number of postal workers under their charge.[41] In 1871, following the incorporation of the inland telegraph companies into the Post Office, and the consequent increase in staff, it was proposed that a doctor should be appointed at offices with at least forty staff and in 1876 this number was lowered to include any office with at

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[36] PP 1864 XXXIX Eighth Report of the Commissioners of Her Majesty's Customs, 90.
[37] Dickson, 'On the numerical ratio', *BMJ,* 442-43.
[38] The Postal Museum (TPM) POST 64/1 *History of the Post Office Medical System,1854-1901*, 2.
[39] *The Morning Post*, 7 May 1855. For further information on the creation of the Post Office Medical Service see Kathleen McIlvenna, Douglas H L Brown, David R Green, 'The Natural Foundation of Perfect Efficiency': Medical Services and the Victorian Post Office, *Social History of Medicine*, 33/2 (2020), 539–558. https://doi.org/10.1093/shm/hky123 or
[40] TPM, POST 64/1, *History of the Post Office Medical Service*, 12
[41] See McIlvenna et al, 'The Natural Foundation of Perfect Efficiency', 542.

least 21 staff.[42] The service continued to expand and by 1901 nearly 600 doctors were employed, including Dr Edith Shove the first female medial officer appointed in 1883 and four more female doctors appointed to look after the growing number of female telegraphists and clerks who started to be employed following the nationalisation of the telegraph companies in 1870.[43] To set the scale of this sanitary bureaucracy in context, according to Ann Hardy, the Post Office medical service during this period accounted for between 9 and 12 per cent of non-hospital appointments for general practitioners.[44]

Doctors employed by the Post Office were an important presence at each stage of an employee's working life, from recruitment through to retirement. They were responsible for conducting a standard medical examination that indicated whether or not a worker was fit enough to be employed; they closely monitored worker's sickness in order to certify any claim for sick pay as well as to detect any hint of malingering; and they were important in determining at what point a worker became physically or mentally unable to perform their duties and therefore should be pensioned off. They did so under the auspices of a centralised bureaucracy that laid out the precise nature of the medical examination, the responsibilities relating to attending sick workers in their own homes in order to corroborate their claim to sick pay, and the form of record keeping that was required to monitor each worker's sickness in order to assess their ability to continue. While doctors were no doubt able to exercise their professional judgement, they did so under clear instructions and with firm expectations from the Post Office authorities that their duty lay first with their employer and only second with their patient. It is to these instructions that we now turn.

Recruiting healthy workers

The concept of meritocratic system of appointment involved not just intellectual capacity but also corporeal fitness. The Northcote-Trevelyan report into the organisation of the Civil Service in 1854 recognised that the lightness of work and the certainty of a pension on retirement provided 'strong inducements to the parents and friends of sickly youths to endeavour to obtain for them employment in the service of the Government'.[45] However, this resulted in higher costs arising from the need to pay salaries to officers who were absent because of sickness and who were forced to retire early. If Civil Servants were to be recruited at an early age and were to remain in office for their entire working life, which the Northcote-Trevelyan report had recommended, then stricter attention had to be paid to ensuring that they were physically fit at the start of their employment. This recommendation had particular resonance with the Post Office and from 1855, with the appointment of doctors in London and other large cities, stricter medical examinations began to be introduced for those seeking employment.[46] In that year applicants to become clerks, sorters or letter carriers had to be passed fit by a Post Office doctor and in the following years, medical examination of all applicants for a permanent position, and for those during the probationary period, became standard practice. [47]

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[42] TPM, POST 64/1 *History of the Post Office Medical Service*, 155-165, 226-30.
[43] PP 1900 XVIII *Forty -sixth report of the Postmaster General on the Post Office*, 20, See also Minnie Madgshon, 'Woman medical officer to the Post Office, 1883', Wellcome Library, SA/MWF/C/62. The topic of female doctors is currently part of a PhD thesis being undertaken by Holly Marley.
[44] PP 1901 XVIII *Forty-seventh report of the Postmaster General on the Post Office*, 22; Anne Digby, *The Evolution of British General Practice 1850-1948* (Oxford University Press, Oxford, 1999), 80.
[45] PP 1854 XXVII Report on the Organization of the Permanent Civil Service, 4.
[46] TPM, POST 64/23 Probation and Medical examinations,' report on the length of probation period for new staff (1894), 2-3.
[47] TPM, POST 64/1 History of the Post Office Medical System, (1854-1901), 65.

Compared to the relatively cursory medical report on new recruits that was required by some other departments of the Civil Service, such as the Customs, the information required by the Post Office was more thorough. Given the sheer scale of employment in the Post Office, and the physical nature of the work involved in sorting and delivering the mail, it was important that postal workers were able to demonstrate their fitness to serve. The initial examination appeared to have been introduced from 1855 and consisted of three parts with the outcomes carefully recorded on a standard form – part of the intricate chain of paperwork that characterised the growth of the modern state – that accompanied any recommendation of employment.[48] The first part included the age, height and weight of the applicant, and these measurements were then used to assess the physical stature of the applicant compared to others. The second part consisted of a series of questions about the medical history of the applicant's family, including parents as well as siblings, and made note of whether or not the applicant had ever contracted smallpox or been vaccinated. The candidate had to add their signature to verify the statements and reminded that wilfully withholding information would risk the loss of the appointment. The final part of the examination comprised the medical examination proper, with the doctor paying close attention to any signs of ill health that could hinder the work, including poor hearing or eyesight, flat feet, varicose veins, rupture or any other physical symptoms indicating infirmity.

The importance of this preliminary medical examination was emphasised by the findings of a committee, which included the Chief Medical Officer, Dr Arthur Wilson, and other high ranking officials, set up in 1894 at a time or rising sickness levels to report on the issue. The committee's report noted that '… for a body of public servants whose failings are so highly capable of causing daily and hourly inconvenience, the first essential is that sanity of body which is the natural foundation of perfect efficiency.'.[49] The initial examination of recruits, therefore, was the first line of defence in ensuring that only workers capable of performing the arduous task of delivering the mail were recruited.

The initial medical examination, though not as demanding as those in other occupations, such as the police, where physical prowess was essential, nevertheless proved sufficiently rigorous to reject a significant proportion of candidates, particularly for the more physically demanding roles associated with delivering the mail.[50] In the 1860s about one in four male applicants as letter carriers in London were rejected because of poor physical health, though the proportion was much lower for clerks.[51] Dr Lewis noted in 1861 that 'candidates who present themselves are, as a whole, very much below the medium of height, strength and physique generally', adding that he would be glad to recruit more muscular persons, 'more like that of ordinary agricultural labourers".[52] There was little sign of improvement in subsequent decades and during the 1890s, between 11 and 25 per cent of applicants in London were rejected.[53] Rejection rates were lower outside the capital, usually between eight and

[48] For an example of the forms used see TPM, POST 64/1 History of the Post Office Medical Service, 1002-1012. For detailed instructions for medical officers see TPM, POST 64/10 Manual for the use of Post Office Medical Officers (1913).
[49] TPM, POST 64/23 Probation and Medical Examinations: Report of the Committee, 22 May 1894, 7.
[50] Haia Shpayer-Makov, *The Making of a Policeman: a social history of a labour force in Metropolitan London, 1829-1914*, (Ashgate, Aldershot, 2002), 34-41.
[51] PP 1862 XXVII Eighth report of the Postmaster General, appendix N, 70-71.
[52] *Ibid*.
[53] These figures are derived from TPM, POST 64/16 Chief Medical Officer's annual report and tables of sick absence 1893-1900.

ten per cent in other parts of England (including Wales) and Scotland.[54] Much worse environmental conditions in large cities, especially London, were important in explaining the differences in physical stature between urban and rural populations observed in Britain.[55] These, together with different types of occupation, help to explain the varying levels of rejection seen in different parts of the country.

Sick pay reforms and retaining a healthy workforce

From their initial encounter at recruitment, sanitary bureaucracy followed Post Office workers throughout their period of employment. Full time postal workers became eligible to receive free medical care and sick pay providing their absence from work was certified by a Post Office doctor.[56] From the worker's perspective, this was a valuable benefit that, in part, made up for their relatively low wages. For the Post Office, it meant that employees who were unwell could afford to stay away and therefore not infect their fellow workers. This benefit, however, was accompanied by a heightened level of medical surveillance to ensure that claims for sick pay were genuine and that malingering workers who feigned illness could be identified and disciplined. This function was highlighted by the Post Office authorities which noted that 'In the provinces the Medical Officers partake more of the character of a Medical Police, as they act on behalf of the Department and not on behalf of its servants…'.[57]

While all periods of sickness were supposed to be recorded by the Post Office doctor and noted on an employee's record, the regulations requiring the certification of sickness were complex and varied between different occupational groups, grades of workers, and between different places. A worker who was sick either had to visit the local Post Office doctor or, if too unwell to attend, they had to send a note to inform a superior officer and would then be visited by the doctor attached to their place of work. Once notified, Post Office doctors were required to visit sick workers in their own home to confirm ill health, and periods of sickness were recorded on a worker's record. The doctor was required to complete a pink form which detailed the cause of the illness and the amount of time to be taken off before another visit was required.[58] The sick worker was required to submit this form to his supervisor to explain his absence. There were also two counterfoils attached, one of which was to be sent to the sick worker's supervisor by the doctor, which acted as a check against the form itself and the other to be retained by the medical officer. If the local office was too small to warrant the

[54] For regional variations in stature in the British Isles see Paul Riggs, and Timothy Cuff, 'Ladies from Hell, Aberdeen Free Gardeners, and the Russian influenza: An anthropometric analysis of WWI-era Scottish soldiers and civilians', *Economics & Human Biology* 11 (2013), 69–77 https://doi.org/10.1016/j.ehb.2012.03.005;
[55] See, for example, Roderick Floud and Bernard Harris, 'Health, height and welfare: Britain, 1700-1980' in Richard Steckel and Roderick Floud (eds), *Health and Welfare during Industrialization* (University of Chicago Press, Chicago, 1997), 101; Paul Johnson and Stephen Nicholas, 'Health and Welfare of Women in the United Kingdom, 1785-1920' in Steckel and Floud (eds) *Health and Welfare,* 210-212; Roy Bailey, Timothy Hatton and Kris Inwood, 'Atmospheric pollution, health and height in late nineteenth-century Britain', *Journal of Economic History* 78 (2018), 1210-1247; Jane Humphries and Tim Leunig, 'Cities, market integration, and going to sea: stunting and the standard of living in early nineteenth-century England and Wales', *Economic History Review,* 62 (2009), 458-478. https://doi.org/10.1111/j.1468-0289.2008.00458.x
[56] See TPM, POST 64/2 'Regulations for Sick Leave', history of the policy on entitlement to sick leave, provision of sick cover and appointment of new staff (1857-1901); TPM, POST 64/4 Sick Leave Conditions 1857-1902 Memorandum.
[57] TPM, POST 64/1 History of the Post Office Medical Service, 127.
[58] For an example of this form see TPM, POST 30/1568, Medical Certificate Forms.

appointment of a doctor, then the worker had to use another doctor to certify sickness but at their own expense and this had to be ratified by the Post Office authorities.

Despite the fact that written rules existed regarding sick pay, implementing those in a uniform way proved more difficult. In London, where access to Post Office doctors was easier, the rules for countermen and telegraphists at the Central Office stated that a medical certificate had to be furnished on the first day of absence through illness, though it was also noted that this requirement had not been enforced strictly.[59] In Dublin, the practice of allowing two days absence without certification had first been applied to female staff but then spread to male employees. In 1885 Dr Fitzgibbon, the Dublin Post Office doctor, warned against the practice for male officers, arguing that 'The effect of it is to encourage habits of intemperance, dissipation and malingering', adding that the list of names of absentees 'always contains those of men known to be of irregular habits.'.[60] In some places workers had to send a medical certificate after one day's absence, while elsewhere the practice was two or three days.[61]

The notification period also differed depending on a worker's grade. For higher grade workers, such as postmasters and supervisors, it was the practice for sickness absence only to require certification after three days. To require a medical officer to visit after one day's absence, it was suggested, 'would imply a suspicion that the cause assigned for absence is questioned.' [62] For lower grades of clerical workers, it was normal to request certification from the second day of absence.[63] In the smaller post offices, where no doctor was appointed, it was felt harsh to compel workers to furnish a certificate at their own expense for a single day's absence, and therefore they only had to do so from the second day, though all sick days were still to be noted on the worker's record.[64] In practice, therefore, although uniform regulations governing sickness absence and pay existed, there was no general rule but rather a series of decisions made on a case by case basis dependent on geography and occupational status.

Sickness absence presented two main problems. First, it threw an extra burden on the remaining workforce. Providing that absences were sufficiently short, or that tasks could be redistributed, this proved less of a problem than the second burden, which was the cost of having to provide sick pay for absent workers. In practice, all established employees were eligible for sick pay, although the regulations were complex and subject to change. Prior to 1872, with the exception of a handful of the larger offices in London, Dublin, Liverpool and Manchester, which had permanent medical officers and where special regulations existed, no employee, whether they be permanent or part-time auxiliary workers, was entitled to sick pay.[65] Instead, a sick worker could find a substitute to perform their duty at less than the full rate of pay, in which case they were allowed to keep the difference, as long as they were likely to return to work. If unable to do so, the sick worker received nothing. Many sick workers

[59] TPM, POST 31/17A Sick leave one day absences 1878-1902, 3.
[60] Ibid, 2.
[61] Ibid, 1, 5.
[62] See TPM, POST 31/17A Sick leave one day absences 1878-1901.
[63] Idem., 'Memorandum to the staff employed at the Central Telegraph Station and Stock Exchange Office, January 1873.
[64] TPM, POST 31/17A Sick leave one day absences 1878-1901 file number XIII: Question of requiring medical certificate for one day's absence.
[65] See TPM, POST 64/3 Regulations for Abnormal Sick Leave, vol 1 and 2. See also TPM, POST 64.2 Regulations for Sick Leave, 6 and 7.

therefore turned to other family members to perform their duties and in that way kept the wages within the household.[66]

After 1872, however, the situation changed and the practice of employing substitutes was replaced by a more general provision of sick pay. The catalyst for change was the Post Office's acquisition of the telegraph companies in 1870. The private telegraph companies had provided sickness pay up to two-thirds of the normal salary and after the take-over, pressure mounted from other postal workers for the same level of benefits.[67] In response the Post Office authorities sought to harmonise the rules governing sick pay and agreed to provide half pay for sickness absence for all established permanent workers for up to six months absence, with a further six months discretionary pay providing that there was a reasonable chance of the worker returning to his job. Some differences remained between places, and the regulations were amended from time to time, but the principle whereby established workers received sick pay became accepted practice everywhere. Unestablished workers, who only worked in part time positions at the Post Office, were not usually eligible for sick pay and it was not until the 1890s that they began to receive similar benefits to their established colleagues. [68] The changes in sick pay were also accompanied by a significant extension of the medical service. Prior to 1876, only post offices with more than forty workers had an appointed medical officer but after that date the threshold dropped to twenty workers, and was lowered again in 1903, so that most post offices by the early twentieth century had a local doctor contracted to provide medical advice for the workforce. [69]

The extension of sick pay, however, came at time of rising levels of sickness absence in the workforce, driven by a variety of factors. No data on sickness rates were kept by the Post Office prior to the 1890s, but it is possible to reconstruct the broad pattern using information contained in the pension records of postal workers. Between 1860 and 1908, 26,500 workers retired from the Post Office, and for each of these individuals a pension record exists which provides details of the employment history together with the amount of sickness and reason for retirement.[70] Employees who had worked for at least ten years were usually granted a pension while those who left before that time were often given a one-off gratuity payment. Of the total, 18,056 retired with a pension, and therefore had worked for at least ten years. The remainder, often young women who were required to leave work upon marriage, mostly worked for less than ten years and therefore received a gratuity. For each individual the

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[66] Kathleen McIlvenna, '"The widows and orphans of servants are dying": The place of the family in the design and application of nineteenth-century civil servant pensions.', in King, S., Carol Beardmore, Cara Dobbing and Steven King (eds), *Family Life in Britain, 1650-1910*, (Palgrave, London, 2019), 83-84.

[67] See *The Times*¸ 21 February 1873*; The Bee-Hive* 15 March 1873; The *Sydenham Times,* 28 June 1881; Henry Swift, *A History of Postal Agitation* (Pearson, London, 1900), 242-243. Agitation by postal workers is discussed in Norman Candy, *London Postal Workers: a trade union history 1839-2000* (Blue Collar, London, 2014) and Alan Clinton, *Post Office Workers: a trade union and social history* (Unwin Hyman, London, 1984).

[68] Sickness allowances for postmen in different parts of the United Kingdom are noted in PP 1897 LII Return of Number of Postmen, Pay, Allowances during Sickness, Uniform, Holidays, Medical Attendance, etc., 1885, August 1891 and 1897. See also PP 1897 XLIV Inter-Dept. Committee on Post Office Establishments: Minutes of Evidence, Indices, Summaries, Appendices, evidence of A McLaren, q. 8739 POST 64/4 Memorandum comprising a brief history of sick leave regulations and staff pay entitlement, 1857-1902, 4-28.

[69] See Kathleen McIlvenna, Douglas H L Brown, David R Green, 'The Natural Foundation of Perfect Efficiency': Medical Services and the Victorian Post Office, *Social History of Medicine*, 33/2 (2020), 539–558, https://doi.org/10.1093/shm/hky123

[70] These records have been transcribed and can be downloaded from https://addressinghealth.org.uk/data-mapper/

number of days off sick was recorded for up to ten years prior to retirement, and therefore for each year we can calculate the average number of sick days taken by these retirees.

The trend in sick leave is shown in Figure 1 which indicates a steeply rising level of sickness from the 1870s until the mid-1890s, followed by an equally sharp drop by the early 1900s. While the reasons for this pattern are complex, the impact of rising rates was to increase the overall cost of providing sick pay at a time when the workforce was expanding rapidly.[71] The Post Office authorities were increasingly aware of the problem and efforts were made to quantify the average rates of sickness at the various post offices around the country, which were published in the Chief Medical Officer's annual reports.[72] From 1894 the annual reports provide detailed information on average sickness rates for hundreds of post offices, and from 1898 this information was broken down into distinct occupational categories. Any worker who exceeded the average sickness rate at their normal place of work for two consecutive years, or who had been absent on twelve separate occasions, or who had been sick for at least 100 days in a year, was reported with a view to being pensioned off.[73] Sir Francis Mowatt, permanent secretary to the Treasury, commenting on the importance of identifying abnormal rates of sickness noted in 1897, '… it is fair neither to the employee nor to the service that persons whose state of health appears likely to prevent them permanently from the efficient discharge of their duties should be allowed to remain on the establishment.' [74] At the same time, the tables also introduced an element of competition between postmasters. As Dr Wilson, the Chief Medical Officer remarked in the 1898 report: "Postmasters too can readily see how the sick-rate of the officers under their control compared with the sick-rate of neighbouring towns; and a healthy competition may possibly be set on foot to keep the rate as low as possible".[75] This medical surveillance, therefore, served a dual purpose: to identify workers who were taking more than the average amount of sick leave in order to recommend retirement, and comparison between different post offices in order to highlight abnormally high sickness rates and thereby introduce an element of internal competition to achieve improvements. Whether these policies, or other, additional factors, were responsible for the reduction in sickness rates after 1895 remains beyond the scope of this article, but stricter levels of surveillance were likely to have played a part in reducing the overall costs of sick leave that such falls represented.

Figure 1: Average number of sick days for Post Office retirees, 1860-1908

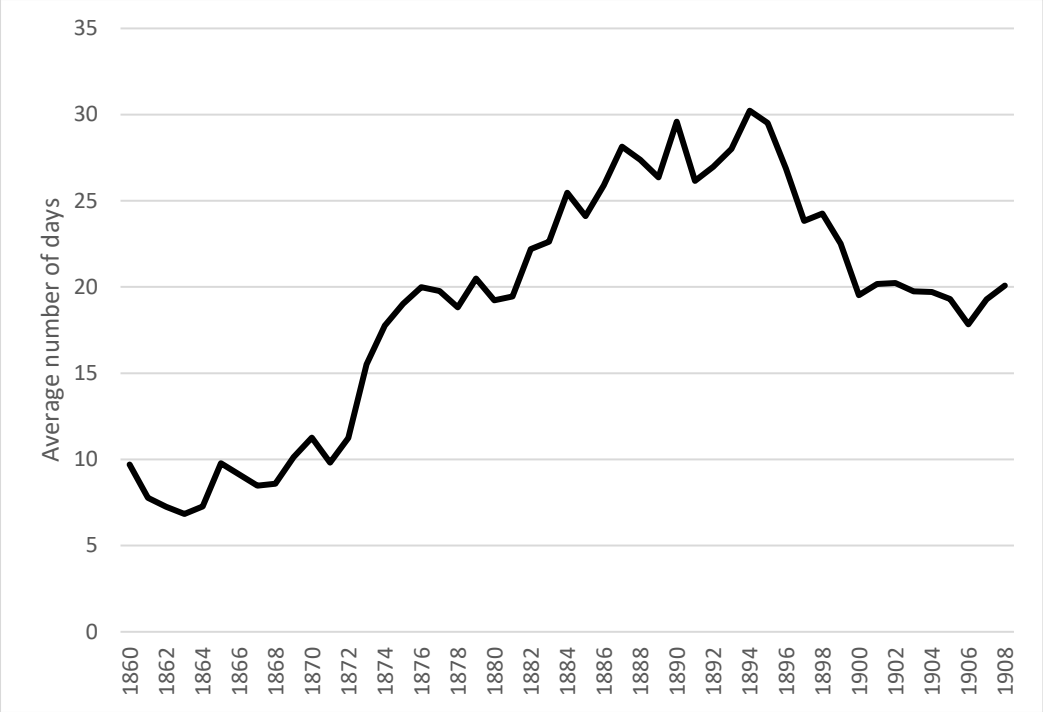
[71] This issue is the subject of ongoing research as part of the Addressing Health research project, funded by the Wellcome Trust under grant 217755/Z/19/Z. For further details see https://addressinghealth.org.uk/

[72] These reports appear to start in 1891 and continued annually thereafter. See TPM, POST 64/16 Chief Medical Officer's Annual Report and tables of sick absence, 1893-1900; TPM, POST 64/27 Chief Medical Officer's Annual Report and tables of sick absence, 1891; TPM, POST 64/28 Chief Medical Officer's Annual Report and tables of sick absence, 1892.

[73] See TPM, POST 64/3 'Regulations for Abnormal Sick Leave', background to cases where staff have taken large amounts of sick leave, time limits to be set for sick leave per annum, details of cases of paid sick leave (1857-1901)

[74] TPM, POST 64/3 Regulations for Abnormal Sick Leave, vol 2, 321.

[75] TPM, POST 64/16 Chief Medical Officer, annual report (1898), 1.



Source: TPM, POST 1/106-POST 1/403 Treasury Letters, 1860 -1908.

Note: The full data can be downloaded from https://addressinghealth.org.uk/data-mapper/

The Costs of Retirement

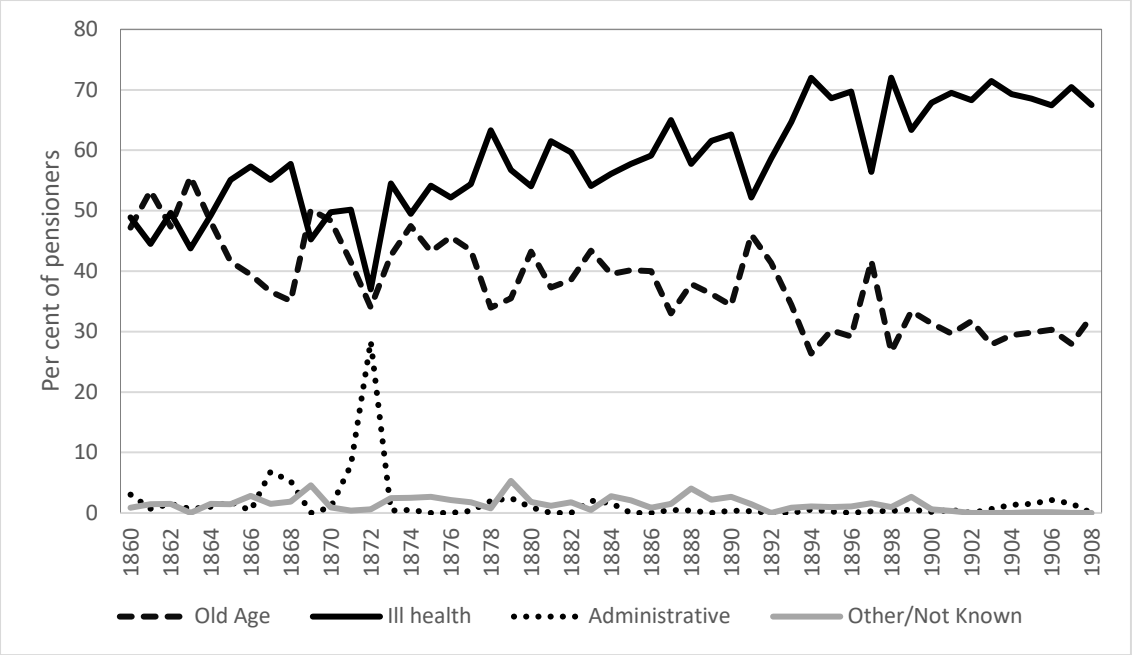
Mounting concern about ill health in the Post Office, and the financial burdens that sickness generated, fed into discussions about the need to retire workers who were no longer able to perform their duties. The problem appeared to be particular severe in the Post Office compared to other Civil Service occupations. A parliamentary report on Civil Service pensions noted that in the ten years ending 30 November 1901, 66 per cent of retirements from the Post Office were due to ill health, compared to 41 per cent in the rest of the Civil Service.[76] Because the Post Office workforce was relatively young, however, the relative amount allocated to pensions compared to wages was low compared to some other departments, but in absolute terms it was significant and rising. [77] In the year 1902-03, for example, the total cost of pensions for the entire Civil Service amounted to £2,035,360, of which £423,111 – equivalent to over 20 per cent of the total – was accounted for by the Post Office.[78] For that reason, the amount of ill health linked to early retirement was of concern to the Treasury, which was responsible for managing the pension fund.

The Treasury's concern was justified. Figure 2 shows that over time, the importance of medical retirements rose and by the mid-1890s, at a time of heightened concern about sickness, the proportion retiring for that reason had risen to around seventy per cent. Some of the sharp annual variations were due to specific factors, such as the relatively large number of redundancies in 1872

[76] PP 1903 XXXIII Report of the Commission on Superannuation in the Civil Service, Appendix 3, Return showing number of Civil Servants who have retired with pensions on account of age, ill health, abolition of office in the 10 years ended 30 November 1901, 192.
[77] Ibid., evidence of T L Heath, principal clerk to the Treasury, q. 230-237.
[78] Ibid., q. 193, 217.

following reorganisation of departments in the Post Office, or the sharp increase in age related retirements in 1891, the year before the age at which workers had to retire was raised to 65 years old.[79] However, these annual variations made little difference to the overall upward trend of medical retirements.

Figure 2: Cause of Retirement for Post Office Pensioners, 1860-1908



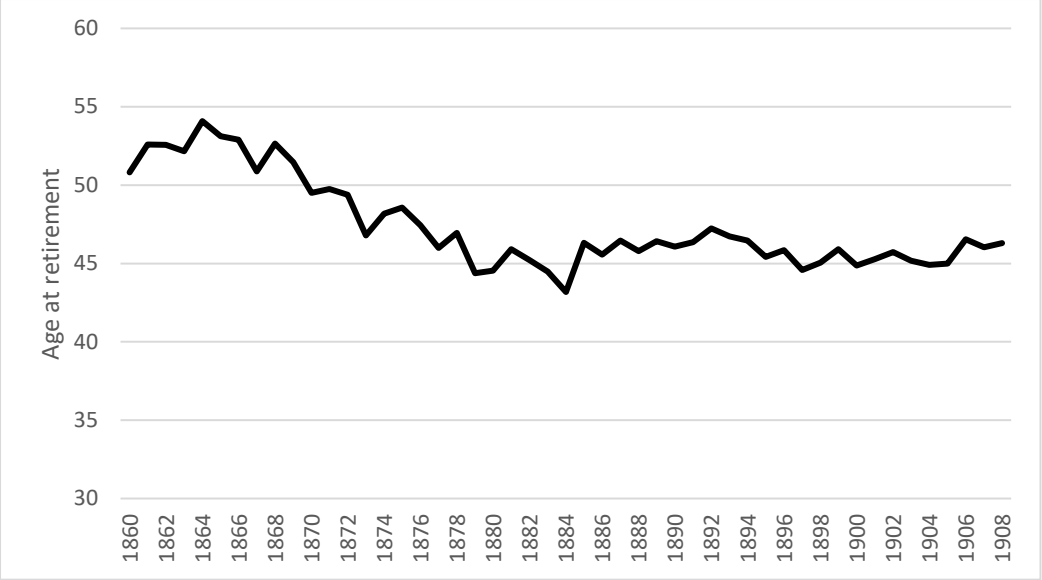
Source: TPM, POST 1/106-POST 1/403 Treasury Letters, 1860 -1908

The reason why this was of concern was that those who retired on medical grounds were relatively young and therefore presented a potentially long term claim on pensions. Figure 3 outlines the average age of pensioners forced to leave because of ill health, and this evidence shows that from the late 1870s that figure had fallen to around 45 years old. In many cases, the reason for retirement was because of a chronic condition that hindered the ability to work but was not necessarily life threatening, and this group therefore represented a long term drain on the pension fund. Between 1860 and 1900, the pension forms contain detailed information about the exact nature of the medical condition. There are over four thousand separate, individual diagnoses which we have amalgamated into broad categories using the ICD10h classification as shown in Table 1.[80] The two largest categories, musculoskeletal, which includes conditions such as rheumatism or descriptions such as 'bad legs', and mental disorders, such as nervous debility or neurasthenia, accounted for around one-third of all medically related retirements. While some diseases, such as tuberculosis, were likely to result in an early death, these kinds of chronic conditions could be disabling but they were by no means life threatening and typically pensioners retiring for these and other similar reasons could expect to live for many more years. For the general population at this time, males aged in their mid-forties could normally expect to live to around 67 years old and females to around 70, and therefore those who

[79] PP XXVII 1892 Thirty -eighth report of the Postmaster General, 3.
[80] Harry Smith, Addressing Health Working Paper 2: Classifying Causes of Retirement in Historical Pension Records, (2023) http://dx.doi.org/10.13140/RG.2.2.20441.29284, 3, 7-15.

retired early on medical grounds represented a potential long term cost to the Treasury.[81] It was little wonder, therefore, that so much care was taken to ensure that only workers who were physically fit would be taken on in the first place and that those with poor sickness records were identified early and weeded out quickly.

Figure 3: Average Age of Retirement for Post Office Pensioners Retiring because of Ill Health



Source: TPM, POST 1/10-40 Treasury Letters, 1860 -1908

[81] See https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/articles/howhaslifeexpectancychangedovertime/2015-09-09

Table 1: Causes of Medical Retirement 1860-1900*

Medical Cause	Number	Per cent of total	Cumulative per cent
Musculoskeletal diseases	1065	17.9	17.9
Mental disorders	902	15.2	33.1
Respiratory diseases	891	15.0	48.1
Circulatory diseases	666	11.2	59.4
Eye diseases	543	9.1	68.5
Tuberculosis	540	9.1	77.6
Nervous system diseases	492	8.3	85.9
Digestive diseases	374	6.3	92.2
Genitourinary diseases	130	2.2	94.4
Infectious	107	1.8	96.2
Neoplasms	65	1.1	97.3
Skin diseases	57	1.0	98.2
Ear diseases	42	0.7	99.0
Metabolic diseases	34	0.6	99.5
Blood diseases	28	0.5	100.0

Source: Source: TPM POST 1/10-40 Treasury Letters, 1860 -1908

* From mid-1900 the precise reason for retirement is no longer provided.

Conclusion

A reader glancing through the Postmaster General's annual reports from the 1850s onwards could have been forgiven for thinking that one of the main functions of the Post Office was to raise revenue for the government. Tables showed the growing revenue and expenditure arising from the Post Office's increasing range of functions – not just delivering the mail and transmitting telegrams, but also operating the savings bank, selling money orders and life annuities. With the balance always firmly in profit, the Post Office could with some justification claim to be both efficient and economical – a perfect example of the successful operation of the new meritocratic bureaucracy created in the wake of the Northcote-Trevelyan reforms of 1854.[82]

Success, however, depended not just on institutional arrangements but also on the ability to attract and retain suitably qualified staff, and in this respect the benefits that were attached to a career in the Civil Service were significant. At a time when occupational pensions were a rarity, and where sick pay primarily depended either on a small number of paternalistic employers or, more commonly, on worker's own contributions to friendly societies, the provision of both superannuation and sick pay in the Civil Service was a considerable benefit to be added to the security of an adequate, though not

[82] Revenue and expenditure figures provided in the Postmaster General's annual reports between 1860 and 1900 regularly show profits of between 25 and 30 per cent.

generous, wage and the status of being a trusted state employee. [83] But such benefits came at a cost, and this required careful monitoring and management.

It was the size of the workforce, the financial costs of pensions and sick pay, and the extent of ill health that made these requirements of such importance in the Post Office and it was primarily for these reasons that the creation of a sanitary bureaucracy was of such significance. It was the appointment of suitably qualified doctors, dispersed in the main post offices throughout the country, operating according to a clear set of regulations and recommendations, recording decisions on specially designed forms, linked to a chain of paperwork and overseen by a centralised hierarchy based in London, that allowed this medical surveillance to operate effectively. It made possible not merely the recruitment of suitable candidates that were sufficiently fit to spend their entire careers in the Post Office, but it also provided the means by which rates of sickness could be monitored and controlled, not by therapeutic interventions but rather by identifying workers deemed too unfit to perform their duties and assisting their early exit from the workforce.

[83] For membership of friendly societies and the provision of sick pay see James Riley, *Sick, Not Dead: the health of British Workingmen during the Mortality Decline* (Johns Hopkins University Press, Baltimore, 1997) and Peter Gosden, *The Friendly Societies in England, 1815-1875* (Manchester University Press, Manchester, 1961).