

HYGIEA INTERNATIONALIS

An Interdisciplinary Journal
for the History of Public Health

Volume 8, No. 1, 2009

The following Swedish research foundations have
provided financial support for the journal:

Swedish Council for Working Life and Social Research (FAS)
The Swedish Research Council (Vetenskapsrådet)

ISSN, Print: 1403-8668; Electronic: 1404-4013
URL: <http://www.ep.liu.se/ej/hygica/>

Editorial Board

Giovanni Berlinguer, University of Rome “La Sapienza”, Italy
Virginia Berridge, London School of Hygiene and Tropical Medicine, U.K.
Patrice Bourdelais, École des Hautes Études en Sciences Sociales, France
Linda Bryder, University of Auckland, New Zealand
Marcos Cueto, Instituto de Estudios Peruanos, Peru
Christopher Hamlin, University of Notre Dame, U.S.A.
Robert Jütte, Robert Bosch Stiftung, Germany
Øivind Larsen, University of Oslo, Norway
Marie C. Nelson, Linköping University, Sweden
Dorothy E. Porter, University of California, U.S.A.
Günter B. Risse, University of California, U.S.A.
Esteban Rodriguez-Ocaña, University of Granada, Spain
John Rogers, Uppsala University, Sweden
Jan Sundin, Linköping University, Sweden
Lars-Göran Tedebrand, Umeå University, Sweden
John H. Woodward, The University of Sheffield, U.K.

Editorial Committee

Laurinda Abreu, Patrice Bourdelais,
Jan Sundin and Sam Willner

Copyright

This journal is published under the auspices of Linköping University
Electronic Press. All Authors retain the copyright of their articles.

Table of Contents

Volume 8, No. 1, 2009

Editorial

Sam Willner	Preface	5
-------------	---------	---

Articles

Aparna Nair	‘An Egyptian Infection’: War, Plague and the Quarantines of the English East India Company at Madras and Bombay, 1802	7
Pilar Leon Sanz	Networking and interaction between a Mutual Assistance Association and other agencies (Pamplona, 1902–1919)	31
Rosemary F. Head and George T. H. Ellison	Conditions in the Channel Island during the 1940–45 German Occupation and their Impact on the health of islanders. A systematic review of published reports and first-hand accounts 1600–1620	51
Filipa Castro Henriques, Teresa Ferreira Rodrigues and Maria Fraga O. Martins	Ageing, Education and Health in Portugal. Prospective from the 19th to the 21st Century	81

Preface

Sam Willner

This volume contains four articles illustrating the great diversity of the interdisciplinary study of public health history, covering different periods and regions of the world as well as different aspects of public health and welfare.

Aparna Nair describes the big differences in quarantine policies as pursued by the English East India Company at Madras respectively Bombay in 1802 when confronted by the threat of plague arriving on the troop ships returning from Egypt, where the soldiers had been exposed to a severe plague epidemic. These incongruent responses with regard to quarantine policy reflect intellectual controversies between supporters of contagionist or miasmatic theories of disease, as well as the commercial antagonism towards the use of quarantine in contemporary Britain and other parts of the world.

Pilar Leon Sanz provides an interesting local example of the development of social and medical support institutions for workers in early 20th century Spain. She presents and discusses the voluntary association of catholic workers mutual benefit society, La Conciliacion, founded in Pamplona 1902, offering economic assistance for unemployed or ill worker-members as well as medical and pharmaceutical assistance. La Conciliacion was a mixed association made up by workers, employers and protectors. The association played an active role in the political life of the city, particularly regarding public health and social issues. While La Conciliacion collaborated with other similar mixed Catholic associations the attitude towards the workers' trade unions was strongly negative.

In a review article, as part of a broader programme of research (the Channel Islands Occupation Birth Cohort Study and related studies), Rosemary F. Head and George T. H. Ellison discuss the impact of the 1940-45 German occupation on the health and welfare of the population of the British Channel Islands. The occupation led to a clear deterioration in living conditions with regard to supplies of foodstuffs, medicine as well as problems with hygiene and water. The authors present evidence suggesting that the occupation had significant effects on health,

such as a decline in growth amongst children and higher death rates in certain sections of the population, particularly during the siege 1944-45.

Filipa Henriques, Teresa Rodrigues and Maria O. Martins presents the main characteristics of the Portuguese demographic dynamics and analyse the relation between future changes in the demographic structure by age, sex and educational level and the health of the Portuguese population. Their conclusion is that while the ageing population will have a negative impact on the average health status this could be counterbalanced by the positive effects from a rise in the educational level.

Finally I will invite the readers to submit their articles dealing with the history of public health to make it possible to publish *Hygiea Internationalis* on a more regularly basis.

‘An Egyptian Infection’

War, Plague and the Quarantines of the English East India Company at Madras and Bombay, 1802

Aparna Nair

Work on the history of quarantine in South Asia has recently been prolific, but has tended to focus on the period after 1858, when the administration of the British territories in the Indian subcontinent was officially handed over from the English East India Company (EEIC) to the British Crown.¹ There is justification for this emphasis, for maritime quarantine would become one of the most important aspects of colonial medical policy in India with repercussions for both the British and the Indians.² However, well before 1857, the EEIC had gained political and economic control over much of South Asia and had established a substantial administrative infrastructure to govern these territories. In addition, EEIC ships plied a regular and multi-million pound trade in tea, calico, chinaware and drugs between many ports of the world, including its Indian holdings.³ In the face of the considerable volume of sea traffic, it is very likely that the EEIC administration in India were faced with the threat of infectious disease arriving by sea and subsequently confronted with the necessity of taking some measures against such a threat. This paper is a study of one such occasion – it is a transnational account of plague and quarantine policy as pursued by the British in Egypt and in India; highlighting the controversies over the policy of quarantine

1 Mark Harrison, “Quarantine, Pilgrimage and Colonial Trade: India 1866–1900”, *Indian Economic and Social History Review*, 29 (1999), 117–144; Mridula Ramanna, *Western Medicine and Public Health in Colonial Bombay, 1845–1895* (New Delhi, 2002), pp. 152–154; Rajnarayan Chandravarkar, “Plague Panic and Epidemic Politics in India, 1896–1914” in Terence Ranger and Paul Slack eds., *Epidemics and Ideas: Essays on the Historical Perception of Pestilence* (Cambridge, 1996), pp. 203–41; Ian. J. Catanach, “Plague and the Tensions of Empire, 1896–1918”, in David Arnold, ed. *Imperial Medicine and Indigenous Societies* (Manchester, 1988), pp. 149–171. While quarantine had implications in the fields of commerce and international relations for the British, this policy affected the flows of Indian pilgrims on the Hajj as well as Indian trade.

2 Harrison, “Quarantine, Pilgrimage and Colonial Trade”.

3 H.V. Bowen, *The Business of Empire: The East India Company and Imperial Britain, 1756–1833* (Cambridge, 2006), pp. 219–260.

within medicine in England and exploring how these conflicts played out in the quarantines established in India by the EEIC's nascent Empire.

This article follows British and Indian troops as they arrived in Egypt at the beginning of the nineteenth century in response to the French invasion and were exposed to a severe plague epidemic. It describes how plague ran rampant among the European and Indian forces and the manner in which the European medical establishment in Egypt managed this threat. In contrast, we then consider how the EEIC's emerging administrative and medical establishments in Madras and Bombay handled quarantine when confronted by the threat of plague arriving on the troop ships returning from Egypt. This paper then discusses the factors that drove the fragmented British implementation of quarantine policies, both at home and in the colonies; describing the schisms and fragmentations within the EEIC's medical and political administration.

Plague and Quarantine through History

Caused by *Yersinia pestis*, the plague has swept through the world in three known pandemics, leaving an indelible mark on affected populations. The remarkable socioeconomic, demographic and political impacts of the Black Death on Europe were so powerful that centuries later in the early 1800s, it still aroused atavistic fears and instinctive responses to the threat of plague.⁴ This disease would have the

4 J. F. D. Shrewsbury, *A History of Bubonic Plague in the British Isles* (Cambridge, 1970); A. B. Appleby, "The Disappearance of Plague: A Continuing Puzzle", *Economic History Review*, 33 (1980), 161–173; Samuel K Cohn, *The Black Death transformed: disease and culture in early Renaissance Europe*, (London, 2002); Hugo Kupferschmidt, "History of the Epidemiology of Plague: Changes in the Understanding of Plague Epidemiology since the Discovery of the Plague Pathogen in 1894", *Antimicrobials and Infectious Diseases Newsletter*, 16,3 (1997), 51–54; Stenseth, et al. "Plague: Past, Present, and Future", *PLoS Med*, 5 (2008), e3; B. P. Zietz and H. Dunkelberg, "The History of the Plague and the Research on the Causative Agent *Yersinia pestis*", *International Journal of Hygiene and Environmental Health* 207 (2004), 165–178; C. F. White, "Plague: Modern Preventive Measure in Ships and Ports", *Proceedings of the Royal Society of Medicine*, 25 (1935), 25–37; Ole. J. Benedictow, *The Black Death 1346–1353: The Complete History* (London, 2006). The most common form of the plague was the bubonic plague. Non-specific symptoms include nausea, fever, chills, headaches, myalgia, weakness and vomiting; the distinguishing symptoms include large, painful and blackened inflammations of the lymph nodes at armpit, groin and neck, called buboes. Death rates vary between 40 and 75 percent, depending on the type of plague. The first pandemic, called the Justinian plague, spread from Central Africa to Lower Egypt and the Mediterranean during the sixth century and was estimated to have killed 100 million people. The second pandemic, or the Black Death, emerged from Central Asia and reached the Crimean ports by the mid-1300s. Over the next 400 years it would become established and kill one quarter of the population of Europe. The third pandemic began in the 1850s in China's Yunnan region and gained international notice when it began to spread to other

dubious distinction of fuelling some of the earliest direct actions of civil governments to control and prevent disease. One of the oldest and most ubiquitous such public health strategies to protect populations against the onslaught of imported infectious diseases was quarantine. This system had its roots in the panicked response of European authorities to the threat of plague, or the Black Death, in the fourteenth century. Three centuries later, many major European cities routinely adopted some form of quarantine, particularly when the presence of plague was declared elsewhere.⁵

Quarantine was intended to identify individuals who were either sick or suspected of disease; isolate them from the general population and thus prevent the transmission of disease. Ships that docked at the port of arrival were presented with a Bill of Health—an authenticated certificate concerning the health of the ship and its company, which had to be obtained from the Harbour Master before entering or leaving port. A ‘foul’ Bill of Health was presented if there were one or more cases of infection on board and a ‘suspected’ Bill of Health if the ships had arrived from an infected port.⁶ The crew and cargo were then isolated in quarantine for an average of 40 days, cutting off any physical contact with the port. Violence and aggression were condoned to compel the cooperation of the reluctant ship’s crew. Masters who concealed information regarding their ships and/or violators of quarantine could be put to death.⁷ By the late eighteenth century, although quarantine continued to be used ubiquitously across Europe, in Britain it had come under siege from medical theorists who questioned its efficacy, governments who resented the administrative expenses of quarantine and by fractious trading companies such as the EEIC who had a vested interest in reducing the costs of quarantine.⁸ It is against the backdrop of these conflicts that the British found themselves faced with the necessity of quarantine in Egypt and India.

parts of the world much faster than in previous outbreaks. Although Europe remained relatively untouched by this pandemic, India and China would lose millions to this disease.

5 Carlo Cipolla, *Fighting the Plague in Seventeenth-Century Italy* (Madison, 1981); Gunther E. Rothenberg, ‘The Austrian Sanitary Cordon and the Control of the Bubonic Plague: 1710–1871’, *Journal of the History of Medicine and Allied Sciences*, 28 (1973), 15–26; Anne Hardy, ‘Cholera, Quarantine and the English preventive System’, *Medical History*, 37 (1993), 250–269.

6 Krista Maglen, ‘“The First Line of Defence”: British Quarantine and the Port Sanitary Authorities in the Nineteenth Century’, *Social History of Medicine*, 15 (2002), 413–428.

7 Peter Baldwin, *Contagion and the State* (London, 1999), p. 93.

8 Maglen, ‘“The First Line of Defence”’.

Anglo-French Conflicts and Disease in Egypt

The incidents recounted in this article take place against the backdrop of sharpening French military and political interest in Egypt, which was then a Mameluke territory and Ottoman province. Napoleon Bonaparte, flush with military success in Europe, sought to further French influence in the east and successfully invaded Egypt with a hastily arranged expedition in 1798.⁹ The British responded to this perceived threat to the security of their empire by sending military and naval support to the Mameluke and Ottoman forces already in Egypt in 1799.¹⁰ By 1801, 15,000 British troops under the command of Abercrombie, together with a force of more than 60 Royal Naval vessels in Alexandria, had comprehensively defeated the French.¹¹

The EEIC had joined the battle in 1800 when, bowing under pressure from the British government, the Court of Directors commanded the Governor General of India to send Company troops to Egypt and join the Crown fight against Napoleon. This Company contribution to the British war effort in Egypt numbered about 2,000 British and 2,600 Indian troops; they arrived in August 1801, commanded by Colonel David Baird.¹² These troops included soldiers from all

9 Edward James Kolla, "Not So Criminal: New Understandings of Napoléon's Foreign Policy in the East", *French Historical Studies* 30 (2007), 175–201; J.C.B Richmond, *Egypt 1798–1952: Her Advance towards a Modern Identity* (London, 1977); Leften Stavros Stoianovich and Traian Stoianovich, *The Balkans since 1453* (London, 2000), p. 200. Since Egypt was on the route to India, Napoleon was fully aware that a French presence in this region could generate considerable anxiety in London; for fear that the Ottoman Empire and the lands bordering the Red Sea route to India should fall under French influence. Egypt was also important strategically as the base from where India could be regained by the French, a point argued in 1793 by Talleyrand.

10 David French, *The British Way in War, 1688–2000* (London, 1990), p.104.

11 *Ibid.*

12 Edward Ingeram, "The Role of the Indian Army at the End of the Eighteenth Century", in Patrick J.N. Tuck ed., *East India Company: 1600–1858* (London, 1998), pp. 112–113. This was not the first or last time that the Company's Indian troops would be used to fight British wars off Indian soil. Indian troops would be used in the Crimean War, in Persia (1856–57), China (1859), Ethiopia (1867), the Mediterranean (1878), Egypt (1882), Sudan (1896–98) and in both world wars. In 1802, however, differences of opinion regarding the use of the Indian army in Egypt, or in effect as an imperial force, had arisen between Dundas, British Secretary of State for War and the newly appointed Governor General of India, Wellesley. The latter believed that the Indian army would be better occupied securing British interests in India against the French, rather than in the role that Dundas appeared to think appropriate for them, as a supplement for British troops. In fact, Wellesley contended that the British in India would benefit from additional troop support from London, as many of them were sick or invalided for long periods. When, at great expense to the EEIC, the Indian army finally travelled to Egypt, they actually arrived late, landing after the French had surrendered, and in effect contributing

three British presidencies, consisting of the 10th (North Lincoln) Regiment, with detachments of the 80th (Staffordshire Volunteers), the 86th Regiment, and 88th (Connaught Rangers) Regiment, plus Bengal Volunteers, Bombay Native Infantry, and Artillery. After the French capitulation, this Indian contingent remained in camp at Aboukir, where it was soon visited by disease.¹³

While these foreign forces struggled over control of Egypt, the plague had largely become a distant and unpleasant memory to most of Europe. But Egypt had never really been free from the ravages of this disease.¹⁴ In fact, recent research suggests that the Nile Valley was the birthplace of the bubonic plague.¹⁵ During the period between 1798 and 1801, when various forces were fighting for control of Egypt, much of the country was held hostage by plague. Owing to some very detailed descriptions left behind by French and British observers, it is possible to ascertain that this disease was indeed the bubonic plague.

On the French side, Rene DesGenettes, the French army's Physician-Chief in Egypt, had commanded that his staff assess and report on the health, local environment, indigenous diseases, medical treatment and vital statistics, beginning detailed investigations into the causation of plague in particular and Egyptian mortality in general.¹⁶ From these investigations, we know at least 77 major plague years were reported before the nineteenth century.¹⁷ Between 1800 and 1844 alone, there were plague epidemics in Egypt in 21 of the 44 years.¹⁸ Jomard, who was part of Napoleon's team of scientists, concluded that plague tended to become epidemic

nothing to the British victory. The Chairman in London remarked to Wellesley that "I hope in God... (the Indian army) will still reach Egypt...if only as an excuse for the great expense."

13 Abu Qir or Abukir was a village on the Mediterranean coast of Egypt along the Nile.

14 Kupferschmidt, 'History of the Epidemiology of Plague'; Daniel Panzac, *La Peste dans L'Empire Ottoman, 1700–1850* (Belgium, 1985).

15 Eva Panagiotakopulu, "Pharaonic Egypt and the Origins of Plague", *Journal of Biogeography*, 31 (2004), 269–75. Some 5,500 years ago, Panagiotakopulu notes, life in Egypt became more cosmopolitan and mobile than before. Humans started living in towns, making it easier for diseases to spread. Later, international trade accelerated and black rats arrived on newly established trade routes from India and Mesopotamia. The Nile River's annual flood drove Nile rats into town, where they could have shared their fleas with black rats. Unlike the Nile rat, the plague bacterium kills black rats quickly, leaving lots of hungry fleas looking for a home in an environment surrounded by humans. Once black rats hosted the oriental fleas, and with it, *Y. pestis*, they spread the plague across entire continents.

16 J. Worth Estes, and Laverne Kuhnke, "French Observations of Disease and Drug Use in Late Eighteenth-Century Cairo", *Journal of the History of Medicine and Allied Sciences*, 39 (1984), 121–152; Thomas G. Russell and Terence M. Russell, "Medicine in Egypt at the time of Napoleon Bonaparte", *British Medical Journal*, 327 (2003), 1461–1464.

17 G.F. Petrie, Ronald E. Todd, Riad Skander and Fouad Hilmy, "A Report on Plague Investigations in Egypt", *The Journal of Hygiene*, 23 (1924), 117–150.

18 Justin A McCarthy, "Nineteenth-century Egyptian population", *Middle Eastern Studies*, 12(1976), 1–39.

in Egypt every five to six years.¹⁹ DesGenettes was of the opinion that the plague was so severe in Egypt that it was the most important demographic counterpoint to the very high birth rate.²⁰

For instance, in the winter of 1800–01 alone, the plague epidemic increased the number of deaths among adults and children in Cairo. In the following spring, the seasonal mortality in Cairo continued to be grossly distorted by the plague outbreak—he recorded 2,937 deaths among the city’s population of 250,000 in the single month of April.²¹ It is clear from these descriptions that the disease had an established presence in the Egyptian population and posed a significant threat to the warring foreign armies on Egyptian soil in the early nineteenth century.²²

The French army itself was subject to one minor and one major outbreak of plague in 1800–1. Of the 8,915 French soldiers that died in hospital, more than 1,000 of that number had been victims of plague during the expedition to Syria.²³ Early British reports of the plague describe it raging among the British allies, the Mamelukes, who lost nearly one-fourth of their entire army to the disease.²⁴ Although the British immediately curtailed all interactions with the Mameluke armies, it proved a pointless measure as the plague was soon transmitted to the British and Indian armies, stationed in both Aboukir and Alexandria.²⁵

The sepoy components of the British forces were attacked suddenly and violently by this disease, many falling unconscious in the ranks and dying soon afterwards.²⁶ The disease was very infectious—in a single sepoy regiment of 300 soldiers, 120 succumbed to the disease.²⁷ None of the sepoys, women or children in the Indian

19 Edme-François Jomard and Gibert-Joseph Chabrol, *Description de l’Égypte: État Moderne, II:2* (Paris, 1810), p. 697.

20 Estes and Kuhnke, “Disease and Drug Use in Cairo.”

21 Walter Scheidel, *Death on the Nile: Disease and the Demography of Roman Egypt* (New York, 2001), p. 42.

22 William Wittman, *Travels in Turkey, Asia-Minor, Syria and Across the Desert into Egypt* (London, 1803), p. 517. Wittman was a surgeon, member of the Royal College of Surgeons and Surgeon to the British Military Mission in the Middle East. He provided very detailed reports of the plague and the obvious and common symptoms: headaches, fever, thirst, generally and intense or burning internal heat about the precordia; nausea and occasional vomiting; the vessels of the eyes are turgid, accompanied by diarrhoea (which is often a troublesome and dangerous symptom); haemorrhages; delirium; petechiae and large liver spots cover the body in different parts; buboes in the groin, axillae...an early and great prostration of strength...The pain of the buboes is sometimes most excruciating, and the surfaces are at times discoloured even to a livid or deep black colour; at other times the pain is trifling, accompanied with little or no discolouration of the skin.

23 McCarthy, “Egyptian Population”.

24 Wittman, *Travels*, pp. 137–140.

25 *Ibid.*, p.140.

26 *Ibid.*, p. 561.

27 *Ibid.*, p. 356.

regiments who contracted the plague survived.²⁸ In Alexandria, the plague had raged with such violence among the sepoys that they were ordered to remain sequestered in Aboukir, in the hope of restricting the spread of infection to the other troops. But these measures proved futile, for even as the sepoy army was about to leave Egypt for the Indian subcontinent, General Baird was informed that cases of bubonic plague continued to appear amongst the camp followers of the 7th Bombay Native Infantry, which was bringing up the rearguard of the army.²⁹ This regiment was then compelled to stay back in Egypt—while the remainder of the Indian army departed for their respective presidencies.

Measures taken by the British in Egypt against the Plague

There was some conflict amongst the members of the British medical establishment in Egypt regarding the possible infectious nature of the plague. While surgeons such as Wittman and McGrigor contended quite strongly that the disease was contagious, many in the medical establishment from India were virulent anti-contagionists.³⁰ White, a naval surgeon employed with the Indian troops is a perfect example. He believed so strongly that the contagion theory of disease in the case of plague and ophthalmia was false that he inoculated himself with matter taken from the bubo of a plague patient. He also “rubbed the same matter upon different parts of his body.” White soon contracted the disease, and died as a result of his experiment. But whatever they may have believed about the cause and spread of the disease itself, the British in Egypt were very rigorous in their approach to the plague.

Many British doctors believed that measures such as isolation and quarantine were very effective prophylactics against the disease. These doctors not only established ‘pest houses’ to quarantine the sick or those suspected of the plague, but also established lazarettos at the Egyptian port of Alexandria.³¹ These pest houses were set up and guarded with great care; Wittman reported that in the Egyptian desert, pest houses were set up in large airy tents and infected patients were completely isolated for their initial treatment. After a plague death, the body was burnt. All the clothes, bedding and linen that were used by the sick, even the tent, were also immediately burned. Attendants who had treated the patients were confined in

28 *Ibid.*, p. 241.

29 James McGrigor, *The Autobiography and Services of Sir James McGrigor* (London, 1861), pp. 132–135.

30 *Ibid.*, pp. 393–394, pp. 518–519; George Power, *Attempt to investigate the Cause of the Egyptian Ophthalmia* (London, 1803), p. 9.

31 A pest-house was a hospital used to quarantine and nurse those individuals afflicted by diseases such as plague and smallpox.

quarantine, and “oily frictions” were applied to prevent the infection from spreading.³²

Breaking quarantine was severely punished, sometimes by death. Wittman reported that one of the Indian sepoys was court-martialled and sentenced to be shot for having allowed two Arab prisoners to escape quarantine.³³ Often these isolationary measures were not enough to contain the infection. Wittman writes, with great frustration, of a gunner, who had entered the tent of a pest house to support the shoulders of a sick friend while he drank water. This man displayed symptoms in a matter of two days and died on the third.³⁴ This rigorous approach taken by the British towards quarantine, plague prevention and prophylaxis in Egypt is not particularly unusual for its day but it is striking when compared against the fragmented plague and quarantine policy adopted by the EEIC in the Indian presidencies.

The Response in Madras

The initial response of the administration of the British presidency of Madras to the return of the possibly plague-infected troop ships from Cairo and Suez appears to have possessed the requisite sense of urgency. When informed of the presence of plague in British occupied Egypt and the threat of its arrival on Indian soil, Lord Clive, then Governor in Council of the Board of Revenue (BOR) sent direct orders from the capital of the presidency, Fort St George, to all district Collectors across the presidency. The BOR urged that the district governments all take the most vital precautions at all ports under their administration to prevent the introduction of the plague.³⁵ If any ships arriving from the Red Sea did approach any of the ports, the Collectors and Commercial Residents were to be informed immediately and the ships were ordered not to land or have any contact with the harbour except in instances of extreme distress.³⁶

The returning troop ships—the *Candidate*, the *Anna* and the *Amelia*, the *Cecilia*, the *Shaw Byranguie*, the *Earl of Mornington* and the *Griffin*—were accordingly denied *pratique* (permission) to enter the port of Madras on the orders of the BOR.

32 Wittman, *Travels*, p.421.

33 *Ibid.*

34 *Ibid.*

35 Tamil Nadu State Archives (TNSA), South Arcot District Records, 109, 33. Letter from G.G. Keble, Secretary to Government, Fort St George to the Commercial Resident at Cuddalore, 17 July 1802.

36 *Ibid.*, Madura District Records, 1178, 376–378. Letter from G.G. Keble, Secretary to Government, Fort St George, to the Commercial Resident at Ramnad, Henry Brown, 17 July 1802.

As no lazaretto existed in the presidency at this time, the ships were ordered instead to lie at the small port of Ennore, which lay to the north of Fort St George.³⁷ The area was designated as 'Quarantine Point' and a Quarantine Officer was appointed from a nearby military station.

All of these ships had their own medical staff on board in the form of ship's surgeons or assistant surgeons. Upon their arrival and subsequent quarantine, the captains commanding these ships, the commanders of the regiments of board and their medical personnel all wrote joint letters to the BOR indicating that to the best of their knowledge, "nothing like the Plague, or any kind of Contagious Fevers of a Pestilential Nature" were found amongst the crew, troops or camp followers on board.³⁸ Clive asked that the Medical Board substantiate this assertion by sending a member of the Board out to Ennore to inspect and report on the conditions at the Quarantine Point, the health of the crew and troops and to ascertain "whether any inconvenient consequence may be expected from permitting them to proceed to the roads of Madras."³⁹

The Medical Board sent, post-haste, a request to Head Surgeon, Dr Andrew Berry to proceed to the makeshift lazaretto. Berry arrived in Ennore the very next day and wrote to the Board from Quarantine Point that Major Orr, the Quarantine officer, had requested that he examine only two of the five ships. Of these two examined ships, he reported that he was unable to find a single person sick or ailing, and none of the individuals on board these two ships had been ill for a single day during the journey either. This in itself is rather unusual, as each of the ships carried between 100–300 soldiers and crew on a month-long journey from Cairo or Suez to Madras. The likelihood that absolutely all of these passengers were "uncommonly healthy"; that none of them had fallen ill and only a single man died on this journey (a death attributed to "sea scurvy") is quite small.⁴⁰

The Physician General of the Madras presidency, Dr James Anderson, also proceeded to Ennore to assess the situation, confirm Berry's findings and inform Lord Clive, the Governor in Council at Fort St George of his recommendations regarding the soldiers' health and the quarantine. Once on board, Anderson conducted an examination of all sailors, soldiers and other crew, "Madras Artillery, 8th Light Dragoons, 33rd Regiment Pioneers, Store Lascars and Artificers, Engineers,

37 *Ibid.*, Surgeon General's Records (SGR), 13A, 408. Letter from G. Buchan, Secretary to Government to the Physician General and Members of the Madras Medical Board, 28 July 1802.

38 *Ibid.*, SGR, 13 A, 410. E. Hunt, Commanding the Ship Earl of Mornington, James Limond, Captain and Commander, Troops on Board and Anthony Taylor, Assistant Surgeon in Charge, 24 July 1802.

39 *Ibid.*, SGR, 13 A, p.409. Government Order from G. Buchan, Secretary to Government, to the Medical Board, 24 July 1802.

40 *Ibid.*, SGR, 13 A, 413–9. Head Surgeon Dr Andrew Berry, Ennore to Physician General, Dr James Anderson, Fort St George, 29 July 1802.

Commissioners of Provisions, Public and Private Followers” on board the ships docked at Ennore.⁴¹ Since these examinations were completed in the space of a single day, they could not have been anything more than cursory. There was no attempt at systematic isolation of groups of individuals and subsequent observation to make out if the plague had indeed hitched a ride across the seas from Egypt.

Anderson then dramatically stated in his report to Lord Clive on the 30 July, that he wished that “all the rest of the Troops on the coast were in as perfect a state of health as these appear to be.”⁴² Considering how so many contemporary reports tell of the general ill-health of the soldiers both in Egypt and in Madras, this appears a little effusive.⁴³ Anderson then contradictorily reported that there were indeed some crew members who were unhealthy and consequently were in Hospital. He had composed a list of these individuals and the ailments they suffered from into a document which was “lost” before it reached the Medical Board in Fort St George.

This seems unusually careless of the Madras Medical Board. Although this medical system was very much in its infancy, as it was grew in response to the needs of the army in the nascent presidency, contemporary medical professionals were able to collect, collate and provide returns on the sick seeking treatment in the field and regiment hospitals to the Medical Board at Fort St George as early as 1787.⁴⁴ Considering the urgency of this situation with the threat of plague looming over the presidency, the purported loss of important records on sickness among the returning soldiers and crew of the ships from Egypt appears a little expedient. The Company administration of the day, however, was not unfamiliar with the tactic of “losing” documents or records which had the capacity to prove uncomfortable or cause dissension, either in India or in London.⁴⁵ All that remains of this list is the remark that these illnesses, although unspecified, were all supposed to be “correctly stated in regard to their Complaint, which are of a Common Nature and much

41 *Ibid*, SGR, 13 A, 413–9, Dr James Anderson, Physician General, Fort St George to the Right Honourable Lord Clive, 30 July 1802.

42 *Ibid*.

43 Philip D. Curtin, *Death by Migration: Europe's Encounter with the Tropical World in the Nineteenth Century* (Cambridge, 1989); “Report of a Committee of the Statistical Society of London, Appointed to Collect an Enquire into Vital Statistics, Upon the Sickness and Mortality among European and Native Troops serving in the Madras Presidency, from the Year 1793 to 1838”, *Journal of the Statistical Society of London*, 3 (1840), 113–143.

44 Aparna Nair, *Between Asclepius and Mammon: Disease, Death, Medicine and Public Health in Madras, 1786–1815*, Unpublished PhD Thesis.

45 Edward Ingram, *Empire Building and Empire Builders* (London, 1994), p. 23. Wellesley was a perfect example of this behaviour. When confronted with records that expressed the dissent of his council with his professed opinions, he usually claimed that these records had been lost.

fewer in proportions than elsewhere.” It was again reiterated, that the other crew members were “in perfect health.”⁴⁶

Based on their brief appraisal, Anderson and Berry both recommended to Lord Clive that the Ennore quarantine be discontinued for four reasons. First, Anderson suggested that the continuation of quarantine would be most harmful to the crew at Ennore, as the lazaretto itself was possessed of a “low, flat, clay soil, which the expected fall of heavy showers will render a very unwholesome situation.”⁴⁷ Second, he considered that the length of the journey itself from Egypt – fifty-four days – was more than sufficient protection against disease. Since no fever or pestilence had appeared among the crew and soldiers during the long and arduous journey, Anderson deemed the soldiers safe from any future attacks of the plague.⁴⁸ Third, from their communiqués to the Medical Board the doctors themselves give the impression that the process of quarantine was at best a mere formality and at worst an expensive encumbrance to the Madras government.⁴⁹ Both Anderson and Berry were eager to “liberate” the government from the “Expense of Quarantine”. Berry lost no time in transmitting the report as “I mean in consequence to leave Ennore this evening, as there is Nothing regarding the Health of the Crews or the State of the Transports that I can say more upon, and that the Deputy Master Attendant can...examine the Provisions which will be a business of detail as they are in the holds of the Ships, in Madras Roads.”⁵⁰ The crew and soldiers were equally eager to be released from their confinement at Ennore. Fourth, the doctors attending the Quarantine Point were of the opinion that plague was infectious, although they did not state so explicitly in their reports. However, Anderson did state that this plague was carried by soiled linen, blankets and clothing. Since all of the cloths used by the crew and soldiers had been repeatedly washed, the blankets used by the Indians burnt and the passengers themselves had bathed frequently in the nearby rivers, Anderson wrote to the Medical Board that there could be no other possible “nucleus for Egyptian infection.”⁵¹

Following these recommendations and a scant 13 days after the commotion over the threat of the plague had first been acknowledged by the Madras administration, the Medical Board sent its own counsel to the Government that the health of the troop transport ships lying at Ennore was satisfactory enough to recommend the

46 TNSA, SGR, 13 A, 413–9, Dr James Anderson, Physician General, Fort St George to the Right Honourable Lord Clive, 30 July 1802.

47 *Ibid.*

48 *Ibid.*

49 *Ibid.*

50 *Ibid.*, SGR, 13 A, 413–9. Head Surgeon Dr Andrew Berry, Ennore to Physician General, Dr James Anderson, Fort St George, 29 July 1802.

51 *Ibid.* Dr James Anderson, Physician General, Madras to the Right Honourable Lord Clive, 30 July 1802.

suspension of the quarantine.⁵² In four days time, the Governor-in-Council passed the resolution to relieve the troops and transports from quarantine at Ennore based on the Medical Board's report.⁵³

A Counterpoint: The Case of Bombay

An interesting contrast to the Madras lazaretto is offered by the response of the Company administration at Bombay, when faced with the very same threat of plague. Ships returning from Egypt to the shores of the Bombay presidency were also denied *pratique* to dock in the harbour and ordered to weigh anchor offshore. A lazaretto was set up on Butcher's Island off the coast of Bombay and Dr James McGrigor, future director general of the British Army Medical department and the senior surgeon on this Bombay-bound convoy, was sent orders by the Medical Board at Bombay to take up residence on the island and undertake the duties of quarantine officer. But from there on, the Bombay lazaretto began to take on a very different character to the Madras lazaretto.

McGrigor was given military support in the shape of one of the Company's naval vessels, a sloop of war that was anchored off shore.⁵⁴ With this support, he enforced a strict regimen of quarantine. He began by issuing general instructions that all ships and vessels following him to Bombay from the Red Sea or the Persian Gulf were to lie in quarantine at Butcher's Island.⁵⁵ As the troop ships from Egypt began arriving, McGrigor spent a few months on the island observing the health status of the soldiers and crew aboard the ships at Butcher's Island. He disembarked various groups of these ships' passengers on to the lazaretto and monitored their health.

Some groups were dismissed from the lazaretto faster than others. For example, the 86th artillery regiment, the 1st Bombay regiment and the commissariat department were considered "so uncommonly healthy" that he only detained them a few days on the island.⁵⁶ However when the 7th Bombay regiment and its followers numbering 700 –odd individuals arrived in August of the year, McGrigor detained this regiment at the quarantine station for an entire month as the plague had been rife among them in Egypt.⁵⁷ Even so, the procedures followed by McGrigor were far more rigorous than any measures taken by Anderson or Berry in Madras.

52 *Ibid.*, 419. Letter from the Medical Board to the Honourable Lord Clive, 30 July 1802.

53 *Ibid.*, Resolution of the Governor in Council, 3 August 1802.

54 McGrigor, *The Autobiography and Services of Sir James McGrigor*, pp. 133–138.

55 Edmund Burke, 'Appendix: Deaths, April 1858: In London, Sir J. McGrigor, Baronet, K.C.B., K.C., K.T.S', in *The Annual Register of the History and Politics of the Year 1858* (London, 1859), 339.

56 McGrigor, *The Autobiography and Services of Sir James McGrigor*, pp. 133–138.

57 *idem*, *Medical Sketches of the Expedition to Egypt from India* (London, 1804).

When the pest-establishment which the Indian army had left behind at Suez returned to Bombay in September, it was also quarantined on Butcher's Island. This group of convalescents, their guards and the pest house servants—although seeming healthy on arrival in Bombay—lay in quarantine on McGrigor's orders for another month because of their exposure to the disease. Following this confinement on Butcher's Island, they were provided with new clothing and only then permitted to enter the presidency town.⁵⁸

Contagionism, Commerce, Controversy and Resistance

It is evident that the lazaretto at Butcher's Island was far more meticulously recorded and thoroughly conducted in comparison to the Madras lazaretto. McGrigor's half year stint on the Bombay lazaretto was in stark contrast to the mere thirteen days that the ships returning to Madras presidency spent at Ennore. While the focus of the Madras lazaretto was primarily on the cargoes of rice, rum and sugar on board the returning ships; that of the Bombay lazaretto was mostly on the soldiers, crew and the followers and their health as is evident in the systematic manner in which groups of the quarantined passengers were disembarked and examined. The Bombay quarantine is evidence enough that not all of the EEIC's employees in the Indian subcontinent, whether medical or nonmedical, saw quarantine as at best an optional or at worst an unnecessary measure as the Madras medical establishment seems to have. The incongruent responses of the Madras and Bombay establishments are comprehensible only when it is considered against contemporary attitudes in the implementation of quarantine policy in Britain and other parts of the world.

Many European ports deeply scarred by the Black Death continued to have a long history of rigorous and stringent quarantine regulations, which remained harsh throughout the late eighteenth and early nineteenth centuries. One of the most stringent such systems were the rigid regulations facing vessels coming from areas such as Turkey and Egypt to ports in the Habsburg Empire. Travellers from the Ottoman lands had to submit to invasive physical searches for buboes, and a quarantine that could last up to 48 days.⁵⁹ Almost half of Slavonia and Croatia was rendered a plague-control zone under the Habsburg system of quarantine, which

⁵⁸ *Ibid.*

⁵⁹ Sheldon Watts, *Epidemics and History: Disease, Power and Imperialism*, (New Haven, 1997), pp. 24–25.

utilised four thousand troops. Such practices were maintained even in the face of considerable economic losses and political strife.⁶⁰

Other states were equally stringent, in spite of the political and commercial implications of quarantine in the eighteenth and nineteenth century.⁶¹ When plague was carried on board ships from Alexandria and brought to Malta in 1789, quarantine officials ordered the entire cargo burnt to destroy the “plague contagion”.⁶² The resulting ire of the Tunisian merchants who owned the cargo eventually led to a declaration of war on Venice; indicating that when it came to plague quarantine, some states remained unwilling to compromise even though they were unsure of the exact manner in which quarantine safeguarded them.⁶³ Even the quarantine response of Egypt to plague in the early 1800s was rigorous in comparison to that of the EEIC in Madras. Muhammad Ali, the *de facto* ruler of Egypt under Ottoman Sultan, was willing to impose strict maritime quarantine on Turkish ships coming from Istanbul to protect Egypt against the plague. This is a significant policy move, as Istanbul was the capital of his political master and Egypt’s primary trading partner.⁶⁴

While most educated Europeans remained convinced of the value of quarantine and isolation measures when under the threat of plague, the British were equally persuaded that quarantine had no place in protecting Britain against imported disease.⁶⁵ Britain had always been relatively slow to implement plague prevention measures such as quarantine and household isolation and had no regular mechanism for controlling communication with ports known to be infected with plague before the mid-seventeenth century.⁶⁶ The British government tended to respond to the threat of plague only when confronted by it rather than pre-emptively formulate and implement regulations for the continued protection of British ports and

60 *Ibid*; Ronald E. Coons, “Steamships and Quarantines at Trieste, 1837–48”, *Journal of the History of Medicine and Allied Sciences*, 44 (1989), 28–56. Trade goods were regularly fumigated. In the case of suspect wool, the Habsburg Empire followed a singular practice—they kept the wool in a warehouse where people of low socioeconomic standing were coerced to reside and sleep. If they developed symptoms, the wool was burnt and they were shot. Bulgarian and Greek traders on either side of this journey would be significantly hampered by the length and rigidity of this quarantine system.

61 *Ibid*.

62 Nancy Gallagher, *Medicine and Power in Tunisia, 1780–1900* (Cambridge, 2002), p. 24.

63 Watts, *Epidemics and History*, pp. 24–25.

64 *Ibid.*, pp. 34–39.

65 Daniel Panzac, *La Peste dans L’empire Ottoman, 1700–1850* (Leuven, 1985); Peter Christensen, “Plague and Plague Policies in Early Modern Denmark”, *Medical History*, 47 (2003), 413–50.

66 Paul Slack, “The Response to Plague in Early Modern England”, in John Walter and Roger Schofield, eds., *Famine, Disease and the Social Order in Early Modern Society*, (Cambridge, 1989), pp. 167–189.

populations in the manner of many other European states.⁶⁷ By the time of the last plague outbreak in England in 1665, public policy had become more regulated.⁶⁸ British Quarantine Acts had to tread a delicate balance between the opinions of conflicting lobbies, a variety of constitutional sensitivities, encroachment upon individual liberties and the maintenance of the greater good. The quarantine regulations, while severe in principle, were difficult to enforce as the British courts were rarely as harsh as the foreign courts when it came to individuals breaking quarantine restrictions.⁶⁹ By the early 1800s, the extant British quarantines were even physically far less impressive than the great lazarettos of port cities like Venice, Pisa, Genoa or Marseilles.⁷⁰

Slack has also pointed out that in the period between 1670 and 1800, plague was never really the kind of hazard in Britain that the disease had posed in earlier centuries—the disease was kept at bay by the rigors of other European quarantine procedures and sheer geographical distance.⁷¹ Ships embarking from the East, in particular, would often lie in quarantine in the Mediterranean before their arrival at British ports, thus endowing Britain with a relative shelter from plague, when compared to other European states. This would permit many eighteenth century British commentators the luxury of questioning the efficacy of quarantine. Quarantine continued to be unpopular with the British both at home and in their colonies through the nineteenth century, even with the onslaught of the major world pandemics such as cholera and plague. When the first International Sanitary Conference was held in Paris in 1851 and major European governments had started down the path to developing more comprehensive and uniform world quarantine policies, anti-contagionist and anti-quarantine feeling continued to persist in Britain. In fact, the Venice protocol on plague control that was drawn up at the International Sanitary Conference of 1897 blamed the spread of the disease on the traditional British resistance to quarantine.⁷²

One primary source of British opposition to quarantine came from members of the medical profession whose deliberations as to whether disease was in fact spread by contagion were very influential in perceptions of the efficacy of quarantine. The miasmatic theory of disease, popular in Britain until late into the nineteenth cen-

67 *Ibid.* Instances of such reactions include 1580, when ships from Lisbon were halted in the Thames to air their cargo; 1585, when an embargo was placed on imports from Bordeaux, then infected by the plague; 1629 and 1635, when the Privy Council ordered customs officials in all British ports to prohibit crew and cargo arriving from infected ports from landing.

68 Maglen, “The First Line of Defence”.

69 John Booker, *Maritime Quarantine: The British Experience, c.1650–1900*, (Aldershot, 2007).

70 Maglen, “The First Line of Defence”.

71 Slack, “The Response to Plague”.

72 Myron Echenberg, *Plague Ports: The Global Urban Impact of Bubonic Plague, 1894–1901* (New York, 2007)

ture, held that diseases were the result of corruptions of the air; “effluvia” that arose from putrefying or decomposing biological matter, unclean water, or the peculiar character of certain geographical regions. Human beings if exposed to these unhealthy miasmas were considered likely to contract disease.⁷³ This school of thought believed that quarantine was a redundant and expensive process; and that only sanitation and good ventilation would protect the country against imported disease.⁷⁴ This school of thought held that the forced confinement in lazarettos was more likely to breed disease as a result of the exposure to pestilential air and the proof of this was to be found in the apparent inability of quarantine to prevent the spread of diseases such as cholera. They also believed that quarantine as a system encouraged concealment of disease and the abandonment of those who were already ill.⁷⁵ Anti-contagionist medical practitioners would continue to campaign successfully against quarantine in the United States, Britain, France and Spain throughout the nineteenth century.⁷⁶ Debates over the efficacy of quarantine would continue in the halls of government and between the pages of medical journals; pursued by impassioned and convincing practitioners who were entirely unable to believe that there was any value in the policy.⁷⁷ This lobby would remain very powerful in British India well into the nineteenth century and their theories would be continually used by the Indian government to argue against quarantine.

As quarantine had the effect of creating major disruptions, delays and losses in trade, the other source of opposition to the system of quarantine came from the British commercial sector. To a country whose international shipping and trade sectors were growing rapidly and whose ruling classes were heavily invested in this sector, such losses would have appeared far more serious than the possible ravages of disease.⁷⁸ Both the Indian and British governments in the late 1800s continued to greet the spectre of quarantine with dismay, vehement debate and indignation over the economic losses linked to the policy.⁷⁹ The forty days spent at harbour in

73 Roy Porter, *The Greatest Benefit to Mankind: A Medical History of Humanity* (London, 1999), p. 259.

74 Dorothy Porter, *Health, Civilisation and the State: A History of Public Health from Ancient to Modern Times* (London, 1999), pp. 82–83; Southwood Smith, *The Common Nature of Epidemics and Their Relation to Climate and Civilisation* (London, 1866), p. 64.

75 Maglen, “The First Line of Defence”.

76 Porter, *Health, Civilisation and the State*, p. 83.

77 Harrison, *Public Health in British India*, pp. 117–138. The British Medical Journal’s pages are filled with treatises from medical practitioners who had worked in British India and argued that quarantine was singularly unable to protect against populations from diseases such as cholera or plague. If a single case of cholera occurred in spite of quarantine, these practitioners claimed the essential futility of quarantine as a protective measure and the potential harm that it could do.

78 Baldwin, *Contagion and the State*, p. 94.

79 Harrison, “Quarantine, Pilgrimage and Colonial Trade”.

quarantine reduced profits by increasing the overall duration of the journey, destroying perishable goods and created losses owing to the quarantine tax.⁸⁰ Consequently both governments and commerce often used *laissez-faire* economics to demonstrate that the practice of quarantine was in conflict with Britain's much vaunted liberal economic principles as it directly interfered with free trade.⁸¹ Quarantine also had the capacity to generate antipathy among sailors and merchants—confining the sick together with the healthy on board ships in the lazarettoes tended to breed considerable ill-will and resentment towards an already unpopular measure.

Conclusion

In the end, it is not possible for us to know for certain whether the Company ships successfully managed to bring plague from Egypt to India in 1802, and whether their quarantines at Madras and Bombay controlled the spread of the disease. There is no further mention of plague or plague like diseases in the medical records of either presidency after 1802, although Bombay does suffer from an epidemic some years later. But what is certain is that the lack of a plague epidemic pursuant to the return of the EEIC troop ships had little to do with Company quarantine policy. In the case of Madras, research conducted during and after the 1896 invasion of plague suggests that the ecological cycle of the disease could not be sustained for very long in the hostile climate of the presidency, although Bombay presidency, on the other hand, was very susceptible to the disease and would bear the brunt of the future 1896 plague pandemic.⁸² Regardless of whether the disease actually reached Indian shores, the most interesting features of this episode are the diverse quarantine policies followed by the Madras and Bombay establishments as well as the relative rigor of the Bombay lazaretto.

The intellectual controversy as well as the commercial antagonism towards the use of quarantine in contemporaneous Britain discussed earlier explains the attitudes of the Medical Board and the Board of Revenue in the Madras presidency. Faced with the threat of plague, the administration and the medical staff submitted to the official request for the quarantine, but ensured that the entire process was

80 Maglen, "The First Line of Defence".

81 *Ibid.*

82 Hwa-Lung Yu and George Christakos, "Spatiotemporal modelling and mapping of the bubonic plague epidemic in India", *International Journal of Health Geographics*, 5 (2006), 12; L.F. Hirst, *The Conquest of Plague* (Oxford, 1953). In both the Eastern and southern parts of the Madras presidency where the specific species of fleas endemic to the region limited the transmission of plague to the local rat population, and consequently to the human population.

completed as expeditiously as possible. Their focus remained on the cargo carried by the ships, rather than the health of the soldiers and sailors.

It must also be kept in mind that ideas of state responsibility for the well being and health of the local population were still embryonic in this young colonial state—for which a useful parallel is to be found in the Company's management of famine in Madras in the late 1700s.⁸³ When famine swept through the presidency in the late eighteenth century, entire villages were deserted as afflicted populations migrated to other areas seeking relief and employment.⁸⁴ The colonial administration focussed their response to this famine on grain market regulation rather than on the essential investments in local infrastructure, such as investment in irrigation, loans to famine-afflicted farmers and labourers; measures which were traditionally instituted by local rulers in times of need. As far as the EEIC were concerned, these latter measures were expensive, difficult to implement and deeply unpopular among the upper echelons of the administration; who reiterated that any further measures against famines would flout the much-vaunted *laissez-faire* economic policy.⁸⁵ While post-1857 colonial administrations would use this principle of state responsibility for local populations to justify and legitimise British colonisation and imperial rule in the Indian subcontinent, this early Company Raj was as yet coming to terms with the concept.⁸⁶

Given that this Company state in both Bombay and Madras was in the early stages of development, it can further be argued that the creation, institution and implementation of methods to restrict the spread of plague necessitates the growth of the state itself, the growth of local administrative structures and the creation of a "medical police".⁸⁷ In the nascent garrison states of the EEIC in India, such administrative structures had not yet developed, or developed fully; explaining the lack of cohesion in the response to such a serious threat as that of plague.⁸⁸ This disparity in public health policy and commitment between presidency governments

83 Ravi Ahuja, "State Formation and 'Famine Policy' in Early Colonial South India", *Indian Economic and Social History Review*, 39 (2002), 351–80.

84 Roland Lardinois, "Deserted Villages and Depopulation in Rural Tamil Nadu" in Tim Dyson, ed., *India's Historical Demography: Studies in Famine, Disease and Society*, (London, 1989), pp.16–49; Richard H. Grove, "The Great El Niño of 1789–93 and its Global Event in World Environmental History Consequences: Reconstructing an Extreme Climate", *The Medieval History Journal*, 10 (2007), 75–100.

85 *Ibid.*

86 Harrison, *Public Health in British India*.

87 Slack, *The Impact of Plague in Tudor and Stuart England*.

88 See Douglas M. Peers, 'Gunpowder Empires and the Garrison State: Modernity, Hybridity and the Political Economy of Colonial India, circa 1750–1860', *Comparative Studies of South Asia, Africa and the Middle East*, 27 (2007), 245–259 and *idem*, *Between Mars and Mammon: Colonial Armies and the Garrison State in Early Nineteenth Century India* (London, 1995). For a discussion of the garrison state in India, and Ahuja, "State Formation and Famine Policy".

was not uncommon even in British India after 1857, when the administrative apparatus had developed further.⁸⁹ The extraneous pressures on the British and Indian governments regarding disease, quarantine and shipping regulations that characterised the later 1800s were also lacking in the instance of the 1802 plague.

These aspects do not, however, explain the comparative rigor of the Bombay lazaretto. To elucidate the motivations that drove the Bombay lazaretto, it is necessary to take into consideration the changing economic and political status of the presidency at this time. By the end of the eighteenth century, the EEIC had initially been considering the “demotion” of Bombay from its standing as a presidency after an assessment of its abysmal record of numerous administrative failures and considerable political mismanagement. A perfect example of this negligence was Bombay’s poor administration of the rich and fertile district of Malabar, which constituted a third of the western coast. When Malabar was handed to the Bombay presidency, the British merchants of Bombay made such a terrible job of administering it that the Governor General Wellesley transferred it to Madras presidency. It was Dundas, then President of the Board of Control, who elevated the deteriorating status of Bombay when the powerful private British merchants of the west coast succeeded in convincing him of the rewards of retaining Bombay as a presidency. The advent of Napoleon onto the British radar in the Indian arena added to the importance of Bombay, which was now considered the first line of defence against possible naval attacks by the French; in addition to the possibilities of the developing trade with China.⁹⁰ By 1800, the EEIC’s Court of Directors began to consider Bombay as a port of great importance and a crucial Company asset, based also on the impression that the port remained open at all seasons of the year in a region buffeted annually by the harsh winds of the monsoons.⁹¹ In the face of all these changes, it would follow quite logically that the British merchants, who were very influential in dictating Company policy in Bombay, could direct that the EEIC administration lavished more care on quarantine policy in the Bombay port than was implemented for Madras.

Aparna Nair is currently an Assistant Professor in Economic History at the Centre for Development Studies, Trivandrum, India.

89 Seán Lang, “Drop the Demon *Dai*: Maternal Mortality and the State in Colonial Madras, 1840–1875” *Social History of Medicine*, 18 (2005), 357–378. For example, Lang explores the early development of the maternity hospital in Madras and the differences in maternal mortality policy between presidencies.

90 Pamela Nightingale, *Trade and Empire in Western India, 1784–1806* (Cambridge, 1970).

91 Anne Bulley, *The Bombay Country Ships, 1790–1833* (London, 2000), pp. 3–6.

References

- Ahuja, Ravi, "State Formation and 'Famine Policy' in Early Colonial South India", *Indian Economic and Social History Review*, 39 (2002), 351–380.
- Appleby, A. B., "The Disappearance of Plague: A Continuing Puzzle", *Economic History Review* 33 (1980), 161–173.
- Baldwin, Peter, *Contagion and the State* (London, 1999).
- Benedictow, Ole. J., *The Black Death 1346–1353: The Complete History* (London, 2006).
- Booker, John, *Maritime Quarantine: The British Experience, c.1650–1900*, (Aldershot, 2007).
- Bowen, H. V., *The Business of Empire: The East India Company and Imperial Britain, 1756–1833* (Cambridge, 2006), pp. 219–260.
- Bulley, Anne, *The Bombay Country Ships, 1790–1833* (London: Routledge, 2000), pp. 3–6.
- Burke, Edmund, 'Appendix: Deaths, April 1858: In London, Sir J. McGrigor, Baronet, K.C.B, K.C., K.T.S', in *The Annual Register of the History and Politics of the Year 1858* (London, 1859).
- Catanach, Ian. J., "Plague and the Tensions of Empire, 1896–1918", in David Arnold, ed. *Imperial Medicine and Indigenous Societies* (Manchester, 1988), pp. 49–171.
- Chandravarkar, Rajnarayan, "Plague Panic and Epidemic Politics in India, 1896–1914" in Terence Ranger and Paul Slack eds., *Epidemics and Ideas: Essays on the Historical Perception of Pestilence* (Cambridge, 1996), pp. 203–241.
- Christensen, Peter, "Plague and Plague Policies in Early Modern Denmark", *Medical History*, 47 (2003), 413–450.
- Cipolla, Carlo, *Fighting the Plague in Seventeenth-Century Italy* (Madison, 1981).
- Cohn, Samuel K, *The Black Death transformed: disease and culture in early Renaissance Europe*, (London, 2002).
- Coons, Ronald E., "Steamships and Quarantines at Trieste, 1837–1848", *Journal of the History of Medicine and Allied Sciences* 44, 1(1989), 28–56.
- Curtin, Philip D., *Death by Migration: Europe's Encounter with the Tropical World in the Nineteenth Century* (Cambridge, 1989).
- Das, Chand N., *Hours of Glory: Famous Battles of the Indian Army 1801–1971* (New Delhi, 1997).
- Echenberg, Myron, *Plague Ports: The Global Urban Impact of Bubonic Plague, 1894–1901* (New York, 2007)
- French, David, *The British Way in War, 1688–2000* (London, 1990), p. 104.

- Gallagher, Nancy, *Medicine and Power in Tunisia, 1780-1900* (Cambridge, 2002).
- Grove, Richard H., "The Great El Niño of 1789–93 and its Global Event in World Environmental History Consequences: Reconstructing an Extreme Climate", *The Medieval History Journal*, 10 (2007), 75–100.
- Hardy, Anne, "Cholera, Quarantine and the English preventive System", *Medical History*, 37 (1993), 250–269.
- Harrison, Mark, "Quarantine, Pilgrimage and Colonial Trade: India 1866-1900", *Indian Economic and Social History Review*, 29 (1999), 117–144.
- Hirst, L. F., *The Conquest of Plague* (Oxford, 1953).
- Ingeram, Edward, *Empire-Building and Empire Builders* (London, 1994).
- Ingeram, Edward, "The Role of the Indian Army at the End of the Eighteenth Century", in Patrick J. N. Tuck ed., *East India Company: 1600-1858* (London, 1998), pp. 112–113.
- Jomard, Edme-François, and Gibert-Joseph Chabrol, *Description de l'Égypte: État Moderne, II:2* (Paris, 1810).
- Kolla, Edward James, "Not So Criminal: New Understandings of Napoléon's Foreign Policy in the East", *French Historical Studies* 30 (2007), 175–201.
- Kupferschmidt, Hugo, "History of the Epidemiology of Plague: Changes in the Understanding of Plague Epidemiology since the Discovery of the Plague Pathogen in 1894", *Antimicrobials and Infectious Diseases Newsletter* 16(7) (1997), 51–54.
- Lardinois, Roland, "Deserted Villages and Depopulation in Rural Tamil Nadu" in Tim Dyson, ed., *India's Historical Demography: Studies in Famine, Disease and Society* (London, 1989), pp. 16–49.
- Maglen, Krista, "'The First Line of Defence': British Quarantine and the Port Sanitary Authorities in the Nineteenth Century", *Social History of Medicine* 15(3) (2002), 413–428.
- McCarthy, Justin A, "Nineteenth-century Egyptian population", *Middle Eastern Studies*, 12(3) (1976), 1–39.
- McGrigor, James, *Medical Sketches of the Expedition to Egypt from India* (London, 1804).
- McGrigor, James, *The Autobiography and Services of Sir James McGrigor* (London, 1861).
- Nair, Aparna, *Between Asclepius and Mammon: Disease, Death, Medicine and Public Health in Madras, 1786-1815*, Unpublished PhD Thesis.
- Nightingale, Pamela, *Trade and Empire in Western India, 1784-1806* (Cambridge: Cambridge University Press, 1970).
- Panagiotakopulu, Eva, 'Pharaonic Egypt and the Origins of Plague', *Journal of Biogeography* 31(2) (2004), 269–275.
- Panzac, Daniel, *La Peste dans L'Empire Ottoman, 1700-1850* (Belgium: Editions Peeters, 1985).

- Peers, Douglas M., *Between Mars and Mammon: Colonial Armies and the Garrison State in Early Nineteenth Century India* (London, 1995).
- Peers, Douglas M., 'Gunpowder Empires and the Garrison State: Modernity, Hybridity and the Political Economy of Colonial India, circa 1750-1860', *Comparative Studies of South Asia, Africa and the Middle East* 27(2) (2007), 245–259.
- Petrie, G. F., Ronald E. Todd, Riad Skander and Fouad Hilmy, "A Report on Plague Investigations in Egypt", *The Journal of Hygiene* 23 (1924), 117–150.
- Porter, Dorothy, *Health, Civilisation and the State: A History of Public Health from Ancient to Modern Times* (London, 1999).
- Porter, Roy, *The Greatest Benefit to Mankind: A Medical History of Humanity* (London, 1999).
- Power, George, *Attempt to investigate the Cause of the Egyptian Ophthalmia* (London, 1803).
- Ramanna, Mridula, *Western Medicine and Public Health in Colonial Bombay, 1845-1895* (New Delhi, 2002), pp. 152–154.
- "Report of a Committee of the Statistical Society of London, Appointed to Collect an Enquire into Vital Statistics, Upon the Sickness and Mortality among European and Native Troops serving in the Madras Presidency, from the Year 1793 to 1838", *Journal of the Statistical Society of London* 3(2) (1840), 113–143.
- Richmond, J. C. B., *Egypt 1798-1952: Her Advance towards a Modern Identity* (London, 1977).
- Rothenberg, Gunther E., 'The Austrian Sanitary Cordon and the Control of the Bubonic Plague: 1710–1871', *Journal of the History of Medicine and Allied Sciences* 28(1) (1973), 15–26.
- Russell, Thomas G., and Terence M. Russell, "Medicine in Egypt at the time of Napoleon Bonaparte", *British Medical Journal*, 327 (2003), 1461–1464.
- Shrewsbury, J. F. D., *A History of Bubonic Plague in the British Isles* (Cambridge, 1970).
- Scheidel, Walter, *Death on the Nile: Disease and the Demography of Roman Egypt* (New York, 2001).
- Slack, Paul, "The Response to Plague in Early Modern England", in John Walter and Roger Schofield, eds., *Famine, Disease and the Social Order in Early Modern Society*, (Cambridge, 1989), pp. 167–189.
- Smith, Southwood, *The Common Nature of Epidemics and Their Relation to Climate and Civilisation* (London, 1866).
- Stavros Stoianovich, Leften and Traian Stoianovich, *The Balkans since 1453* (London, 2000)
- Stenseth, et al. "Plague: Past, Present, and Future", *PLoS Med* 5(1) (2008), e3.
- Watts, Sheldon, *Epidemics and History: Disease, Power and Imperialism*, (New Haven, 1997).

- White, C. F., "Plague: Modern Preventive Measure in Ships and Ports", *Proceedings of the Royal Society of Medicine*, 25(591) (1935), 25–37.
- Wittman, William, *Travels in Turkey, Asia-Minor, Syria and Across the Desert into Egypt* (London, 1803).
- Worth Estes, J., and Laverne Kuhnke, "French Observations of Disease and Drug Use in Late Eighteenth-Century Cairo", *Journal of the History of Medicine and Allied Sciences* 39(2) (1984), 121–152.
- Yu, Hwa-Lung and George Christakos, "Spatiotemporal modelling and mapping of the bubonic plague epidemic in India", *International Journal of Health Geographics* 5 (2006).
- Zietz, B. P. and H. Dunkelberg, "The History of the Plague and the Research on the Causative Agent", *Yersinia pestis*, *International Journal of Hygiene and Environmental Health* 207(2) (2004), 165–178.

Networking and interaction between a Mutual Assistance Association and other agencies (Pamplona, 1902–1919)

Pilar Leon Sanz

Introduction

We have referred on an earlier occasion to the diverse medical healthcare systems that co-existed in Spain at the turn of the 20th century.¹ During the 19th century there was a change from a social assistance appropriate to the old regime to a humanitarian model more in keeping with the Liberal State. Particularly from the 1880's, the reformist and hygienist movements, the statutory provisions and the socio-economic conditions brought about change in the assistance organization. These reforms were also due to the fact that the Liberal public care model left much of the population unprotected, as it only covered those families that were on the poor list.

The development of social prevision in Spain had always been connected with worker associationism and with those movements which arose from the social doctrine of the Catholic Church, as promoted by Pope Leon XIII. In fact, the impact of the papal encyclical *Rerum novarum* (1891) in Spain is well-known, both in the Krausist and Liberal-Conservative media. Both groups, while having different philosophical views, shared an organicist and harmonical perspective on society. Under their wing were begun the initiatives for popular education and the first projects for social protection legislation which led to the passing, in 1900, of the Law on Labour Accidents and the regulation of working conditions for women and children.

In this context, the Mutual Benefit Societies were a collective means of voluntary prevision, developed separately from the State. Some of these societies had their roots in the old guilds, others in the *Montepíos*, but the majority was new, and was

1. León Sanz, Pilar, "Professional Responsibility and the Welfare System in Spain at the Turn of the 19th Century", *Hygiea Internationalis*, 5: 1 (2006), 75–90.

encouraged by the 1887 Law on Associations. In absolute numbers, the highest figure for members and organizations was between the years 1896 and 1906. With the passage of time, these Mutual Benefit Societies changed their structure and objectives.

Complementary to these Mutual Benefit Societies, in the more industrialized areas of Spain, such as Vizcaya, some companies organized health care for their employees. And, with the appearance of the first law on private insurance, passed in 1908, the slow development of private health insurance companies began.

It is evident that the development of social prevision in Spain was clearly marked by international inspiration. Initially the debate focused on the Bismarckian mandatory insurance system, but when the National Institute of Prevision (INP) project was being designed, between 1903 and 1906, it also took into account the Italian and Belgian systems, which were based on collaboration with private initiatives, particularly with the *Cajas de Ahorro* (savings banks). In the end, the National Institute of Prevision, which came into being in 1908, maintained its subsidiary relationship with the State in the promotion of social security.²

In general the medical and social assistance offered by charitable organizations, private or public systems, such as la *Beneficencia* and later the Social Health Services, tended to have separate historiographical approaches. When dealing with Spanish mutualism, the historiographical perspective on case studies is characteristic, because, although there were exceptions, the development of the Mutual Benefit Societies was limited by law to the local area.³

Nonetheless, assistance in an urban area is the sum of the different systems and organizations, together with the less formal initiatives and activities promoted by individuals and families. This essay focuses on the social networks that supported the assistance and labour associations. This complex phenomenon was more or less institutionalised, such that we need to examine the local context in order to comprehend the dynamics of the associations, which are of great interest for general history.

Several important studies have analysed the situation of medical and social associations in Navarra at the time of the Spanish Restoration⁴, but I wish to focus

2 Montero, Feliciano, “El debate sobre el intervencionismo y el nacimiento del Instituto Nacional de Previsión (INP)”, pp. 171–196 in: *La previsión social en la historia: actas del VI Congreso de Historia Social de España*: Vitoria, 3–5 de julio de 2008. Madrid: Siglo XXI de España, 2009.

3 Andreu Martínez Gállego, Francesc and Ruzafa, Rafael, “Los socorros mutuos y la cooperación en la España del siglo XIX: actitudes de los poderes públicos y soluciones populares” pp. 101–135 in Santiago Castillo and Rafael Ruzafa, eds., *La previsión social en la historia: actas del VI Congreso de Historia Social de España*: Vitoria, 3–5 de julio de 2008. Siglo XXI de España. Madrid, 2009.

4 Ferrer Muñoz, Manuel, “Panorama asociativo de Navarra entre 1887 y 1936”, pp. 49–65 in *Congreso de Historia de Euskal Herria*. Vitoria, VI, 1988. Pejenaute Goñi, Javier María, “Las

specifically on the interaction between the Workers' Mutual Benefit Society *La Conciliación*, the most important workers' association in Pamplona, and other public and private organizations between 1902 and 1919.

Until 1920, The Catholic Workers Protection Society *La Conciliación* was formed by an association of workers from each trade, made up by employers and a mixed group of tradesmen, employers and protectors. The main objective of *La Conciliación* was to be a mutual illness and unemployment protection society.⁵ First, I will describe the relations of *La Conciliación* with other assistance organizations (mutual aid associations), specifically the interaction that *La Conciliación* had with the different workers' societies. Further, I will discuss the relations *La Conciliación* had with public bodies, and refer to the web of public figures involved in the Society.

Relations between *La Conciliación* and other Associations and Mutual Aid Societies at the Beginning of the 20th Century

La Conciliación and other Mutual Aid Associations in Pamplona

On issues of medical care for its members, *La Conciliación* habitually cooperated with the mutual aid societies and guilds in Pamplona: the Craftsmen's Guild, the oldest in the city, founded in the latter half of the 19th century; the Workers' Union and the Sodality of the Passion, and so on. But records clearly show that *La Conciliación* was fiercely independent in its criteria and actions on the varied matters.

La Conciliación employed physicians from the Craftsmen's Guild and also asked the Hermandad (Sodality) of the Passion for doctors. These societies even worked together in cooperation when, in 1916, they agreed to exchange their sick leave lists

Sociedades de Socorros Mutuos en Navarra (finales del siglo XIX-Comienzos del XX)", pp. 273–287 in *Congreso de Historia de Euskal Herria*. Vitoria, VI, 1988.

5. León Sanz, Pilar, "La concertación de la asistencia en la enfermedad en La Sociedad de Obreros *La Conciliación* (1902–1919)", pp. 97–108 in *Navarra: Memoria e Imagen*. Eunete, Pamplona, 2006. León Sanz, Pilar, "Higienismo y previsión social a través de una Sociedad de Socorros Mutuos: el Consultorio de Niños de Pecho de "La Conciliación" (1905-1916)" CD: Comunicaciones, pp. 1-23, in Santiago Castillo and Rafael Ruzafa, eds., *La previsión social en la historia: actas del VI Congreso de Historia Social de España: Vitoria, 3-5 de julio de 2008*. Siglo XXI de España. Madrid, 2009. León Sanz, Pilar, "Private initiatives against social inequalities and health vulnerabilities: the case of *La Conciliación* (Pamplona, 1902–1920)" in Patrice Bourdelais and John Chircop, eds., *Vulnerabilities, Social Inequalities and Health*. Évora, Edições Colibri, forthcoming.

in order to avoid fraud in the payment of aid. It was true that payment of aid from more than one organization could add up to more than a day's wage, which meant that people were in no hurry to be discharged.⁶ The Societies also confronted crisis situations together, such as the 1918 influenza epidemic, at which point they demanded subsidies from the Town Council. And when, that same year, the Official Medical Council of Navarre was negotiating a rise in physicians' fees, these organizations joined to carry out the negotiations. But in the end, as *La Conciliación* was aware of the bargaining power it had due to its greater membership, it came to an independent agreement with the Medical council on more advantageous fees.

Despite all this, their good relations continued, as we can see when in 1919 the Master of the Craftsmen's Guild, don Claudio Lozano, asked the President of *La Conciliación* (J. Sánchez-Marco) about their experience and conditions of the pharmaceutical service, etc.⁷

This harmony among the Mutual Aid Societies in Pamplona is surprising, as they were, to a certain extent, rival organisations: they all offered medical assistance and had similar ideologies. Nevertheless, they did share some members who, voluntarily, belonged to more than one organization. This was beneficial to *La Conciliación* because of the subsidiary character of its medical assistance. Possibly, this attitude of cooperation among the Mutual Aid Societies is comprehensible, as we shall see, because of the personal relations of those who directed the organizations.

La Conciliación and the Workers' Societies in Pamplona

Very different was the attitude of *La Conciliación* towards the workers' associations (without the employers' intervention). Its attitude was one of confrontation, independently of their political line or ideology. The period studied here was marked by conflicts and disagreements, both with the Federation and with the Free Catholic Union.

This behaviour is logical as the relations with these organizations refer to labour aspects, and in this area, their attitudes were disparate. *La Conciliación* was a mixed association with different employers' associations as members, and it wished to resolve labour conflicts by negotiating between the employers and the workers, while the workers' societies proposed other measures.

6. La Conciliación, *Books of Minutes* (1902–1923). *Pro manuscript*. Archive University of Navarra. (Cited: LCBM, number book, page). In this case: LCBM 6, 35, (1916)

7. LCBM 8, 123 (1919).

From the start, *La Conciliación* was firmly opposed to the *Federación Local de Sociedades Obreras de Pamplona*,⁸ and numerous confrontations arose between both workers' groups. For example, the records for March 8th 1903 state:

Receipt is acknowledged of the note from Eugenio Lacunza and Julio Goñi who were dismissed by their boss, who has employed three workers from the federation and it is agreed that the President will call this gentleman so he can be heard and a favourable solution for the workers will be sought.⁹

Soon it was declared impossible for the members to belong to both institutions. And with the passage of time and the increase in friction, the suspicions of solidarity with the Federation endangered a worker's continuing in *La Conciliación*. Thus, for example, a member who had been seen at the May 1st demonstration, organised by the Federation, was expelled.¹⁰ And the incompatibility was extended to the physicians of *La Conciliación*, who, in 1917, were forbidden from attending patients from *La Conciliación* and from the Federation, unless they were attending the surgery as private patients.¹¹

This shows an emphatic rejection of the Socialist initiative, even though the Federation did not declare itself to be socialist until the beginning of the 1920's.¹² In fact, J. Andrés-Gállego warns that the federated unions of the time,

declare their religious, political and economic asepsis, and that each of these unions admit all and every worker, with any and every idea, on all matters, as long as they agree to be united against the outrages of the capitalists.¹³

The resistance societies, Severino Aznar insists in 1909, "are subscribed to by anarchists, both believers and non-believers".¹⁴ Moreover, there is unanimity that, in Pamplona, Socialism did not become a social force until 1923¹⁵, which explains why

8. About this Worker's Society: Virto, Juan Jesús, "La UGT", p. 244 in Alfredo Floristán Samanes, *Gran Atlas de Navarra*, II. Caja de Ahorros de Navarra, Pamplona, 1986. Pazos, Anton M., *El clero navarro (1900–1936): origen social, procedencia geográfica y formación sacerdotal*. Pamplona, 1990, pp. 74–75

9. LCBM 1, 37–38 (1903).

10. LCBM 4, 73 (1916); 5, 147 (1917).

11. LCBM 5, 153 (1917).

12. Virto Ibáñez, Juan Jesús, "La UGT de Navarra: algunas aportaciones al estudio del socialismo navarro", *Príncipe de Viana*. Pamplona, 1989, 395–429 (396).

13. Andrés-Gállego, José, *Historia contemporánea de Navarra*. Pamplona, 1982, pp. 105–108.

14. Aznar Embid, Severino, *El riesgo-enfermedad y las Sociedades de Socorros Mutuos*. Madrid, 1914.

15. Pejenaute Goñi, Javier M, "La Federación Católico Social de Navarra y los partidos políticos del momento (1910–1916)", *Príncipe de Viana, I Congreso de Historia de Navarra de los siglos XVII, XIX y XX*. XXXVII: 5, Anejo (1986): 37–51. Tuñón de Lara, Manuel, "Navarra en los movimientos sociales de la Historia Contemporánea de España", *Príncipe de Viana, I Congreso de*

the number of members in *La Conciliación* at the time was far higher than those of the *Federación*. However, although in Navarre Socialism was of little importance, this was not so for the rest of Spain or the world, where Socialism was the principal adversary of Catholic institutions, and justified the attitude of *La Conciliación*. The *Sindicato Católico Obrero Libre*,¹⁶ created in 1915, after the visit of Father Pedro Gerard to Pamplona on the occasion of The Sixth Social Week in 1912, because of the rise in horizontal associationism, received the same treatment.¹⁷

The tensions between the two institutions are easily comprehensible, as their programmes were contradictory. The members of the *Sindicato Libre* were extremely spirited: they did not hesitate to go on strike and argued with other unions, with the employers, and also with *La Conciliación*. They had polemical discussions with *La Conciliación* in the local press, to the point that the *Sindicato Libre* went so far as to proclaim the end of the Mixed Societies. This explains why *La Conciliación* expelled those who joined the *Sindicato Libre*, with no possibility of redress. Thirty-six members were expelled between 1915 and 1920 for this reason.¹⁸

Surprisingly, both the *Federación* and the *Sindicato Libre* made consecutive labour proposals to *La Conciliación*, of both negotiation and protest. Thus, the Mixed Board received invitations to participate in demonstrations and in negotiations to demand labour improvements. In each case, *La Conciliación* apologized for not taking part, as the Society was a mixed one with employers among its members.

In 1918, *La Conciliación* changed its strategy regarding the *Sindicato Libre*. So, for example, it re-admitted some members as it considered they had been “duped” into joining the *Sindicato Libre*. Joint actions were also undertaken. The records of the Mixed Board of *La Conciliación* for May 1919 show the petition of the Tailors and Commerce Guilds in favour of a merger with the *Sindicato de Obreros Libre*, in order to carry out joint actions against *La Federación*.

Shortly afterwards, we find a petition from the Carpenters Guild for *La Conciliación* to join up with the *Federación* and the *Sindicato Libre*, to order to force the reduction of working hours and other labour improvements.¹⁹ In answer, the Mixed Board again states its position. It advises that, although occasionally, “*in extremis*, some joint agreements have been made”, *La Conciliación* is incompatible

Historia de Navarra de los siglos XVII, XIX y XX. XXXVII: 5, Anejo (1986): 9–22; Andrés Gállego, José, “Sobre el inicio de la política obrera contemporánea en Navarra, 1855–1916”, *Príncipe de Viana*, 1978, pp. 335–375.

16. Carrasco Calvo, Salvador, “Los Sindicatos libres en Navarra”, *Príncipe de Viana, I Congreso de Historia de Navarra de los siglos XVII, XIX y XX*. XLVII: 5, Anejo (1986): 53–67.

17. Calavia Urdániz, Ana, “*La Conciliación* de Pamplona y sus relaciones con los sindicatos católico-libres (1915–1923)”, *Príncipe de Viana*, XLIX: 10 Anejo (1988): 73–84.

18. LCBM 5, 147 (1917).

19. LCBM 8, 22 (1919).

with the resistance societies. *La Conciliación*, as it has always done, will support the petitions of the guilds, but in its own way.²⁰

In fact, *La Conciliación* preferred to intervene in the problems by using its influence both on employers and on employees. Two relevant examples: Pamplona was one of the few places in Spain where the workers' protest march organized in 1917 failed, although it was massive in other cities. And the above-mentioned demand by the Carpenters Guild ended up in a meeting where the President and the Secretary of the employers association informed the Bricklayers, Stonemasons, Tinsmiths, Painters, Carpenters, Woodcarvers, Gilders, Cabinet-makers and Turners Guilds of the improvement which had been agreed.²¹

There was one exception in its dealing with the workers' societies. *La Conciliación* had extremely cordial relations with the *Sindicato de Obreras de Nuestra Señora del Camino* (a working-women's association), that was allowed to use the Society's premises for their meetings. In exchange, the women made the *La Conciliación* flags and emblems. The relationship between the two associations became less friendly when *La Conciliación* wanted to charge for the use of its assembly hall.²² We must also note that as it was a women's society, it was not a rival of importance for *La Conciliación*.

La Conciliación and Associations in Navarre and other Provinces

La Conciliación was not an isolated initiative; it had relations with other organizations promoted by Social Catholic activists in Pamplona. Outstanding was its close collaboration with the workers' Centro Dominical, founded and maintained by Eustaquio Olosa in Pamplona, in 1881, attended by between 300 and 400 day-labourers. Its aims were education (several physicians in the city participated in pedagogical work) and the promotion of savings (it assisted in negotiations with the Savings Bank - *Caja de Ahorros*).²³ A few months after it was inaugurated, the Mixed Board appointed Eustaquio Olosa as Honorary President of *La Conciliación*, "due to his merits relevant to his work in favour of the workers". In 1914 the *Centro Dominical* was taken over by *La Conciliación*,²⁴ which implies that both organizations had a project in common, that is, directed towards the same group.

20. LCBM 8, 37 (1919).

21. LCBM 8, 37 (1919).

22. LCBM 4, 20 (1912).

23. The rules of this institution were published in *Boletín del Consejo Nacional de las Corporaciones Católico-Obreras*, II: 2 (1897), 2. About the Centro Dominical: José Andrés-Gallego, *Historia contemporánea de Navarra*. Pamplona, 1982, p. 104.

24. LCBM 1, 17–18 (1903).

In 1906, after the visit to Pamplona of Padre Vicent, the Diocesan Council of the Catholic-Worker Corporations was set up, to which the President of *La Conciliación* belonged, at least until 1908.²⁵ Together with other responsibilities, this Council had to approve the credit unions, unions and other initiatives that were formed in the diocese.

La Conciliación also collaborated closely with other Navarrese organizations such as the *Círculos Católicos* in Estella, Peralta, etc.²⁶, and with the flourishing new Navarrese agrarian cooperativism.²⁷ Thus, as a symbol of its support of the initiatives of *La Conciliación*, the Federation of Rural Savings Banks donated 50 pesetas to the campaign for funds to introduce old age insurance.²⁸

La Conciliación was in correspondence with many associations, mutual aid societies and *Círculos Católicos* in the rest of Spain, such as those in Santander and Vitoria, etc. Over the years, it worked regularly with the *Consejo Nacional de Corporaciones Católicas Obreras de España*.²⁹ Moreover, *La Conciliación* was proposed as a model in national assemblies and congresses. For example, José de Posse y Villelga mentioned *La Conciliación* as the prototype for mixed associations of workers and employers.³⁰

In the minutes of the Mixed Board we can read decisions like the following: in November 1905,

it is agreed to send 20 copies of the regulations which were requested by Don Pedro Igoa in Santa Cruz de Tenerife.³¹

There were also requests for Regulations and experiences from other places (as the *Patronato de Acción Social Popular de Melilla*, etc.).

25. *Diario de Navarra*, 31 July 1906, 14 August 1906, 18 September 1907. *El Pensamiento Navarro*, 2 July 1906.

26. Pejenaute Goñi, Javier María, “Las Sociedades de Socorros Mutuos en Navarra (finales del siglo XIX-Comienzos del XX)”, pp. 273-287 in *Congreso de Historia de Euskal Herria*. Vitoria, VI, 1988.

27. The Navarrese agrarian cooperativism has been studied by: Pejenaute Goñi, Javier María, “Las cooperativas de Consumo y producción en Navarra (1907-1917)”, pp. 257-271 in *Congreso de Historia de Euskal Herria*. Vitoria, VI, 1988. Pejenaute Goñi, Javier, “Participación del clero en la Federación navarra de Cajas Rurales”, pp. 369-376 in *Congreso de Historia de Euskal Herria*. Vitoria, VI, 1988. Majuelo Gil, Emilio; Pascual Bonis, Angel, *Del catolicismo agrario al cooperativismo empresarial: setenta y cinco años de la Federación de Cooperativas Navarras, 1910-1985*. Madrid, 1991.

28. LCBM 5, 51 (1915).

29. LCBM 1, 310-312 (1905).

30. Posse y Villelga, José de, *Estudios sociales. El socialismo, sus hombres, su organización, sus procedimientos. La Asociación Agrícola, Las Uniones Profesionales. Los Obreros de Tierra de Campos*, Bilbao, 1912, p. 192.

31. LCBM 1, 380-381 (1905).

In 1908, an association was created in Burgos (a city in Castile) with the same name, aims and organizational model as the one in Pamplona. The Burgos association was made up of Workers Guilds, Employers Guilds and, above them, a “Council for conciliation and arbitration”, with an equal number of representatives of the guilds (workers and employers) and protector members.³² And in the same group, we have to place the *Asociación Obrera León XIII*, the San Salvador del Valle, in the mining area of La Arboleda in Vizcaya (1906), the *Asociación Católica Obrera* of Laguna de Duero, near Valladolid, and the *Asociación General de Empleados de Vizcaya*. These groups had links with: the *Asociación Católica de Obreros* of Avila (1908); the *Asociación Obrera Pío X* of Abanto y Ciérvana, in Gallarta in the coalfields of Vizcaya (1909); the *Asociación Los Obreros* in Chelva (Valencia, 1910); the *Asociación de Obreros* of Begoña (Retuerta, 1911); and the *Asociación Católica de Obreros Mineros* which was begun in the area of La Hullera, in Asturias, in 1912.³³

All these groups shared the objectives and characteristics of *La Conciliación*, although not all of them attained the same levels of assistance. Of importance is the *Asociación de León XIII* because, in 1912, it had a credit union, a Secretariat for the village, a savings bank, a consumer co-op, a school mutual benefit society, and was planning a fund for unemployment.

The correspondence between these societies shows a clear dynamic of collaboration that went beyond mere institutional or inspirational relationships: the Section of the *Workers’ Federación Local de Sindicatos Católicos* in Tolosa writes to *La Conciliación* several times requesting funds for striking workers. *La Conciliación* joins in sending signatures asking for pardons for workers. Moreover, *La Conciliación* participated in the testimonial mobilizations which were so typical of the time: it collaborated with pilgrimages or public demonstrations that similar groups organized from Bilbao. It also kept up correspondence with the *Asociación para el estudio y defensa de los intereses de la clase obrera* in Madrid and with the *Biblioteca Católico-Propagandista*, to which it gave premises for its library.

Institutional Mediation

On the political landscape of the region, the “foral” regime and the *Diputación* (provincial government) were of particular importance as Navarre had a special

32. About this institution: Castrillejo Ibáñez, Félix, “El Círculo Católico de Burgos como modelo de sociabilidad confesional (1883–1936)”, pp. 237–262 in Elena Maza Zorrilla, ed., *Asociacionismo en la España contemporánea: vertientes y análisis interdisciplinar*. Valladolid, 2003. Delgado Viñas, Carmen, *Clase obrera, burguesía y conflicto social: Burgos, 1833–1936*. Valladolid, 1993.

33. Andrés-Gállego, José, *Pensamiento y acción social de la Iglesia en España*, Madrid, 1984, pp. 298–299.

regime of administrative autonomy from the central government. This regime stated that the *Diputación Foral de Navarra* was an executive group that depended on the parliament, the legislative body. The *Diputación* was directly responsible for matters such as the social welfare of the region.³⁴

In the early part of the 20th century, there was a majority of conservative parties both in the local and regional government, although not all of these supported *La Conciliación*.³⁵ However, we can say that the Society had government backing and institutional aid. *La Conciliación* demanded aid from the Town Council and the *Diputación* because “the Association saved these corporations a great deal of money in Beneficence and other expenses”.³⁶

For example, the Society co-op participated in the reduction of the price of milk, coal and other basic supplies which was promoted by the Town Council in 1915,³⁷ etc.

In spite of the fact that, in its records, *La Conciliación* repeatedly emphasized its apolitical and neutral character, appropriate for this type of associations, it did, in fact, play an active role in the political and social life of the city. Representatives of *La Conciliación* belonged to the Commissions which both the Town Council and the *Diputación* set up in order to solve the sanitary and social problems in the city. Some examples are that, year after year, during this period, a member of *La Conciliación* was elected as a worker representative on the local Board for Social Reform. The Society gave its backing to the measures, such as the building of the railway, adopted to palliate the unemployment situation, and Members of the Mixed Board of *La Conciliación* intervened in the campaigns to promote the construction of cheap houses and the demolition of the city walls. They were also involved in the Subsistence Board organized by the Civil Government when confronted by the shortage and high cost of foodstuffs.

They also corresponded directly with important figures on the central Government (ministers, Cortes, and so on) to give their opinions or to congratulate

34. This situation was established by the *Ley de Modificación de Fueros* (or *Paccionada*) in 1841, it changed in 1984.

35. About the political configuration of the region cf.: Andrés-Gallego, José, *Historia contemporánea de Navarra*. Pamplona, 1982. Olabarri Gortazar, Ignacio, “Notas en torno al problema de la conciencia de identidad colectiva de los navarros en el siglo XIX”, pp. 339–356 in *Congreso de historia de Euskal Herria*, San Sebastián, V, 1988. Olabarri Gortazar, Ignacio, “Notas sobre la implantación, la estructura organizativa y el ideario de los partidos del Turno en Navarra, 1901–1923”, *Príncipe de Viana*, 10 Anejo (1988), 317–329; Mina Apat, M Cruz, “Elecciones y partidos en Navarra (1892–1923)”, pp. 111–129 in José Luis García Delgado, *La España de la Restauración. Política, economía legislación y cultura*. Madrid, 1985. García-Sanz Marcotegui, Angel, “Elites económicas y políticas en la Restauración. La diversidad de las derechas navarras”, *Historia contemporánea*, 23 (2001), 577–628.

36. LCBM 5, 152 (1915).

37. LCBM 5, 152 (1915).

them on decisions taken, as in the case of the telegrams sent to the Council of Ministers on the decision on the building of the extension to the city (in 1914) or Spain's neutrality in the European War, in 1917.

There is no doubt, as we have seen, that their cooperation with the most important public institutions was in relation to medical-social affairs: they organized vaccination campaigns, the Mother and Baby Clinic, they were part of the Anti-tuberculosis Committee, of the Healthcare Board, the Provincial Board for the Protection of Children of Navarre, among others.³⁸ And the attention paid to the worker-members and their families during the influenza epidemic demonstrates the complementary nature of the mutual aid societies, including *La Conciliación*, in the socio-sanitary assistance to the people of Pamplona.³⁹

The network of personal relations

The relations *La Conciliación* had with public and private bodies described here were, to a large extent, arguably due to the personal contacts of the protector members. Indeed, it has frequently been said that this important social support provided substantial economic aid which permitted the development of the Society. This support, both at a local and a national level, was obtained because the original members of the Mixed Board were well-known members of the Navarrese bourgeoisie, with links to the conservative parties.⁴⁰ Some, apart from having held political posts, had influential professional careers: the first President of *La Conciliación*, Miguel García Tuñón, had been the mayor of the city (1885–1886, 1897–1901) and was a lawyer in the capital; Fernando Gorosabel presided the consortium between 1895 and 1897; Rafael Gaztelu, also, was city mayor in 1872 and the records show that he personally obtained important donations for *La Conciliación*. So, in January 1903, we read: “a donation of 1,000 pesetas was received thanks to Mr. Rafael Gaztelu, from the testate proceedings of Doña Balbina Jiménez de Cénarbe”.⁴¹ Juan José Seminario was a Carlist, proprietor of a store and he also belonged to the municipal corporation (1897, 1905).⁴² The

38. LCBM 1, 223–224 (1904). León Sanz, Pilar, “Private initiatives against social inequalities and health vulnerabilities: the case of *La Conciliación* (Pamplona, 1902–1920)” in Patrice Bourdelais, John Chircop, *Vulnerabilities, Social Inequalities and Health*. Évora, forthcoming.

39. León Sanz, Pilar, “Diversity and Convergence in practice: the Mutual Benefit Societies’ Responses to the 1918–19 Influenza Pandemic in Pamplona”, in *Health and Welfare: diversity and convergence in policy and practice*, PHOENIXTN Conference Athens, 2009.

40. Andrés-Gallego, José, *Pensamiento y acción social de la Iglesia en España*. Madrid, 1984, p. 12.

41. LCBM 1, 15–16 (1903).

42. Andrés-Gallego, José, *Navarra cien años de historia*. Pamplona, 2003, p. 49.

following gives us an idea about some of this backing, and emphasises the links between *La Conciliación* and the newspapers.

Local Support

Some of the local celebrities who favoured *La Conciliación* were the above-mentioned Eustaquio Olaso; the Carlist politician Luis de Bobadilla, who, 1903, gave a donation of 1,000 pesetas;⁴³ the architect-archaeologist Florencio Ansoleaga (1846–1916), co-founder of the “Basque Association” of Navarre and a member of the Provincial Health Board. He was a person of some influence in the City Hall, and, in his will, left the sum of 25,000 pesetas to the Mutual Aid Societies of the city, including *La Conciliación*;⁴⁴ Miguel Ciganda, a founder member of the Chamber of Commerce and Industry, when he was the Mayor of Pamplona publicly praised the work of *La Conciliación* and offered his support.⁴⁵

Of note is the collaboration with *La Conciliación* of other physicians in the city, for example, Manuel Jimeno Egurbide, then provincial manager of the Navarrese Healthcare Service (1905–1924), who supported the vaccination campaign and the Mother and Baby Clinic promoted by the Society.⁴⁶ This Navarrese hygienist is a clear example of the network of relations and influence established in the city. Apart from creating a professional journal, *La clínica médica* (1884–1889), which included articles by many professionals, he was one of the promoters of the journal *La Ilustración Navarra*, with other significant personalities of the times, such as A. Campión, J. Cancio Mena, M. Cayuela, Nicanor Espoz, Rafael Gaztelu, J. Iturralde y Suit, among others, all of whom had relations with *La Conciliación*. Moreover, Dr. Jimeno worked as the director of the newspaper *El Liberal Navarro* (1887–1890) and participated in the Centro *Dominical de Obreros* (1890) with the army physician Nicasio Landa. He was a good friend of the then physician in Artajona and Republican “foral” county councillor for Estella, and later President of *La Conciliación*, Silvestre Goicoechea Ataun, as can be seen in the fact that he dedicated his doctoral thesis to him (1883).

43. LCBM 1, 61–63 (1903). About this politician, Sanchez Aranda, José Javier, *Navarra en 1900: los comienzos del Diario*. Pamplona, 1983, p. 112.

44. LCBM 6, 293 (1914). About this figure, Andres-Gallego, José, *Navarra cien años de historia*. Pamplona, 2003.

45. LCBM 1, 355–357 (1905). Sanchez Aranda, José Javier, *Navarra en 1900: los comienzos del Diario*. Pamplona, 1983, p. 66.

46. See León Sanz, Pilar, “Private initiatives against social inequalities and health vulnerabilities: the case of *La Conciliación* (Pamplona, 1902–1920)” in Patrice Bourdelais, John Chircop, *Vulnerabilities, Social Inequalities and Health*. Évora, forthcoming.

The Media

The activities of *La Conciliación* were widely reflected in the local press. In general, the Carlist newspaper *Pensamiento Navarro* and the *Tradición Navarra* did not always favour the Society, while the more liberal ones such as *El Eco de Navarra* and *Diario de Navarra* did. Other figures, such as Atanasio Mutuverría, founder of the *Caja Agrícola de Tafalla* and director of the newspaper *El labrador*, allowed *La Conciliación* to use the papers for the Society's aims;⁴⁷ and Juan Iturralde y Suit (1840–1909), a multitalented character, who, from a moderate and traditionalist position, played an active role in municipal politics and was a co-founder of the Asociación Euskara de Navarra, also arranged the appearance of *La Conciliación* in other periodicals with which he had relations: *El Arga*, *La Paz* and *Lau buru*.⁴⁸ Importantly, the *Diario de Navarra*, founded in 1903 and which quickly became the major local newspaper, expressed the views of *La Conciliación*. It was used to broadcast news, for promotion campaigns and to attract new members, and to announce the actions it undertook for social or healthcare education, etc.⁴⁹

Many of the protector-members and Mixed Board members of *La Conciliación* were, simultaneously, members of the first shareholder board of the newspaper. This group included Eugenio Arraiza Baleztena, a lawyer and a member of the town council (1895, 1905); Pedro Uranga Esnaola, who also participated in the creation of the *Caja Rural de Tafalla*; the above-mentioned Silvestre Goicoechea Atáun (1833–1906), who was also President of the *Aguas de Arteta* society; Fermín Iñarra Echenique (1850–1911), a lawyer, “foral” deputy for Aoiz, and the second president of the Chamber of Commerce; or the engineer from Villava, Serapio Huici Lazcano (1868–1953), who was one of the most dynamic businessmen of the times, a shareholder in electricity companies, *Papelera Española*, sugar mills, founder of *Cementos Portland*, among others.

The Navarrese in Madrid

As before, *La Conciliación* also appealed for support from other Navarrese who held political posts and had influence in the national world. Perhaps the most important protector of *La Conciliación* was the Pamplona politician Francisco Javier González de Castejón y Elío (1848–1919), the Marquis of Vadillo. A professor of natural law

47. LCBM 1, 251–252 (1904).

48. Sanchez Aranda, José Javier, *Navarra en 1900: los comienzos del Diario*. Pamplona, 1983, p. 29; Imbuluzqueta Alcasena, Gabriel, *Periódicos navarros en el siglo XIX*. Pamplona, 1993.

49. León Sanz, Pilar, “Private initiatives against social inequalities and health vulnerabilities: the case of *La Conciliación* (Pamplona, 1902–1920)” in Patrice Bourdelais, John Chircop, *Vulnerabilities, Social Inequalities and Health*. Évora, Edições Colibri, forthcoming.

at the *Universidad Central*, the Marquis of Vadillo began his political career as a deputy for Pamplona (1879–1880), was re-elected to the same post in every term of office until 1914, when he was made a senator for life. He belonged to the *Unión Católica* group, and with A. Pidal y Mon joined the Conservative Party, and later took part in the Catholic Congresses in Madrid and Zaragoza. He was the Minister for Grace and Justice (1900–1901), and, again with F. Silvela, he held the portfolio of Agriculture and Public Works (1902–03) and, in 1913, with Eduardo Dato, that of Grace and Justice.⁵⁰ Among other things, he obtained an annual State subsidy of two or three thousand pesetas for *La Conciliación*, during the first eight years. He also kept the Society up to date on different governmental decisions as can be seen in the minutes of April 24th 1905:

The President read out a telegram from the Most Excellent Marquis of Vadillo notifying the pardon in favour of the accused Resano and Ruba, and the President stated that he had replied expressing his gratitude for his assistance on the matter.⁵¹

Another Navarrese was the professor of medicine at the *Universidad Central de Madrid*, Antonio Simonena Zabalegui (1861–1941) who was invited to give a lecture “for the workers”, and then made an honorary member of *La Conciliación* in 1904.⁵² This honour was shared by Eduardo Sanz y Escartín (1855–1939) from Pamplona, Count of Lizárraga, a politician belonging to the Conservative Party, who, among other posts, was the Civil Governor of Barcelona, president of the permanent commission of the Council for Public Instruction, president of the Institute for Social Reforms and Minister of Labour (1921); etc.⁵³

The support of other public figures

La Conciliación had the support of Padre Vicent SJ, and of Padre Manjón. The former, the Valencia Jesuit sociologist Antonio Vicent (1837–1912), was a key figure in Spain because of the range of his ideas and projects for social action, particularly in rural areas. His presence in Pamplona, in 1906, brought about the establishment of the *Consejo Diocesano de las Corporaciones Católico-Obreras* of the Pamplona Diocese and the Navarra Federation of agricultural co-ops. In December 1902, *La Conciliación* contacted the priest and educator Andrés Manjón y Manjón (1846–1923), and requested “data on his system of instruction”. Father Manjón was the creator of the Ave María schools, and was well known for his work on education. At

50. Bleiberg, German, *Diccionario de historia de España*. Madrid, 1979.

51. LCBM 1, 316–317 (1905).

52. LCBM 1, 169 (1904).

53. Bleiberg, German, *Diccionario de historia de España*. Madrid, 1979.

the time *La Conciliación* contacted him, he had been made Counsellor for Public Instruction by the government minister Romanones.⁵⁴

Moreover, in order to achieve its educational and recreational objectives, *La Conciliación* organised conferences to which well-known Spanish Social-Christian politicians and activists of the period were invited. Thus, in 1903, for the celebration of their annual festival, they invited Juan Cancio Mena, a Carlist ideologist, who was married to Francisca Sarasate, a sister of the famous Navarrese violinist. He founded the “Academia de San Luis Gonzaga” in Saragossa, an organization which organized cycles of scientific and religious conferences, and he also often wrote (habitually) for the newspaper *El Eco de Navarra*.⁵⁵ Later, between 1896 and 1929, another guest of *La Conciliación*, Mariano Baselga, became President of the *Academia de San Luis Gonzaga*.⁵⁶ This is recounted in the minutes of April 1905, that they agreed “to extend an invitation to Don Mariano Baselga to make a speech at the *La Conciliación* festival.”⁵⁷ Mariano Baselga Ramírez (1865–1938), was a writer, banker and philosopher, and one of the most outstanding figures in Zaragoza in the early 20th century. Baselga wrote assiduously in the daily press and in numerous publications such as the *Revista de Aragón*, *El Pilar* and *Atheneum*.

On other occasion *La Conciliación* proposed “to initiate relations with Don Víctor Pradera”⁵⁸, a lawyer and engineer who participated actively in both Navarrese and national politics as a Deputy and member of the Tribunal for Constitutional Guarantees during the Second Republic; his publicity work for national newspapers was also important.⁵⁹ Other guests of *La Conciliación* were the Royal Academy of Madrid member, Francisco de Paula Arrillaga;⁶⁰ the editor of *La Gaceta del Norte* newspaper, José María de Urquijo;⁶¹ José Posse y Villelga, etc.⁶² *La Conciliación* kept in touch with all of these people for many years.

54. There are many publications about this author, for example: Medina Ocaña, José, *Andrés Manjón*. Madrid, 2006.

55. LCBM 1, 61–63 (1903). Cf.: Sanchez Aranda, Jose Javier, *Navarra en 1900: los comienzos del Diario*. Pamplona, 1983, p. 99.

56. Cf. Pascual de Quinto y de los Rios, Jose, *Las publicaciones de la Real Academia de Nobles y Bellas Artes de San Luis, de Zaragoza, desde su fundación hasta nuestros días (1792–1987); su historia y bibliografía*. Zaragoza, 1988.

57. LCBM 1, 316–317 (1905).

58. LCBM 1, 322–323 (1905).

59. Orella Martínez, José Luis, *Víctor Pradera: un católico en la vida pública de principios de siglo*. Madrid, 2000.

60. LCBM 1, 304–306 (1905).

61. LCBM 1, 304–306; 310–312; 345–346 (1905); LCBM 1, 197–200 (1904).

62. LCBM 1, 345–346 (1905).

Conclusions

From this date, it is clear that that *La Conciliación* was part of the medical healthcare network in the city, evidences by the relation between power and associationism, and the interconnected interests of the associations, the social groups and the public bodies. In particular we should note the significance of the close contact between the town council and the local societies. *La Conciliación*, and other associations likewise, were linked to local political events and choices. It depended on them for its particular development and in order to organize its social-healthcare programmes throughout the town. We have also seen the relations this Mutual Aid Society had with other local organizations and with those in other cities and even in other countries.

In general, the institutional relations of *La Conciliación* were determined by two issues. The first was the achievement of the Society's objectives: medical-pharmaceutical assistance and the provision of financial aid for unemployed or ill worker-members. Together with this was its work on labour and educational mediation. The second question was that its dealings with other bodies were limited by the characteristics of the associations. In general, and also in Pamplona, the mutual aid and workers' societies of the times were based on the different ideological motivations –Catholic or lay – of their sponsors; and they were either made up specifically of workers or were mixed.⁶³ In this case, at least during the period studied here, *La Conciliación* only collaborated with similar institutions (Catholic and mixed), with which it shared an authentic support network. Through this kind of association, which attempted to apply the social doctrine of the Papal Encyclical *Rerum novarum* (1891), the Catholic Church directly influenced the people. However – as we have seen – it was not the only model.

Of particular importance in this area were the personal contacts of the protector-members of the Society. They produced the synergy with government bodies which helped *La Conciliación* to participate in the political life, and the physical and social construction of the city. Whatever the case, the records show, precisely, that *La Conciliación* defended its independence of judgement and action energetically; which leads us to support the idea that we cannot entirely link associationism and the powers-that-be. Such an approach would condition our understanding of sociability and the association phenomenon in itself, because it involves the actions of individuals who, independently or in a group, work in certain circumstances, taking into account their personal characteristics and convictions.

63. Montero García, Feliciano, Esteban de Vega, Mariano, "Aproximación tipológica al mutualismo popular y obrero en España: el mutualismo asistencial", pp. 457–469 in Santiago Castillo, coord., *La historia social en España: actualidad y perspectivas: actas del I Congreso de la Asociación de Historia Social, Zaragoza, septiembre, 1990*. Madrid, 1991.

Pilar Leon Sanz is Associate Professor at the Department of Biomedical Humanities, University of Navarra.

Acknowledgements

This work is part of the project “La Sociedad de Obreros La Conciliación: escenario de prácticas médicas (1902–1977)”, funded by the Plan de Investigación Universidad de Navarra (2006–09). A summary was presented in the Workshop Welfare, Health and Social Change Welfare, Health and NGOs, Pamplona, 17–18 October, 2008, funded by *PHOENIX– Comparative History of European Public Assistance* (Socrates EU Programme).

References

- Andrés Gállego, José, “Sobre el inicio de la política obrera contemporánea en Navarra, 1855–1916”, *Príncipe de Viana*, 1978, pp. 335–375.
- Andrés-Gallego, José, *Historia contemporánea de Navarra*. Pamplona, 1982.
- Andrés-Gallego, José, *Pensamiento y acción social de la Iglesia en España*. Madrid, 1984.
- Andres-Gallego, José *Navarra cien años de historia*. Pamplona, 2003.
- Andreu Martínez Gállego, Francesc and Ruzafa, Rafael, “Los socorros mutuos y la cooperación en la España del siglo XIX: actitudes de los poderes públicos y soluciones populares” pp. 101–135 in Santiago Castillo and Rafael Ruzafa, eds., *La previsión social en la historia: actas del VI Congreso de Historia Social de España: Vitoria, 3–5 de julio de 2008*. Siglo XXI de España. Madrid, 2009.
- Aznar Embid, Severino, *El riesgo-enfermedad y las Sociedades de Socorros Mutuos*. Madrid, 1914.
- Bleiberg, German, *Diccionario de historia de España*. Madrid, 1979.
- Calavia Urdániz, Ana, “La Conciliación de Pamplona y sus relaciones con los sindicatos católico-libres (1915–1923)”, *Príncipe de Viana*, XLIX: 10 Anejo (1988): 73–84.
- Carrasco Calvo, Salvador, “Los Sindicatos libres en Navarra”, *Príncipe de Viana, I Congreso de Historia de Navarra de los siglos XVII, XIX y XX*. XLVII: 5, Anejo (1986): 53–67.
- Castrillejo Ibáñez, Félix, “El Círculo Católico de Burgos como modelo de sociabilidad confesional (1883–1936)”, pp. 237–262 in Elena Maza Zorrilla, ed., *Asociacionismo en la España contemporánea: vertientes y análisis interdisciplinar*. Valladolid, 2003.
- Delgado Viñas, Carmen, *Clase obrera, burguesía y conflicto social: Burgos, 1833–1936*. Valladolid, 1993.
- Ferrer Muñoz, Manuel, “Panorama asociativo de Navarra entre 1887 y 1936”, pp. 49–65 in *Congreso de Historia de Euskal Herria*. Vitoria, VI, 1988.
- García-Sanz Marcotegui, Angel, “Elites económicas y políticas en la Restauración. La diversidad de las derechas navarras”, *Historia contemporánea*, 23 (2001), 577–628.
- Imbuluzqueta Alcasena, Gabriel, *Periódicos navarros en el siglo XIX*. Pamplona, 1993.
- León Sanz, Pilar, “Professional Responsibility and the Welfare System in Spain at the Turn of the 19th Century”, *Hygiea Internationalis*, 5: 1 (2006), 75–90.

- León Sanz, Pilar, “La concertación de la asistencia en la enfermedad en La Sociedad de Obreros La Conciliación (1902–1919)”, pp. 97–108 in *Navarra: Memoria e Imagen*. Eunate, Pamplona, 2006.
- León Sanz, Pilar, “Higienismo y previsión social a través de una Sociedad de Socorros Mutuos: el Consultorio de Niños de Pecho de “La Conciliación” (1905–1916)” CD: Comunicaciones, pp. 1–23, in Santiago Castillo and Rafael Ruzafa, eds., *La previsión social en la historia: actas del VI Congreso de Historia Social de España: Vitoria, 3–5 de julio de 2008*. Siglo XXI de España. Madrid, 2009.
- León Sanz, Pilar, “Private initiatives against social inequalities and health vulnerabilities: the case of La Conciliación (Pamplona, 1902–1920)” in Patrice Bourdelais, John Chircop, Vulnerabilities, Social Inequalities and Health. Évora, forthcoming.
- León Sanz, Pilar, “Diversity and Convergence in practice: the Mutual Benefit Societies’ Responses to the 1918–19 Influenza Pandemic in Pamplona”, in Health and Welfare: diversity and convergence in policy and practice, Phoenixtn Conference Athens, 2009.
- Majuelo Gil, Emilio, Pascual Bonis, Angel, *Del catolicismo agrario al cooperativismo empresarial: setenta y cinco años de la Federación de Cooperativas Navarras, 1910–1985*. Madrid, 1991.
- Medina Ocaña, José, *Andrés Manjón*. Madrid, 2006.
- Mina Apat, M Cruz, “Elecciones y partidos en Navarra (1892–1923)”, pp. 111–129 in José Luis García Delgado, *La España de la Restauración. Política, economía legislación y cultura*. Madrid, 1985.
- Montero García, Feliciano, Esteban de Vega, Mariano, “Aproximación tipológica al mutualismo popular y obrero en España: el mutualismo asistencial”, pp. 457–469 in Santiago Castillo, coord., *La historia social en España: actualidad y perspectivas: actas del I Congreso de la Asociación de Historia Social*, Zaragoza, septiembre, 1990. Madrid, 1991.
- Montero, Feliciano, “El debate sobre el intervencionismo y el nacimiento del Instituto Nacional de Previsión (INP)”, pp. 171–196 in: *La previsión social en la historia: actas del VI Congreso de Historia Social de España: Vitoria, 3–5 de julio de 2008*. Madrid: Siglo XXI de España, 2009.
- Olabarri Gortazar, Ignacio, “Notas en torno al problema de la conciencia de identidad colectiva de los navarro en el siglo XIX”, pp. 339–356 in *Congreso de historia de Euskal Herria*, San Sebastián, V, 1988.
- Olabarri Gortazar, Ignacio, “Notas sobre la implantación, la estructura organizativa y el ideario de los partidos del Turno en Navarra, 1901–1923”, *Príncipe de Viana*, 10 Anejo (1988), 317–329.
- Orella Martínez, José Luis, *Víctor Pradera: un católico en la vida pública de principios de siglo*. Madrid, 2000.

- Pascual de Quinto y de los Rios, José, Las publicaciones de la Real Academia de Nobles y Bellas Artes de San Luis, de Zaragoza, desde su fundación hasta nuestros días (1792–1987); su historia y bibliografía. Zaragoza, 1988.
- Pazos, Anton M., El clero navarro (1900–1936): origen social, procedencia geográfica y formación sacerdotal. Pamplona, 1990.
- Pejenaute Goñi, Javier M, “La Federación Católico Social de Navarra y los partidos políticos del momento (1910–1916)”, *Príncipe de Viana, I Congreso de Historia de Navarra de los siglos XVII, XIX y XX*. XXXVII: 5, Anejo (1986): 37–51.
- Pejenaute Goñi, Javier María, “Las cooperativas de Consumo y producción en Navarra (1907–1917)”, pp. 257–271 in *Congreso de Historia de Euskal Herria*. Vitoria, VI, 1988.
- Pejenaute Goñi, Javier María, “Las Sociedades de Socorros Mutuos en Navarra (finales del siglo XIX-Comienzos del XX)”, pp. 273–287 in *Congreso de Historia de Euskal Herria*. Vitoria, VI, 1988.
- Pejenaute Goñi, Javier, “Participación del clero en la Federación navarra de Cajas Rurales”, pp. 369–376 in *Congreso de Historia de Euskal Herria*. Vitoria, VI, 1988.
- Posse y Villelga, José de, Estudios sociales. El socialismo, sus hombres, su organización, sus procedimientos. La Asociación Agrícola, Las Uniones Profesionales. Los Obreros de Tierra de Campos, Bilbao, 1912.
- Sanchez Aranda, José Javier, *Navarra en 1900: los comienzos del Diario*. Pamplona, 1983.
- Tuñón de Lara, Manuel, “Navarra en los movimientos sociales de la Historia Contemporánea de España”, *Príncipe de Viana, I Congreso de Historia de Navarra de los siglos XVII, XIX y XX*. XXXVII: 5, Anejo (1986): 9–22;
- Virto Ibáñez, Juan Jesús, “La UGT de Navarra: algunas aportaciones al estudio del socialismo navarro”, *Príncipe de Viana*. Pamplona, 1989, 395–429.
- Virto, Juan Jesús, “La UGT”, p. 244 in Alfredo Floristán Samanes, *Gran Atlas de Navarra*, II. Caja de Ahorros de Navarra, Pamplona, 1986.

Conditions in the Channel Islands during the 1940–45 German Occupation and their impact on the health of islanders

A systematic review of published reports and first-hand accounts

Rosemary F. Head and George T. H. Ellison

An unhealthy occupation? The Impact of the 1940–45 German Occupation on the Health of Channel Islanders

We're all quite well, but getting thinner,
Not much for tea, still less for dinner.
Though not exactly on our uppers,
We've said Adieu to cold ham suppers.
In peace time those who wished to slim,
Tried diet, massage, baths and gym.
We'll tell the stout of every nation
The secret's solved by Occupation.

[Anon, Jersey (Lainé, 1945)]

Introduction

The occupation of the British Channel Islands by the German Army is one of the less discussed episodes of the Second World War, not least perhaps because it was something of an embarrassment to the British Government of the time.¹ The British Government was forced to order the demilitarisation of the islands, which lie just off the coast of northern France, when the collapse of the

1 Bunting, M. (2004). *The Model Occupation: The Channel Islands under German rule 1940–1945*. London: Pimlico.

Maginot line and the retreat of Allied forces to the beaches of Dunkirk meant that occupation became inevitable.² Any attempt to defend the islands would have involved huge loss of life, both military and civilian, and at little strategic gain to the Allies. For this reason they were abandoned to their fate – a fate which involved almost five years of increasing deprivation and misery.

Studies of the impact of conditions during the German occupation of other European countries are plentiful, and suggest that conditions were particularly severe in occupied Russia, where sources speculate that the Leningrad siege may have claimed the lives of up to 50% of the city's population.³ In the Netherlands, German blockades towards the end of 1944 had an immediate effect on the health of the population, leading to an increase in mortality, a decrease in fertility and a reduction in the birth weight of babies.⁴ The occupation of the Channel Islands also involved increasing deprivation, culminating in a siege during the last 10 months of the war when the islands were cut off from mainland France by the Allied advance following the Normandy landings.

As part of a broader programme of research exploring the impact of the occupation on the health of Channel Islanders (the Channel Islands Occupation Birth Cohort Study and related studies; see Ellison et al., 1998 and the Appendix), this paper set out to conduct a systematic review of published sources describing the conditions experienced by Channel Islanders during the 1940–45 occupation and thereby assess the immediate and longer term impact of these conditions on islanders' health.

Methods

The systematic review applied each of the four key components developed within epidemiology and the applied social sciences for generating explicit secondary syntheses of data from primary sources: a systematic search for relevant published sources with explicit inclusion and exclusion criteria; the critical appraisal of included sources to assess the reliability of the evidence they provide; the extraction of relevant data from each of the included sources; and the collation of extracted data to generate a synthesis of findings.⁵ The systematic search for relevant sources

2 Sanders, P. (2005). *The British Channel Islands under German Occupation 1940–45*. Jersey: Jersey Heritage Trust.

3 Salisbury, H. E. (2000). *The 900 Days: The siege of Leningrad*. London: Pan.

4 Stein, Z., Susser, M. (1975). "Fertility, Fecundity, Famine: Food rations in the Dutch Famine 1944–5 have a causal relation to fertility, and probably to fecundity", *Human Biology*, 47: 131–154.

5 Victor, L. (2008). "Systematic reviewing", *Social Research Update*, 54: 1–4.

used a citation network based on references cited in Madeleine Bunting's recently updated historical account, *The Model Occupation* (2004), and on references cited in each of these cited sources. Any sources that provided first- or second-hand accounts of conditions and related experiences during the 1940–45 occupation of the Channel Islands were included in the review. The first of these searches generated a total of 12 published histories of the occupation, including several written immediately after the occupation ended and a number of more recent additions. In addition to these formal histories of the occupation, personal memoirs and diaries written by those who experienced the occupation first-hand were obtained from the reference lists of works identified through the citation network and from a systematic search of the comprehensive collection of published and unpublished material on the occupation held by the Guernsey Island Archives Service.⁶ A total of 11 such memoirs and diaries were obtained, and these also included those contemporary to the occupation and those published more recently. Meanwhile, the search of the Guernsey archives also uncovered wartime recipes and health reports, as well as two official reports compiled by the Guernsey Controlling Committee – the civilian “cabinet” that assumed emergency administrative powers in the run-up to the occupation and thereafter⁷ – and four academic papers and theses examining the occupation of the Channel Islands.

A total of 30 sources were therefore consulted for information relating to the occupation of the Channel Islands (a complete list of these can be found in Table 1). During the critical appraisal and extraction of data provided by each of the included sources, details such as the rationing of foodstuffs, the dates on which specific events occurred, and the nature of conditions on the islands were cross-checked and validated between sources prior to synthesis. Critical appraisal confirmed that much of the material contained in these sources was essentially anecdotal and was therefore of limited reliability. For this reason the data extracted from these sources were treated with caution and only included in those aspects of the synthesis that are essentially speculative. Nonetheless, wherever possible the key data presented here were drawn from conditions and events to which more than one source referred, and are therefore most likely to offer valid information on conditions prevailing during the occupation. The following is therefore intended to be a robust account of conditions during the occupation and the reported health consequences of these conditions.

6 <http://user.itl.net/~glen/archgsy.html>

7 Jeffs, D. (ed.) (1999). *One Hundred Years of Health: The changing health of Guernsey 1899–1999*. Guernsey: Board of Health.

Table 1. List of sources used for compilation of the review.

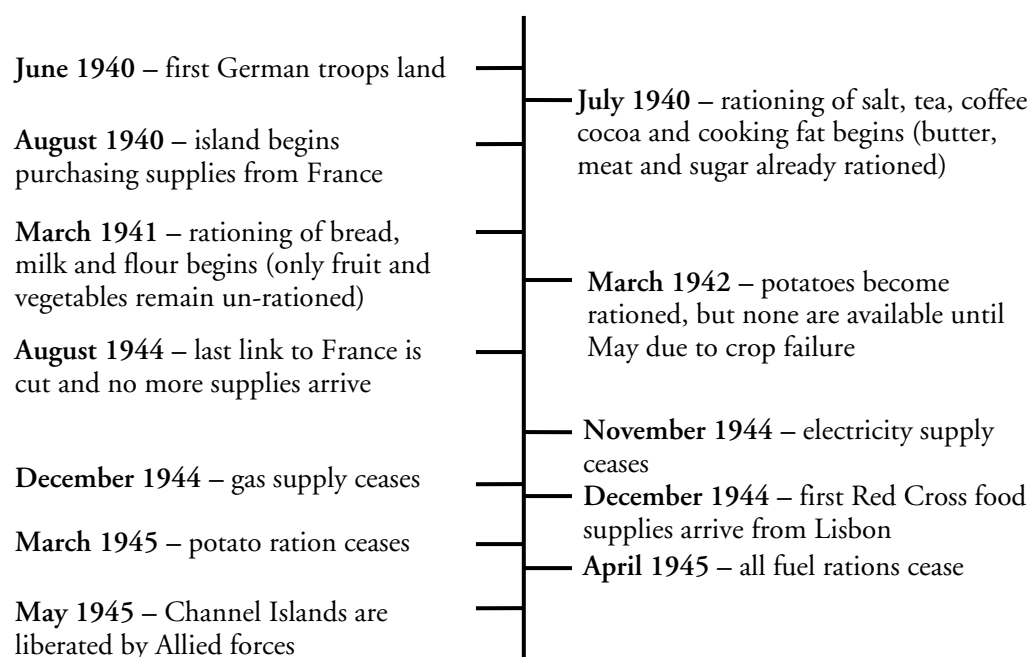
Author(s)	Year	Type of Source	Where Extracted From
Anquetil	1990	Memoir	Reference List
Aubin Morris	1994	Recipes	Guernsey Archives
Bell	1995	Published History	Reference List
Bichard Plumb	1958	Memoir	Reference List
Bihet	1985	Memoir	Reference List
Bihet	1993	Memoir	Reference List
Bunting	2004	Published History	Original source consulted
Cruickshank	1975	Published History	Reference List
Dales	1995	Anthology	Guernsey Archives
Day	1995	Anthology	Guernsey Archives
Ellison and Kelly	2005	Academic Paper	Guernsey Archives
Falla	1995	Anthology	Guernsey Archives
Hillsdon	1999	Anthology	Guernsey Archives
Jeffs	1995	Anthology	Guernsey Archives
Lainé	1945	Memoir	Reference List
Lainé	1945	Committee Report	Guernsey Archives
Langlois	1999	Academic Paper	Guernsey Archives
Le Ruez	1994	Memoir	Reference List
Leale	1945	Committee Report	Guernsey Archives
Lewis	1983	Memoir	Reference List
Maugham	1946	Published History	Reference List
Mayne	1945	Memoir	Reference List
McLoughlin	1995	Published History	Reference List
Mollet	1954	Published History	Reference List
Ozanne	1994	Memoir	Reference List
Pipe	1945	Academic Paper	Wellcome Library
Rivett	2001	Published History	Reference List
Sanders	2005	Published History	Reference List
Sinel	1958	Published History	Reference List
Sinel	1984	Memoir	Reference List
Stoeckl and Ellison	2001	Academic Paper	Guernsey Archives
Tabb	2005	Published History	Reference List
Toms	1967	Published History	Reference List
Troudeaud	1990	Memoir	Reference List
Wood and Wood	1955	Published History	Reference List

Background to the occupation

The occupation of the Channel Islands (affecting the populations of the two main islands, Jersey and Guernsey, as well as Alderney, which was almost completely evacuated, and the small population of Sark) began at the end of June 1940. Prior to the occupation, large numbers of islanders were evacuated (including men leaving to enlist in the British armed forces), with 17,000 out of a population of about 41,000 leaving Guernsey and 10,000 of a population of about 50,000 leaving

Jersey.⁸ Children in particular were encouraged to evacuate, and most of the schools in Guernsey evacuated en masse although, again, fewer left Jersey.⁹ Despite its much reduced population, conditions in Guernsey were rapidly to become more severe than those on Jersey due to a more limited capacity for growing food and a larger influx of German soldiers.¹⁰ In fact, a meeting of doctors in Guernsey concluded that total evacuation would be required in order to avoid starvation of the remaining population, but this advice was not heeded.¹¹

Figure 1. Timeline showing major events during the occupation of Guernsey, 1940–45.



Source: Report on Essential Supplies and Services during the Occupation of Guernsey by German Forces and the Work of the Committee, States of Guernsey Committee for the Control of Essential Commodities.

At the beginning of the occupation, conditions were bearable on all of the islands, as large stocks of food and other essentials had been laid in from the beginning of the war.¹² However, from 1941 onwards conditions became increasingly difficult as these stocks ran out and had to be replaced by whatever substitutes could be obtained from France – substitutes which were often of inadequate quantity and

⁸ Bunting (2004).

⁹ Bihet, M. (1985). *A Child's War: The German Occupation of Guernsey as seen through young eyes*. Sparkford: Haynes.

¹⁰ Sanders (2005).

¹¹ Cruickshank, C. (1975). *The German Occupation of the Channel Islands: The official history of the occupation years*. Guernsey: Guernsey Press.

¹² Sinel, L. (1958). *Swastika Over Jersey: An outline of the occupation and the liberation of the island*. Guernsey: Guernsey Press.

inferior quality. Leslie Sinel in his 1958 book, *Swastika Over Jersey: An Outline of the Occupation and the Liberation of the Island*, stated that successive Christmases passed “each more grim than the one before”.¹³ However, there is evidence that the winter of 1941–2 was particularly difficult owing to the failure of the potato crop. Indeed, RCF Maugham (1946: 97) pointed out that “[t]he winter months [of 1941–2] brought with them a long period of domestic misery, owing to hunger and cold. Neither was easy to bear”.

The situation became more severe for islanders in the summer of 1944, when the liberation of Normandy following the D-Day landings cut the islands off from mainland France. From this point onwards the islands were under siege and their meagre stocks of food did not last very long. By the end of that year the islands were on the brink of starvation, and were only reprieved by the arrival of food and other essential supplies from the Red Cross. A letter from an islander in autumn 1944, reproduced by Madeleine Bunting in the 2004 edition of her book, *The Model Occupation*, expressed the sentiment of the time: “Life is not worth living, we cannot sleep at nights, we are so worried and distressed... we are starving here”.¹⁴ Even after the arrival of Red Cross supplies the islands continued to be in a desperate situation until the end of the war, since the German army increasingly requisitioned civilian food and materials in order to save themselves from starvation,¹⁵ on the grounds that the islanders were now being fed by the “protecting power” via the Red Cross.

There is evidence that the occupation did not affect all sections of society equally, despite the fact that food and other essentials were carefully rationed. A report drawn up by the President of the Guernsey Board of Health and cited by Madeleine Bunting (2004: 125) concluded that “the poor and the elderly, particularly in the towns, had suffered the worst”. Times were particularly hard for families where the father had left to enlist in the British armed forces, because the reduced income made it difficult to obtain extra supplies on the black market.¹⁶ Likewise, women are thought to have suffered particularly badly, because they would give up their rations to feed their husbands and children.¹⁷

Charles Cruickshank (1975: 133) argued that “no two islanders were affected in exactly the same way by the occupation” – wealth was definitely important for mitigating the worst of the conditions, as was residence in one of the islands’ rural parishes where more food could be grown and hidden. Farmers, in particular, are likely to have fared better because they were permitted to retain a proportion of their produce, and many secretly retained a great deal more than they were officially

13 Sinel (1958): 18.

14 Bunting (2004): 236.

15 Jeffs (1999).

16 Bunting (2004).

17 Sanders (2005).

allowed.¹⁸ Indeed, some sections of the population may have escaped much of the occupation relatively unscathed. According to Paul Sanders' (2005) account, the Reverend Mylne in Jersey believed that some 10–15% of the population were essentially unharmed by the occupation either because they “made deals” with the Germans or because they were so affluent that they could secure additional food and other essentials regardless of black market prices.¹⁹ This figure may have been lower in Guernsey because of the harsher conditions there, but even there not everyone will have suffered equally. Nonetheless, it seems likely that most of the population suffered some ill effects from the occupation, and no-one appeared to have been unaffected by the worsening conditions precipitated by the 1944–45 siege.

Rations and other sources of food

At the beginning of the war, food stocks had been increased to full storage capacity, but rationing was quickly introduced in order to make the most of these stocks.²⁰ At first the rations were adequate, but a new system soon had to be implemented, and in September 1940 the island authorities began to purchase supplies from France. However, the amount obtained was much less than that imported during peacetime. For example, the total quantity of food imported into Guernsey during 1938–39 amounted to 1kg per person per day, while the average for the occupation years (excluding the period of the 1944–45 siege) was only 0.4kg per person per day.²¹ As Sir Abraham Lainé mentions in the final report of Guernsey's Essential Commodities Committee, “The supplies of foodstuffs allocated to the island periodically by the French Authorities did not allow anything like an adequate standard of living to be maintained”.²²

By August 1941, rationing extended to almost all foodstuffs and other essentials, including bread (see Tables 2 and 3). Fruit and vegetables were the only food freely available, but even these were in limited supply because they were only available seasonally and those that were imported often did not survive the journey from France intact.²³ Indeed, even after the introduction of rationing, certain foods became increasingly difficult to obtain, so that by 1942 rations of pork and poultry

18 Lewis, J. (1983). *A Doctor's Occupation: The dramatic true story of life in Nazi-occupied Jersey*. Sevenoaks: New English Library.

19 Sanders (2005).

20 Lainé, A. (1945a). *Occupation Diary*. Guernsey: Island Archives Service.

21 Lainé (1945a).

22 Lainé (1945a):10.

23 Sanders (2005).

Table 2. Weekly rations of major foodstuffs provided to adults in Guernsey during the occupation – certain categories such as heavy workers or hospital patients sometimes received slightly higher rations of some items.

Week Beginning	Butter	Potatoes	Sugar	Meat	Milk(separated)	Salt
1 st July 1940	4oz ¹	NR	8oz	2/- ¹	NR	1oz
30 th Sept 1940	4oz	NR	6oz	1/-	NR	2oz
31 st March 1941	4oz	NR	6oz	1/-	3½pt ¹	2oz
29 th Sept 1941	4oz	NR	3oz	6oz	3½pt	3oz
23 rd March 1942	4oz	Nil	Nil	4oz	3½pt	3oz
28 th Sept 1942	4oz	5lb ¹	3oz	4oz	3½pt	2oz
29 th March 1943	4oz	5lb	3oz	4oz	3½pt	Nil
27 th Sept 1943	4oz	5lb	3oz	6oz	3½pt	1oz
27 th March 1944	3oz	Nil	3oz	4oz	3½pt	1oz
25 th Sept 1944	4oz	6lb	2oz	Nil	5¼pt	Nil
26 th March 1945	Nil	Nil	Nil	Nil	½pt	4oz

¹Units: oz – ounces (1oz = 28g); lb – pounds (1lb = 454g); pt – pints (1pt = 568ml)

Source: Report on Essential Supplies and Services during the Occupation of Guernsey by German Forces and the Work of the Committee, States of Guernsey Committee for the Control of Essential Commodities.

had disappeared completely and fish was a rare luxury due to restrictions on fishing.²⁴ Rations were substantially reduced in quantity towards the end of 1941 (see Tables 2 and 3), and from this point onwards only skimmed milk was available in Guernsey, although Jersey had access to full cream milk for the duration of the occupation.²⁵ The poor potato harvest in 1941 did not help matters²⁶ and by 1943 the potato ration had been drastically reduced, while the potatoes that were available were of very low quality, half being rotten.²⁷ The rations were completely inadequate by 1944, so that most meals consisted of vegetable soup and meat was only provided once every two weeks.²⁸

Finally, during the 1944–45 siege, the rations available could not provide enough for people to survive. By this point they were a quarter of the level of German rations,²⁹ and required supplementation from off-ration foodstuffs. Indeed, estimates from the occupation indicate that the rations in Jersey provided just 2100–2500 kcal per day (i.e. 70–83% of an estimated average adult requirement of 3000 kcal per day) up until 1944,³⁰ and that by the end of 1944 this had fallen to

24 Bihet, M. (1993). *Reflections of Guernsey*, Guernsey: Guernsey Press; Sanders (2005).

25 Lewis (1983).

26 Cruickshank (1975).

27 Lainé (1945a)

28 Lainé (1945a).

29 Bunting (2004).

30 Sanders (2005).

Table 3. Weekly bread ration provided in Guernsey during the occupation.

Week Beginning	Male heavy worker	Other male adult	Female heavy worker	Other female adult	Children over 1½	Children under 1½
24 th Mar 1941	6lb 2½oz ¹	4lb 10oz	5lb 6¼oz	4lb 10oz	3lb 1½oz	3lb 1½oz
28 th July 1941	6lb 2½oz	4lb 10oz	5lb 6¼oz	4lb 10oz	3lb 1½oz	1lb 8oz
15 th Sep 1941	6lb 0oz	4lb 8oz	5lb 4oz	4lb 8oz	3lb 0oz	1lb 8oz
10 th May 1943	4lb 12oz	3lb 12oz	4lb 4oz	3lb 12oz	3lb 0oz	1lb 8oz
1 st Aug 1943	6lb 0oz	4lb 8oz	5lb 4oz	4lb 8oz	3lb 0oz	1lb 8oz
27 th Nov 1944	3lb 0oz	3lb 0oz	3lb 0oz	3lb 0oz	3lb 0oz	1lb 8oz
12 th Mar 1945	5lb 0oz	5lb 0oz	5lb 0oz	5lb 0oz	4lb 0oz	1lb 0oz

¹Units: oz – ounces (1oz = 28g); lb – pounds (1lb = 454g)

Source: Report on Essential Supplies and Services during the Occupation of Guernsey by German Forces and the Work of the Committee, States of Guernsey Committee for the Control of Essential Commodities.

2000 kcal per day, or as low as 1700 kcal per day for working class families.³¹ The Medical Officer in Guernsey believed that caloric intake did not fall below 2300 kcal per day during this period, but when a medical team visited Guernsey after the liberation in 1945, the diet was found to be poorer than that of Jersey.³² More recent estimates indicate that the daily ration in Guernsey during the winter and spring of 1942 was equivalent to 1198 kcal per day, and in the last 10 months of the occupation had fallen to just 1163 kcal per day. Both of these amounts offer less than half of the estimated average adult requirements, but their impact would have been worst during 1944–45 when off-ration foods were largely unavailable.³³

It appears clear, then, that the population of the Channel Islands would have needed to rely on sources of off-ration food to supplement their meagre rations. The largest alternative source of off-ration food was the black market, which was in full operation from early in the occupation and in which virtually the entire population of the Channel Islands seems to have participated.³⁴ An extract from a letter from Guernsey resident Richard Foley to his mother during the occupation (reproduced in the 1995 memories of the Guernsey Women's Institute) suggested that: "Almost everybody in the island managed somehow or other to get things apart from the basic rations, as on these alone I do not see how any of us could possibly

31 Cruickshank (1975).

32 Cruickshank (1975).

33 Langlois, A. (1999). *Undernutrition in Early Life and Cause of Premature Mortality in Guernsey*. Cambridge: Hons. Thesis, Department of Biological Anthropology, University of Cambridge.

34 Maugham, R. C. F. (1946). *Jersey under the Jackboot: A first-hand account of the island's ordeal during the German occupation*. London: W. H. Allen and Co.

have survived”.³⁵ Many people appear to have spent their life savings on the black market,³⁶ as prices became increasingly prohibitive with increasing scarcity. Although officially forbidden by the Germans, there was also a barter market through the shops and in the press, so that those with a little surplus of basic essentials could exchange this with others.³⁷

As a supplement to official rations and food acquired through the black market, islanders also became experts at foraging and creating food from unlikely sources. These methods ranged from eking out foodstuffs by, for example, eating potato peelings and food that had gone bad,³⁸ to the production of salt, magnesium carbonate and fish oils in a specially constructed plant to help provide some of the nutrients islanders were missing in their diet.³⁹ People discovered how to make puddings from carrageen moss (a local seaweed) and skimmed milk,⁴⁰ while the only sources of fat and sugar were the small quantities of buttermilk which were provided from time to time.⁴¹ Less palatable additions to the diet provided by foraging included maggots and husks.⁴² Worse, by 1943 most bread was a mixture of wheat, oats, peas and mashed potato, as well as sweepings from the floors of bakeries, none of which is likely to have aided the digestion of islanders.⁴³

Finally, it is clear that some islanders were reduced to stealing from one another, although this is thought to have been rare. Cases of theft, while common, were thought to be mostly committed by the foreign forced labourers brought to the islands by the Germans, many of whom were already on the brink of starvation when they arrived. Additionally, German troops routinely used their position of power to “requisition” islanders’ food, even when this was against the law.⁴⁴ However, members of Guernsey’s police force were also tried for the theft of food from civilian stores during the occupation. In their defence they stated that their rations and pay were inadequate, PC Kingston Bell being quoted as saying, “It became obvious that the rich could live and the poor could starve”.⁴⁵ It is therefore hardly surprising that some islanders were reduced to breaking the law.

35 Dales, G. (1995). “True account of relatives under German Occupation in Guernsey in the year 1944”, *Careless Talk Costs Lives: Memories 1939–1945*. Guernsey: Guernsey Women's Institute: 36.

36 Day, O. (1995). “Extracts from a letter sent by Richard Foley to his mother 12th June 1945”, *Careless Talk Costs Lives: Memories 1939–1945*. Guernsey: Guernsey Women's Institute.

37 Cruickshank (1975).

38 Sanders (2005).

39 Lainé (1945a).

40 Lainé (1945a).

41 Bihet (1985).

42 Bihet (1985).

43 Lewis (1983).

44 Cruickshank (1975).

45 Bell, W. M. (1995). *I Beg to Report. Policing in Guernsey During the German Occupation*. Guernsey: Guernsey Press: 183.

Conditions during the siege

The final ten months of the war were undoubtedly the worst period of the occupation for the Channel Islands. Following the D-Day landings in June 1944 conditions on the islands began to deteriorate until, by August 1944, no supplies could get to the islands from mainland France.⁴⁶ At this point there was nothing left to buy in the shops, and civilian rations were reduced to bare subsistence levels,⁴⁷ with off-ration foodstuffs being unavailable even on the black market.⁴⁸ Evidence obtained by the British government in the autumn of 1944 suggested that the standard of living among the civilian population of the Channel Islands was very poor, and that “the people, especially the less well-off, were near breaking point”.⁴⁹

Living conditions continued to deteriorate as the weather grew colder during the winter of 1944–45 – so much so that, in her Jersey occupation diary, Nan Le Ruez (1994: 249) stated that there was “misery” in the town, and that people were particularly suffering from lack of fuel, so that even had they obtained more food, they could not have cooked it. During this winter, according to Alan and Mary Wood (1955: 196), “life became completely primitive”, with people going to bed after lunch because there was nothing more to eat and they needed to save energy. Likewise, Beryl Ozanne (1994: 118), a nurse in Guernsey throughout the war, felt that by this stage of the occupation, the rations “hardly kept body and soul together”. Indeed, in his history of the occupation, Charles Cruickshank (1975: 141) argued that “By and large the health pluses and minuses balanced out during the greater part of the occupation, but in the two or three months [of 1944] before the Red Cross supplies began to arrive there was a real threat of general starvation”.

The situation was alleviated somewhat by the arrival of the Red Cross ship Vega at the end of December 1944, by which point many Channel Islanders were indeed facing starvation.⁵⁰ This is evident from an article published in the Jersey Evening Post at the time which made it clear that “only those who have knowledge of how many of the poorer inhabitants have lived during the past months can imagine what this will mean”.⁵¹ Certainly, it seems likely that the arrival of the Vega saved many lives⁵² and many believed that the arrival of the Red Cross parcels saved the

46 Bell (1995); Sanders (2005).

47 Cruickshank (1975); Le Ruez, N. (1994). *Jersey Occupation Diary*. Jersey: Seaflower Books.

48 Sinel, L. (1984). *The German Occupation of Jersey: The complete diary of events from June 1940 to June 1945*. Jersey: La Haule.

49 Cruickshank (1975): 269.

50 Bihet (1985); Sinel (1958).

51 Sinel (1958): 29.

52 Bihet (1985); Mayne, R. (1945). *Operation “Nestegg”: The liberation of Jersey 1945*. Jersey: Channel Printers.

population as a whole from starvation.⁵³ Indeed, when the extra supplies arrived, there were tales of people making themselves ill because they were no longer used to adequate quantities of food.⁵⁴ Elsewhere, there was such demand for the extra food that people were often robbed for their parcels, and at least one couple was murdered by German soldiers for this food.⁵⁵

Nonetheless, even with the arrival of emergency food supplies, the situation in the Channel Islands remained critical until the end of the war. For example, the bread ration ran out in February 1945, so that islanders had to cope for several weeks without one of their staple foods.⁵⁶ By this point there were also problems with the potato and milk rations, so that islanders often had virtually nothing to live on.⁵⁷ Communal cooking had been instituted in Guernsey in December 1944, followed by the opening of soup kitchens, but these had to be stopped in March 1945 because there were not enough rations to keep them going.⁵⁸ These conditions were not to improve until hostilities ceased in May 1945, when a sudden influx of supplies brought conditions very quickly back to almost normal levels.

Fuel and medical supplies

While the food situation was undoubtedly very serious, particularly during the 1944–45 siege, additional problems were caused by a lack of other essential supplies, such as fuel for heating and cooking, and medical supplies. Fuel was rationed from quite early on in the occupation, so that in Jersey there was often no electricity even during the first winter.⁵⁹ Heating of rooms by coal and gas was forbidden from spring 1941 onwards, as was the use of electricity for anything other than lighting. By that summer it was also forbidden to heat water using gas.⁶⁰ There was a shortage of candles, and the felling of trees was prohibited, so that even a log fire was hard to come by. In *A Century of Jersey Memories*, Sonia Hillsdon (1999: 12) recorded that “Food was short during the Occupation but, for the poor housewife, the means to cook it was almost as difficult to cope with.”

53 Ozanne, B. S. (1994). *A Peep Behind the Screens: 1940–1945*. Guernsey: Guernsey Press.

54 Ozanne (1994).

55 Dales (1995).

56 Dales (1995); Sinel (1984).

57 Maugham (1946).

58 Lainé (1945).

59 Lewis (1983).

60 Maugham (1946).

By the end of the occupation people were dismantling empty houses and burning the timber for fuel, and were even using sawdust stoves for cooking.⁶¹ In Jersey the gas supply was completely cut off in the summer of 1944, while electricity was only on for 2 to 3 hours per day, and even this was eventually cut off completely.⁶² The situation was similar in Guernsey, where gas supplies ceased in November 1944 and electricity supplies in December of 1944.⁶³ By this point communal kitchens were the only source of hot food⁶⁴ and many public buildings such as schools had to close because there was no way of heating them. Paul Sanders, in his history of the occupation, argued that the lack of cooking and heating facilities was almost as serious as the lack of food in terms of the health and morale of the population.⁶⁵

Medical supplies and facilities were also a serious problem. Many doctors had evacuated from the islands before the occupation began,⁶⁶ and the shortage of fuel meant that ambulances often could not run. Eventually a horse-drawn ambulance was the only method of getting emergency cases to hospital.⁶⁷ Meanwhile, the German army took over many of the islands' medical buildings, leaving less than adequate facilities for the civilian population. Medical care at these facilities tended to be extremely basic, often with no electricity and no sterile dressings or gloves.⁶⁸ Hospital staff often had problems completing their shifts due to exhaustion,⁶⁹ which is not surprising given that at one stage the daily ration for nurses in Guernsey only comprised a cup of acorn coffee and some turnip stew.⁷⁰ According to the first-hand account of one Guernsey nurse,⁷¹ some hospital staff were also weakened by dysentery and found it more and more difficult to perform their duties. Likewise, their patients were also undernourished while in hospital,⁷² and this tended to prolong their recovery, placing further pressure on the meagre resources available.⁷³

There was also a shortage of drugs and other medical supplies from quite early in the occupation, despite periodic deliveries from the Red Cross between 1941 and 1944 – deliveries which included insulin, vitamin C and serum for diphtheria and

61 Hillsdon, S. (ed.) (1999). *A Century of Jersey Memories*. Bradford on Avon: Seaflower Books; Sinel (1984).

62 Lewis (1983).

63 Sanders (2005).

64 Sinel (1984).

65 Sanders (2005).

66 Lewis (1983).

67 Lewis (1983).

68 Lewis (1983).

69 Lainé (1945).

70 Wood, A., Wood, M. (1955). *Islands in Danger*. London: Wyman and Sons.

71 Ozanne (1994).

72 Bell (1995).

73 Ozanne (1994).

morphine, as well as dressings and scalpels.⁷⁴ Before the siege, some medicines could be imported from France, although these tended to be of poor quality and sometimes did not work.⁷⁵ The islands also produced their own improvised tonics and remedies to replace those no longer available, and these helped to eke out supplies until 1944.⁷⁶ However, towards the end of 1944 there were few supplies left, and only the most essential operations could be performed,⁷⁷ in particular due to a shortage of catgut for stitching.⁷⁸ The absence of drugs became very serious, especially for diabetics when there was no more insulin, and many of these patients died.⁷⁹ It was no longer possible to vaccinate people against many diseases, and this may have contributed to an increase in several common diseases during the occupation.⁸⁰ Indeed, in addition to the problems caused by the reduced medical supplies, there was also an increased demand for medical care, not least because a number of illnesses increased due to the poor diet⁸¹ so that the islanders may have suffered more than would have been the case due to a lack of food alone.

Hygiene

Poor hygiene was an additional problem faced by Channel Islanders during the occupation, and one that could have become much more serious had the war not ended when it did. By September 1943 there was no mains water supply between 7pm and 7am,⁸² and by the end of the occupation these hours had been further curtailed. This was exacerbated by low rainfall during the occupation years – a serious problem for islands dependent on rainfall for their water supply.⁸³ In March 1945 all houses were limited to one tap, all flush toilets were disconnected, and water was only available from the remaining tap for just three hours per day.⁸⁴ This is likely to have led to severe problems with disease had the islands not been liberated three months later.

As well as a lack of water for washing, there was also a lack of soap, which further increased the danger of disease and infection. At the beginning of the occupation people were instructed to wash their hands only once a day to conserve soap, but

74 Lainé (1945a).

75 Lewis (1983).

76 Rivett, P. J. (2001). *A Tiny Act of Defiance*. Paignton: Planetesimal; Sanders (2005).

77 Bell (1995).

78 Sanders (2005).

79 Lewis (1983).

80 Lainé (1945a).

81 Rivett (2001).

82 Sinel (1984).

83 Lainé (1945a).

84 Lainé (1945b).

even this precaution did not prevent soap supplies running out.⁸⁵ Indeed, the English soap previously used by islanders ran out by June 1941 apart from a small reserve set aside for use in maternity cases.⁸⁶ Thereafter, the soap obtained from France tended to be of very poor quality. By October 1944, adults had not received any soap for three months,⁸⁷ and the islands only received a proper supply again with the arrival of the Vega in December 1944.

The lack of proper hygiene precipitated by inadequate supplies of water and soap resulted in an increased prevalence of skin infections and ulcers,⁸⁸ and when the toothpaste ran out there was also an increase in tooth and gum problems.⁸⁹ Lice infestations became common because even when there was water it was rarely possible to heat it.⁹⁰ Added to the islanders' nutritionally compromised immune systems, poor hygiene became a potentially serious problem towards the end of the occupation as people were not able to fight off infections as effectively as they would under normal circumstances.

Health and disease

Despite the reports summarised above, in the main, the general health impact of the occupation was perhaps not as bad as it might have been. Indeed, in some respects health actually improved, such as the weight loss that benefited the obese,⁹¹ especially in terms of cardiac health.⁹² In some cases this might have also helped some previously overweight women to conceive,⁹³ while even those women who appeared to have become underweight as a result of the occupation still seemed to give birth to healthy sized babies.⁹⁴ One Jersey doctor stated that, particularly in the early days of rationing, his more overweight patients benefitted from their change of diet.⁹⁵ Elsewhere, the health of the population of Guernsey was thought to be "exceptionally good"⁹⁶ during the first winter of the occupation. Some aspects of

85 Lainé (1945b).

86 Lainé (1945b).

87 Sinel (1984).

88 Wood and Wood (1955).

89 Lewis (1983).

90 Lewis (1983).

91 Cruickshank (1975).

92 Sanders (2005).

93 Rivett (2001).

94 Lewis (1983).

95 McLoughlin, R. (1995). *Living With the Enemy: An outline of the German occupation of the Channel Islands with first-hand accounts by the people who remember the years 1940 to 1945*. St Helier: Starlight.

96 Lainé (1945b).

the occupation diet that may have been advantageous in this regard were the reduced sugar and fat content, and the increased consumption of wholemeal flour.⁹⁷

However, the weight loss experienced by most Channel Islanders during the occupation was not beneficial to all sectors of the population, such as the elderly and infirm and those who were required to do physical work. For example, the outdoor telephone staff in Guernsey each lost an average of 22lbs (10kg) in weight between 1940 and 1943, and the associated loss of energy began to prevent them from doing their jobs properly even before the onset of the siege in 1944.⁹⁸ Even the Jersey doctor cited earlier, who was wealthy and had many contacts from whom to obtain off-ration food, saw his body weight fall from 13 stone (83kg) to under 9 stone (57kg) by the end of the war.⁹⁹ Indeed, he stated that many of his patients experienced similar losses, including his mother-in-law, who weighed less than 6 stone (38kg) by the end of the occupation. Some elderly people seem to have ended the war at an alarmingly low weight, as evidenced by an inquest into the death of a 70-year-old Jersey woman where “malnutrition” was cited as a secondary cause, and whose weight was reported to be only 3 stone (19kg).¹⁰⁰

Some of the islanders in prominent positions also appeared to have suffered disproportionately, as a result of the fact that it would not have been proper for them to have been seen to be indulging in the black market. As a consequence, the Dame of Sark lost 4 stone (25kg) in weight during the occupation, and towards the end of the siege weighed only 7 stone (44kg).¹⁰¹ The Bailiffs of Jersey and Guernsey were in a similar predicament, with Alexander Coutanche, Bailiff of Jersey, losing over 2 stone (13kg), and Victor Carey, Bailiff of Guernsey, losing 5 stone (32kg) during the occupation.¹⁰² Likewise, the Rector of St Helier, who took a principled stand against the black market, lost half his body weight as a result.¹⁰³

The most extreme example of weight loss cited by any source was the case of a Guernsey man whose weight dropped from 18 stone (115kg) to 8 stone (51kg) by the end of the war.¹⁰⁴ Not surprisingly, Adèle Lainé described in her Occupation Diary how, by the end of the siege, people in Guernsey were often unrecognisable because they had lost so much weight.¹⁰⁵ Likewise, Leslie Sinel recorded in his diary

97 Jeffs, D. (ed.) (1999). *One Hundred Years of Health: The changing health of Guernsey 1899–1999*. Guernsey: Board of Health.

98 Cruickshank (1975).

99 Lewis (1983).

100 Sinel (1984).

101 Tabb, P. (2005). *A Peculiar Occupation: New Perspectives on Hitler's Channel Islands*. Hersham: Ian Allan.

102 Wood and Wood (1955).

103 Sanders (2005).

104 Rivett (2001).

105 Lainé (1945a).

that by June 1942 some islanders had “lost weight to an astounding degree”.¹⁰⁶ In his history of the occupation of Jersey, RCF Maugham mentioned that in 1943 the general public began to look emaciated, and that by the end of the war, “[t]he people grew thin, their features pinched by privation and want... [n]ormal strength and vitality could just not be maintained”.¹⁰⁷

Although this weight loss must have been alarming, it seems to have been malnutrition that affected the islands most as opposed to outright starvation¹⁰⁸ since the principal problem lay with the composition of the diet rather than a paucity of calories, at least until the onset of the siege.¹⁰⁹ When the islands were starving, towards the end of the siege, this took the form of slow starvation rather than acute deprivation. This may have made the crucial difference between suffering and death for many,¹¹⁰ since the Channel Islanders were able to become gradually accustomed to fewer and fewer calories rather than being suddenly deprived. However, this is not to say that the effects of this ‘creeping malnutrition’ were not serious, as malnutrition was recorded as a cause of death on a number of death certificates at the time.¹¹¹ Malnutrition also caused loss of memory, concentration and stamina, and many people collapsed in the street as they were going about their daily tasks. There were cases of famine oedema of the legs, again particularly among the elderly,¹¹² while recovery rates from a number of other conditions were notably slow.

Increases in several other diseases and illnesses were also reported during the occupation, including tuberculosis,¹¹³ scarlet fever,¹¹⁴ dysentery,¹¹⁵ tetanus,¹¹⁶ typhoid,¹¹⁷ hepatitis,¹¹⁸ jaundice,¹¹⁹ chicken pox¹²⁰ and whooping cough¹²¹, as well as conditions such as diarrhoea¹²² and intestinal worms.¹²³ Many people had sore gums and loose teeth, and there was speculation that this might be due to scurvy.¹²⁴ There

106 Sinel (1984).

107 Maugham (1946).

108 Wood and Wood (1955); Ozanne (1994).

109 Sanders (2005).

110 Lainé (1945a); Lainé (1945b); Sanders (2005).

111 Cruickshank (1975), Lainé (1945b); Sinel (1984).

112 Cruickshank (1975); Lewis (1983); Wood and Wood (1955).

113 Anquetil, A. F. (1990). *Wartime Memories*. Guernsey Archives Service: Guernsey; Sanders (2005); Jeffs (1999); Le Ruez (1994); Lewis (1983); Maugham (1946).

114 Sanders (2005); Sinel (1984).

115 Cruickshank (1975); Ozanne (1994).

116 Le Ruez (1994).

117 Jeffs (1999).

118 Lewis (1983).

119 Maugham (1946).

120 Tabb (2005).

121 Lewis (1983); Sanders (2005).

122 Cruickshank (1975); Lewis (1983); Sanders (2005).

123 Lewis (1983).

124 Lewis (1983).

was also an epidemic of colic, perhaps as a result of people being encouraged to eat nettles, sorrel and bracken to supplement their diet.¹²⁵ The cold did not help matters, and chilblains were prevalent and painful.¹²⁶

Matters were said to have been particularly bad during the winters, and the islands' authorities tried to build up people's health during the summer months in order to maximise their chances of surviving until the following spring.¹²⁷ When there was an outbreak of diphtheria in Jersey in 1944 this affected more adults than usual,¹²⁸ and also affected many children because the immunisation programme had had to be stopped.¹²⁹ Meanwhile, the German troops brought a range of diseases with them from the front, including trench mouth (a severe gum infection), mite infestations, syphilis and gonorrhoea.¹³⁰ Colds and sore throats, however, were less common, perhaps because of reduced population movement both into and within the islands.¹³¹

There is some speculation as to whether the death rate increased during the years of the occupation. There is certainly some evidence that people died from malnutrition, including one death of an adult male on Jersey in September 1941 where the cause of death was listed as heart failure due to malnutrition.¹³² Many more such cases had been reported by 1945.¹³³ The lack of proper medical supplies is also likely to have contributed to mortality rates,¹³⁴ such as the lack of insulin which led to the deaths of most of the diabetics on the islands.¹³⁵ From 1942 onwards there were reports of increasing numbers of deaths attributed to living conditions on the islands, although generally the precise cause of these was not specified.¹³⁶ For example, Paul Sanders mentions an increase in the death rate in his history of the occupation, but states that this was not due to general starvation, but involved certain groups of the population such as the elderly, the young, members of large families and those with low incomes.¹³⁷ Indeed, in Jersey the pre-war death rate was 12–13 per 1000, while by January 1945 this had risen to 35.6 per 1000.¹³⁸ The death rate in Guernsey also rose at certain points during the occupation (see Figure 2), but these

125 Maugham (1946).

126 Lewis (1983); Sinel (1984).

127 Rivett (2001).

128 Cruickshank (1975); Lewis (1983); Maugham (1946); Sanders (2005); Sinel (1984).

129 Jeffs (1999); Lewis (1983).

130 Lewis (1983).

131 Cruickshank (1975); Rivett (2001); Sanders (2005).

132 Sinel (1984).

133 Bunting (2004); Lainé (1945b).

134 Ozanne (1994).

135 Lewis (1983).

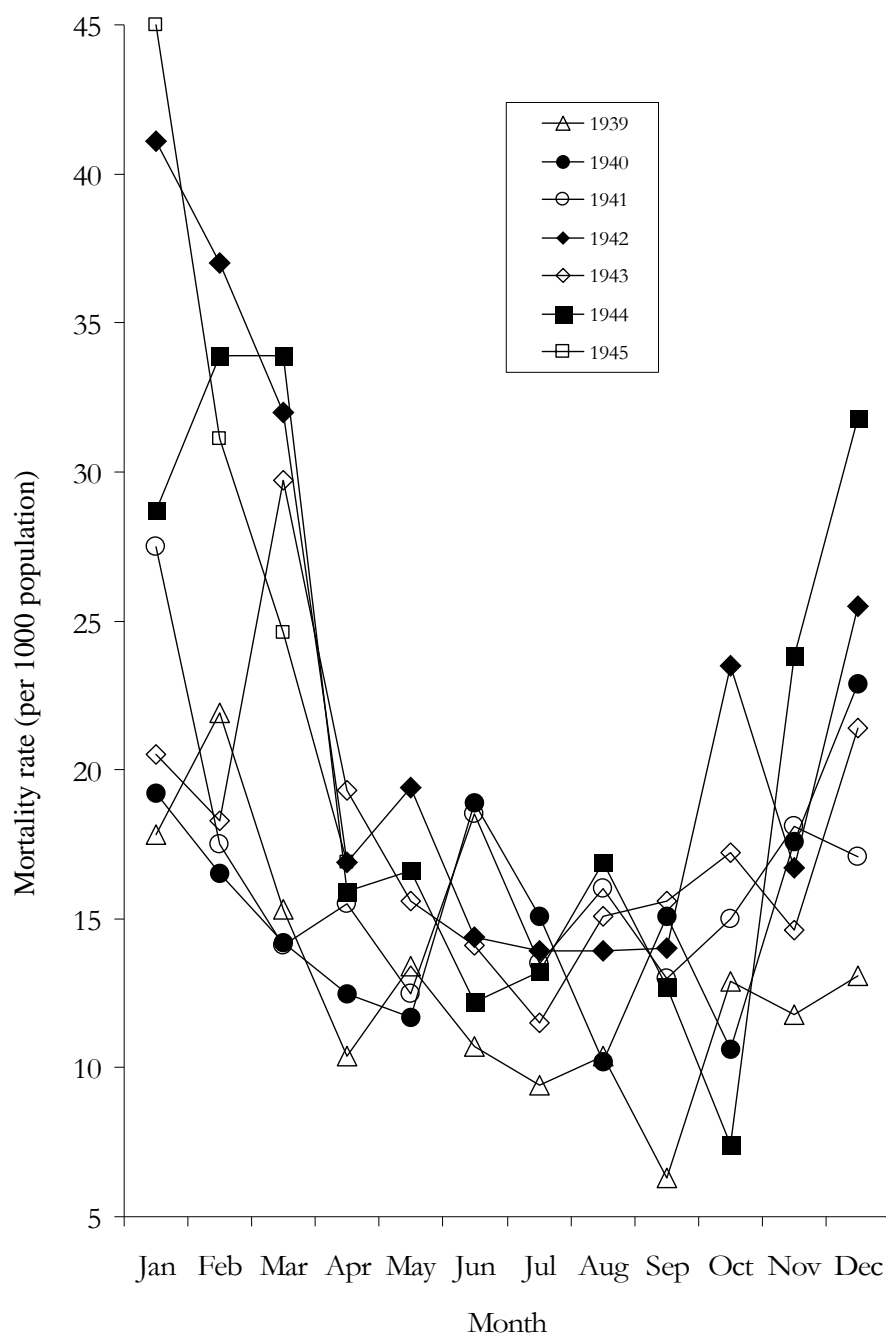
136 Sinel (1984).

137 Bunting (2004); McLoughlin (1995); Sanders (2005).

138 Maugham (1946).

increases were only found to be significant among the over-65 age group.¹³⁹ Nonetheless, there were many deaths recorded as being due to “syncope”, or sudden collapse from hunger.¹⁴⁰

Figure 2. Mortality rates (per thousand population) in Guernsey during the occupation.



Source: Report on Essential Supplies and Services during the Occupation of Guernsey by German Forces and the Work of the Committee, States of Guernsey Committee for the Control of Essential Commodities.

¹³⁹ Sanders (2005).

¹⁴⁰ Maugham (1946).

Children and young people

Children were allocated additional rations as they were perceived to be a particularly at-risk group. These included milk provided at school¹⁴¹ and sometimes soup,¹⁴² as well as the occasional orange¹⁴³ and supplements of cod liver oil.¹⁴⁴ The youngest children were also first in line to receive a ration of sugar whenever this became available.¹⁴⁵ In fact, children under the age of 4 received twice as much sugar as adults, while children at school from time to time received biscuits from the ‘Secours National’ – a political and religious organisation which helped victims of the war.¹⁴⁶ It may have been just as well that these extra rations were provided, since by the end of the occupation there was evidence that some children were eating very little apart from what they were given at school.¹⁴⁷

Indeed, despite these additional rations there were numerous accounts of children, and teenagers in particular, faring particularly badly during the occupation.¹⁴⁸ Teenagers did not receive the extra milk ration once they had left school, even though they needed plenty of extra energy to grow, not least if they were also engaged in manual labour, as many of them were.¹⁴⁹ The British Nutrition Foundation (BNF) states that teenagers aged 15–18 actually require more calories per day than adults (see Table 4), and as such this group would have received proportionately fewer of the calories they required during the 1940–45 occupation.¹⁵⁰ Moreover, when German medical advisors examined the islanders they concluded that the rations available were adequate for all except, perhaps, children aged 6 to 14, whose needs were felt to be greater than the rations provided.¹⁵¹ This concurred with the views of a local doctor, who felt that children under 6 were adequately nourished but that older children suffered from inadequate food.¹⁵² It is therefore possible that these children actually suffered more than adults during the occupation. They were certainly hungry, as this letter to Father Christmas from a Guernsey child in 1940 testifies: “Could you bring me some chocolate? I have not

141 Bihet (1985); Langlois (1999); Leale, J. (1940–1945). *Minutes of the Controlling Committee of the States of Guernsey*. Guernsey; Lewis (1983); Sanders (2005).

142 Bihet (1985); Sinel (1984).

143 Lewis (1983).

144 Bihet (1985); Rivett (2001).

145 Sinel (1984).

146 Lainé (1945a).

147 Lainé (1945a).

148 Day (1995).

149 Day (1995).

150 BNF (2004). Nutrient requirements and recommendations, www.nutrition.org.uk.

151 Cruickshank (1975).

152 Sinel (1984).

Table 4. Estimated average daily requirements (EAR) of energy in kilocalories for people of different ages.

Age Group	Males	Females
0–3 Months	545	515
4–6 Months	690	645
7–9 Months	825	765
10–12 Month	920	865
1–3 Years	1230	1165
4–6 Years	1715	1545
7–10 Years	1970	1740
11–14 Years	2220	1845
15–18 Years	2755	2110
19–50 Years	2550	1940
51–59 Years	2550	1900
60–64 Years	2380	1900
65–74 Years	2330	1900
74+ Years	2100	1810

Source: www.nutrition.org.uk

had any for three months. I would adore a good hunk of Dutch cheese also, and about two dozen eggs would be lovely if you could get them across without breaking them. Even one egg would be very acceptable”.¹⁵³

There was also evidence that the growth of children and adolescents was impeded during the occupation.¹⁵⁴ One Jersey doctor who investigated the growth of school-aged children during the occupation found that all age groups had below average growth rates.¹⁵⁵ The Education Council agreed, finding in its annual report of 1944 that between December 1943 and January 1944 25% of children had lost weight, and that between January and February 1944 33% had lost weight.¹⁵⁶ Likewise, the Medical Officer for Health in Jersey found that children aged 6 to 14 were several pounds lighter, on average, in 1943.¹⁵⁷ There was also evidence of reduced growth in height, since the average height of 14 year olds in 1940 was 5ft 1in (1.55m), while in 1943 this was only 4ft 10½in (1.49m).¹⁵⁸ A subsequent analysis of the Jersey children’s growth data, which compared their growth in height and weight during the occupation years with that of children on the mainland UK,¹⁵⁹

¹⁵³ Bihet (1985).

¹⁵⁴ Rivett (2001).

¹⁵⁵ Lewis (1983).

¹⁵⁶ Jeffs (1999).

¹⁵⁷ Cruickshank (1975).

¹⁵⁸ Cruickshank (1975); McLoughlin (1995).

¹⁵⁹ Ellison, G. T. H., Kelly, M. (2005). “Growth of Jersey schoolchildren during the 1940–1945 German occupation: comparison with schoolchildren on mainland Britain”, *Human Biology*, 77: 761–772.

found that the Jersey children had significantly lower growth rates compared to children in the UK. Shortly after the end of the occupation, the Jersey children's growth rate had caught up in terms of weight, but their rate of growth in height remained below that of children in the UK. This is likely to indicate that either the Jersey children would have remained shorter as adults, or their period of growth would have been extended, thus delaying their development. Finally, there is also evidence that age at menarche was delayed among women resident in Guernsey who reached puberty during the occupation, and this may be further evidence of developmental delay affecting young people exposed to the occupation.¹⁶⁰

Food deprivation not only manifested itself in poor growth, but also created a number of other health problems. Many children were admitted to hospital in Guernsey suffering from malnutrition, as well as bronchitis and pneumonia brought on by their reduced resistance to disease.¹⁶¹ They were also lacking in vitality, so that school gymnastics and sporting events had to be cancelled in order to conserve energy.¹⁶² Likewise, educational standards were thought to have dropped because there was too little fuel to heat schools, while the children suffered from poor concentration as a result of hunger.¹⁶³ In the final winter of the occupation, all of the islands' state schools were closed from before Christmas until February because of a lack of heating, and when they did reopen it was for only 2½ hours per day.¹⁶⁴ Not surprisingly, by the end of the war the children who had remained on the islands were found to have fallen well behind their evacuated counterparts in terms of their education, and this may well have affected these children well into their later lives.¹⁶⁵

Summary and Conclusion

This review found a considerable body of published reports and first-hand accounts which suggests that conditions during the 1940–45 German occupation of the Channel Islands had a number of immediate effects on the health of the population at the time, with an increase in a range of ailments, a decline in growth amongst children and, in certain sections of the population, higher rates of mortality. The sources included in this review also described a serious lack of medical supplies and

160 Fentiman I. S., Allen D. S., Ellison G. T. H. (2007). "The impact of the occupation of Guernsey 1940–1945 on breast cancer risk factors and incidence", *International Journal of Clinical Practice*, 61: 937–943.

161 Ozanne (1994).

162 Lewis (1983).

163 Jeffs (1999).

164 Sinel (1984).

165 Bunting (2004).

problems with hygiene, fuel and water, all of which are likely to have exacerbated the decline in health. The deterioration in conditions intensified during the 10 month siege at the end of the war, and mass starvation amongst the civilian population was felt to have been prevented only by the arrival of supplies from the Red Cross. Given the findings of extensive studies examining the longer-term effects of pre- and post-natal exposure to the ‘Dutch famine’ (also known as the ‘Dutch hunger winter’) of 1944–1945,¹⁶⁶ during which comparable levels of deprivation occurred, it is likely that similar long-term health effects may have occurred amongst Channel Islanders – particularly amongst children and young people resident on the Islands throughout the occupation, whose rations appear to have been substantially lower than that currently recommended. This is an issue which the Channel Islands Occupation Birth Cohort Study, and related studies, have set out to address.¹⁶⁷ The first tranche of analyses from these studies (listed in the Appendix) confirm that individuals exposed to the Channel Islands occupation during childhood and early adulthood experienced delayed growth¹⁶⁸ and reproductive development,¹⁶⁹ and have subsequently experienced an increased risk of obesity,¹⁷⁰ hyperglycaemia,¹⁷¹ as well as elevated mortality and higher rates of

166 van Noord, P. A. H. (2004). “Breast cancer and the brain: a neurodevelopmental hypothesis to explain the opposing effects of caloric deprivation during the Dutch famine of 1944–1945 on breast cancer and its risk factors”, *Journal of Nutrition*, 134: 3399S–406S; Painter, R. C., Roseboom, T. J., Bleker, O. P. (2005). “Prenatal exposure to the Dutch famine and disease in later life: an overview”, *Reproductive Toxicology*, 20: 345–352; Kyle, U. G., Pichard, C. (2006). “The Dutch famine of 1944–45: a pathophysiological model of long-term consequences of wasting disease”, *Current Opinion in Clinical Nutrition and Metabolic Care*, 9(4): 388–94; Lumey, L. H., Stein, A. D., Kahn, H. S., van der Pal-de Bruin, K. M., Blauw, G. J., Zybert, P. A., Susser, E. S. (2007). “Cohort profile: the Dutch Hunger Winter families study”, *International Journal of Epidemiology*, 36: 1196–1204.

167 Ellison, G., Jeffs, D., Harhvey, J. (1998). “How did the Occupation Affect the Health of the Channel Islanders?”, *Channel Islands Occupation Review*, 26: 29–43.

168 Kelly, M., Ellison, G. T. H. (2001). “The growth of children on Jersey during the 1940–45 German occupation: Evidence of a negative secular trend?”, *Annals of Human Biology*, 29: 463–464; Ellison and Kelly (2005).

169 Fentiman et al (2007).

170 Head, R., Gilthorpe, M., Ellison, G. T. H. (2007a). “Obesity among Channel Islanders exposed to a siege in childhood and adolescence a comparison with birthweight”, *Early Human Development*, 83: S160–S161.

171 Travis, R. (1999). *Undernutrition in utero, Hyperglycaemia and Hypertension in Later Life Following Exposure to the 1940–45 German Occupation of Guernsey*. Hons. Thesis, Department of Biological Anthropology, University of Cambridge, Cambridge; Ellison, G. T. H., Travis, R., Phillips, M. (2001). “Blood pressure and blood glucose concentration amongst middle-aged men conceived and/or born on Guernsey during the 1940–45 German occupation”, *Journal of Epidemiology and Community Health*, 55 (Suppl 1), A25; Ellison, G. T. H., Travis, R., Phillips, M. (2003). “Blood pressure and blood glucose concentration amongst middle-aged men conceived and/or born on Guernsey during the 1940–45 German occupation”, *Pediatric Research*, 53, 25A.

hospital admission for cardiovascular disease in later life.¹⁷² However, there was no evidence that exposure to the occupation was associated with hypercholesterolaemia in later life¹⁷³ and the increased risk of hypertension and hyperglycaemia reported previously¹⁷⁴ has not been replicated in all the cohorts studied to-date.¹⁷⁵ Nonetheless, these findings do suggest that undernutrition and related deprivation during the 1940–45 Channel Islands occupation had a substantive impact on health in later life. Further research will draw on additional sources detailing conditions during the occupation (including unpublished material held by the Wellcome Library and the Imperial War Museum, and qualitative interviews with surviving islanders), and will extend the range of cohorts examined to include analyses of potential intergenerational effects on reproductive outcomes based on data from vital registration records¹⁷⁶ and a recently completed questionnaire survey.¹⁷⁷

Rosemary Head is currently based at the National Centre for Social Research in London and was formerly Senior Research Fellow at St George's, University of London. *George Ellison* is currently Director of the Graduate School & Research Office at London Metropolitan University, and was formerly Professor of Health Sciences at St George's, University of London.

Acknowledgements

Thanks to Dr Darryl Ogier, Don Le Tissier and staff at the States of Guernsey Island Archives Service, without whom many sources for this work could not have

172 Head, R. F., Gilthorpe, M. S., Huntington, A., Ellison, G. T. H. (2006). "Does age at exposure influence the development of cardiovascular disease following the 1944–45 Channel Islands' siege?", *Journal of Epidemiology and Community Health*, 60: (Suppl 1), A3; Head, R., Gilthorpe, M., Byrom, A., Ellison, G. T. H. (2007b). "Cardiovascular disease and mortality in later life following exposure to the 1944 Channel Islands' siege during childhood and adolescence", *Early Human Development*, 83: Suppl.1, S89; Head, R. F., Gilthorpe, M. S., Byrom, A., Ellison, G. T. H. (2008). "Cardiovascular disease in a cohort exposed to the 1940–45 Channel Islands occupation", *BMC Public Health*, 8: 303.

173 Head, R. F., Gilthorpe, M. S., Ellison, G. T. H. (2009). "Cholesterol levels in later life following exposure to the 1944–45 Channel Islands' siege in childhood and adolescence", *Nutrition and Health*, 20: 91-104.

174 Travis (1999); Ellison et al. (2001) ; Ellison et al. (2003).

175 Head, R. F. (2008) *Long-term Health Impact of the 1944-45 Channel Islands' Siege*. Ph.D. Thesis, St George's, University of London: London.

176 Phillips, M. (1999). *Fertility on Guernsey during the 1940–45 German Occupation*. Hons. Thesis, Department of Biological Anthropology, University of Cambridge, Cambridge.

177 Kelly Irving, M. (2007). *The Health and Social Circumstances of Channel Islanders Exposed to the German Occupation (1940–1945): A Lifecourse Approach to Epidemiology*. Ph.D. Thesis, Institute of Education, University of London: London.

been identified. Thanks too to Dr David Jeffs and colleagues at the Guernsey Board of Health and to Keith Robilliard and colleagues at the Guernsey Greffe for their advice and support throughout this research. This work forms part of the Channel Islands Occupation Birth Cohort Study and related studies which have been generously funded by the Lloyds TSB Foundation for the Channel Islands.

References

- Anquetil, A. F. (1990). *Wartime Memories*.
- Bell, W. M. (1995). *I Beg to Report. Policing in Guernsey During the German Occupation*. Guernsey: Guernsey Press.
- Bihet, M. (1985). *A Child's War: The German Occupation of Guernsey as seen through young eyes*. Sparkford: Haynes.
- Bihet, M. (1993). *Reflections of Guernsey*, Guernsey: Guernsey Press.
- BNF (2004). Nutrient requirements and recommendations, www.nutrition.org.uk/.
- Bunting, M. (2004). *The Model Occupation: The Channel Islands under German rule 1940–1945*. London: Pimlico.
- Cruickshank, C. (1975). *The German Occupation of the Channel Islands: The official history of the occupation years*. Guernsey: Guernsey Press.
- Dales, G. (1995). “True account of relatives under German Occupation in Guernsey in the year 1944”. *Careless Talk Costs Lives: Memories 1939–1945*. Guernsey: Guernsey Women's Institute.
- Day, O. (1995). “Extracts from a letter sent by Richard Foley to his mother 12th June 1945”. *Careless Talk Costs Lives: Memories 1939–1945*. Guernsey: Guernsey Women's Institute.
- Ellison, G. T. H., Kelly, M. (2005). “Growth of Jersey schoolchildren during the 1940–1945 German occupation: comparison with schoolchildren on mainland Britain”, *Human Biology*, 77: 761–772.
- Ellison, G., Jeffs, D., Harvey, J. (1998). “How did the Occupation Affect the Health of the Channel Islanders?”, *Channel Islands Occupation Review*, 26: 29–43.
- Ellison, G. T. H., Travis, R., Phillips, M. (2001). “Blood pressure and blood glucose concentration amongst middle-aged men conceived and/or born on Guernsey during the 1940–45 German occupation”, *Journal of Epidemiology and Community Health*, 55 (Suppl 1), A25.
- Ellison, G. T. H., Travis, R., Phillips, M. (2003). “Blood pressure and blood glucose concentration amongst middle-aged men conceived and/or born on Guernsey during the 1940–45”, *German occupation. Pediatric Research*, 53, 25A.
- Fentiman I. S., Allen D. S., Ellison G. T. H. (2007). “The impact of the occupation of Guernsey 1940–1945 on breast cancer risk factors and incidence”, *International Journal of Clinical Practice*, 61: 937–943.
- Head, R. F. (2008). *Long-term Health Impact of the 1944–45 Channel Islands' Siege*. Ph.D. Thesis. St George's: University of London, London.

- Head, R. F., Gilthorpe, M. S., Huntington, A., Ellison, G. T. H. (2006). "Does age at exposure influence the development of cardiovascular disease following the 1944–45 Channel Islands' siege?", *Journal of Epidemiology and Community Health*, 60: (Suppl 1), A3.
- Head, R., Gilthorpe, M., Ellison, G. T. H. (2007a). "Obesity among Channel Islanders exposed to a siege in childhood and adolescence: a comparison with birthweight", *Early Human Development*, 83: S160–S161.
- Head, R., Gilthorpe, M., Byrom, A., Ellison, G. T. H. (2007b). "Cardiovascular disease and mortality in later life following exposure to the 1944 Channel Islands' siege during childhood and adolescence", *Early Human Development*, 83: Suppl.1, S89.
- Head, R. F., Gilthorpe, M. S., Byrom, A., Ellison, G. T. H. (2008). "Cardiovascular disease in a cohort exposed to the 1940–45 Channel Islands occupation", *BMC Public Health*, 8: 303.
- Head, R. F., Gilthorpe, M. S., Ellison, G. T. H. (2009). "Cholesterol levels in later life following exposure to the 1944–45 Channel Islands' siege in childhood and adolescence", *Nutrition and Health*, 20: 91–104.
- Hillsdon, S. (ed.) (1999). *A Century of Jersey Memories*. Bradford on Avon: Seaflower Books.
- Jeffs, D. (ed.) (1999). *One Hundred Years of Health: The changing health of Guernsey 1899–1999*. Guernsey: Board of Health.
- Kelly, M., Ellison, G. T. H. (2001). "The growth of children on Jersey during the 1940–45 German occupation: Evidence of a negative secular trend?", *Annals of Human Biology*, 29: 463–464.
- Kelly Irving, M. (2007). *The Health and Social Circumstances of Channel Islanders Exposed to the German Occupation (1940–1945): A Lifecourse Approach to Epidemiology*. Ph.D. Thesis, Institute of Education, University of London: London.
- Kyle, U. G., Pichard, C. (2006). "The Dutch famine of 1944–45: a pathophysiological model of long-term consequences of wasting disease", *Current Opinion in Clinical Nutrition and Metabolic Care*, 9(4): 388–94.
- Lainé, A. (1945a). *Occupation Diary*. Guernsey: Island Archives Service.
- Lainé, A. (1945b). Report on Essential Supplies and Services During the Occupation of Guernsey by German Forces and the Work of the Committee. Guernsey: Committee for the Control of Essential Commodities, States of Guernsey.
- Langlois, A. (1999). *Undernutrition in Early Life and Cause of Premature Mortality in Guernsey*. Hons. Thesis, Cambridge: Department of Biological Anthropology, University of Cambridge.
- Le Ruez, N. (1994). *Jersey Occupation Diary*. Jersey: Seaflower Books.
- Leale, J. (1940–1945). *Minutes of the Controlling Committee of the States of Guernsey*. Guernsey.

- Lewis, J. (1983). *A Doctor's Occupation: The dramatic true story of life in Nazi-occupied Jersey*. Sevenoaks: New English Library.
- Lumey, L. H., Stein, A. D., Kahn, H. S., van der Pal-de Bruin, K. M., Blauw, G. J., Zybert, P. A., Susser, E. S. (2007). "Cohort profile: the Dutch Hunger Winter families study", *International Journal of Epidemiology*, 36: 1196–1204.
- Maugham, R. C. F. (1946). *Jersey Under the Jackboot: A first-hand account of the island's ordeal during the German occupation*. London: W. H. Allen and Co.
- Mayne, R. (1945). *Operation "Nestegg": The liberation of Jersey 1945*. Jersey: Channel Printers.
- McLoughlin, R. (1995). *Living With the Enemy: An outline of the German occupation of the Channel Islands with first-hand accounts by the people who remember the years 1940 to 1945*. St Helier: Starlight.
- Ozanne, B. S. (1994). *A Peep Behind the Screens: 1940–1945*. Guernsey: Guernsey Press.
- Painter, R. C., Roseboom, T. J., Bleker, O. P. (2005). "Prenatal exposure to the Dutch famine and disease in later life: an overview", *Reproductive Toxicology*, 20: 345–352.
- Rivett, P. J. (2001). *A Tiny Act of Defiance*. Paignton: Planetesimal.
- Salisbury, H. E. (2000). *The 900 Days: The siege of Leningrad*. London: Pan.
- Sanders, P. (2005). *The British Channel Islands under German Occupation 1940–45*. Jersey: Jersey Heritage Trust.
- Sinel, L. (1958). *Swastika Over Jersey: An outline of the occupation and the liberation of the island*. Guernsey: Guernsey Press.
- Sinel, L. (1984). *The German Occupation of Jersey: The complete diary of events from June 1940 to June 1945*. Jersey: La Haule.
- Stein, Z., Susser, M. (1975). "Fertility, Fecundity, Famine: Food rations in the Dutch Famine 1944–5 have a causal relation to fertility, and probably to fecundity", *Human Biology*, 47: 131–154.
- Tabb, P. (2005). *A Peculiar Occupation: New Perspectives on Hitler's Channel Islands*. Hersham: Ian Allan.
- van Noord, P. A. H. (2004). "Breast cancer and the brain: a neurodevelopmental hypothesis to explain the opposing effects of caloric deprivation during the Dutch famine of 1944–1945 on breast cancer and its risk factors", *Journal of Nutrition*, 134: 3399S–406S.
- Victor, L. (2008). "Systematic reviewing", *Social Research Update*, 54: 1–4.
- Wood, A., Wood, M. (1955). *Islands in Danger*. London: Wyman and Sons.

Appendix. Publications emanating from the Channel Islands Occupation Birth Cohort Study and related studies

Available from: www.gthellison.info.

- Allen, D. S., Ellison, G. T. H., Dos Santos Silva, I., De Stavola, B. L., Fentiman, I. S. (2002). "Determinants of the availability and accuracy of self-reported birth weight in middle-aged and elderly women", *American Journal of Epidemiology*, 155(4): 379–384.
- Ellison, G. T. H., Kelly, M. (2005). "The growth of Jersey school children during the 1940–45 German occupation: a comparison with school children on mainland Britain", *Human Biology*, 77: 761–772.
- Ellison, G., Jeffs, D., Harvey, J. (1998). "How did the occupation affect the health of the Channel Islanders?", *Channel Islands Occupation Review*, 26: 29–43.
- Ellison, G. T. H., Travis, R., Phillips, M. (2001). "Blood pressure and blood glucose concentration amongst middle-aged men conceived and/or born on Guernsey during the 1940–45 German occupation", *Journal of Epidemiology and Community Health*, 55 (Suppl 1): A25.
- Ellison, G. T. H., Travis, R., Phillips, M. (2003). "Blood pressure and blood glucose concentration amongst middle-aged men conceived and/or born on Guernsey during the 1940–45 German occupation", *Pediatric Research*, 53: 25A.
- Fentiman, I. S., Allen, D. S., Ellison, G. T. H. (2007). "The impact of the Occupation of Guernsey 1940–45 on breast cancer risk factors and incidence", *International Journal of Clinical Practice*, 61: 937–43.
- Head, R. F. (2008). *Long-term Health Impact of the 1944–45 Channel Islands' Siege*. Ph.D. Thesis. St George's: University of London, London.
- Head, R., Ellison, G. T. H. (2005) "Sociodemographic determinants of evacuation from Guernsey prior to the 1940–45 German occupation", *Annals of Human Biology*, 32: 795–797.
- Head, R. F., Ellison, G. T. H. (2007a). Home births and birth outcomes: midwifery in pre-war Guernsey. *British Journal of Midwifery*, 15: 332–336.
- Head, R., Ellison, G. T. H. (2007b). "Is the 1940–45 occupation of the Channel Islands a good model for studying the developmental origins of health and disease?", *Early Human Development*, 83: S148.
- Head, R. F., Gilthorpe, M. S., Huntington, A., Ellison, G. T. H. (2006) "Does age at exposure influence the development of cardiovascular disease following the 1944–45 Channel Islands' siege?", *Journal of Epidemiology and Community Health*, 60 (Suppl 1): A3.

- Head, R., Gilthorpe, M., Ellison, G. T. H. (2007). "Obesity among Channel Islanders exposed to a siege in childhood and adolescence a comparison with birthweight", *Early Human Development*, 83: S160–S161.
- Head, R., Gilthorpe, M., Byrom, A., Ellison, G. T. H. (2007). Cardiovascular disease and mortality in later life following exposure to the 1944 Channel Islands' siege during childhood and adolescence. *Early Human Development*, 83, S89.
- Head, R. F., Byrom, A., Ellison, G. T. H. (2008). "A qualitative exploration of the production Hospital Episode Statistics in a Guernsey hospital: implications for regional comparisons of UK health data", *Health Services Management Research*, 21: 178–184.
- Head, R. F., Gilthorpe, M. S., Byrom, A., Ellison, G. T. H. (2008). "Cardiovascular disease in a cohort exposed to the 1940–45 Channel Islands occupation", *BMC Public Health*, 8: 303.
- Head, R. F., Gilthorpe, M. S., Ellison, G. T. H. (2009). "Cholesterol levels in later life following exposure to the 1944–45 Channel Islands' siege in childhood and adolescence", *Nutrition and Health*, 20: 91–104.
- Kelly, M., Ellison, G. T. H. (2001). "The growth of children on Jersey during the 1940–45 German occupation: Evidence of a negative secular trend?", *Annals of Human Biology*, 29: 463–464.
- Kelly, M., Ellison, G. T. H. (2002). "Sociodemographic correlates of the availability and precision of self-reported birthweight: implications for research into the foetal origins of adult disease", *Annals of Human Biology*, 29: 466.
- Kelly Irving, M. (2007). *The Health and Social Circumstances of Channel Islanders Exposed to the German Occupation (1940–1945): A Lifecourse Approach to Epidemiology*. Ph.D. Thesis, Institute of Education, University of London, London.
- Langlois, A. (1999). *Undernutrition in Early Life and Cause of Premature Mortality in Guernsey*. Hons. Thesis, Department of Biological Anthropology, University of Cambridge, Cambridge.
- Phillips, M. (1999). *Fertility on Guernsey during the 1940–45 German Occupation*. Hons. Thesis, Department of Biological Anthropology, University of Cambridge, Cambridge.
- Stoeckl, A. D., Ellison, G. T. H. (2000). "Sociodemographic predictors of low birth weight and perinatal mortality in pre-war Guernsey", *Annals of Human Biology*, 28: 108–109.
- Travis, R. (1999). *Undernutrition in utero, Hyperglycaemia and Hypertension in Later Life Following Exposure to the 1940–45 German Occupation of Guernsey*. Thesis, Department of Biological Anthropology, University of Cambridge, Cambridge.

Ageing, Education and Health in Portugal prospective from the 19th to the 21st century

Filipa Castro Henriques, Teresa Ferreira Rodrigues and
Maria Fraga O. Martins

Introduction

The first aim of this study is to present the Portuguese mortality model from a long chronological perspective and discuss the role of educational level as a predictor of health status. By the end of the 19th century, when social and economic changes took place, the short and unstable life cycle model was replaced with a long and stable one, with major changes from 1970's onwards. Today Portugal is a country with low mortality and fertility rates. Having presented this changing process and its consequences to the population's age structure, we will analyze the extent to which future changes in the composition of the population by sex, age and educational level will affect the average health status. It is an important issue, as we know that the ageing phenomena of the Portuguese population will continue and that health care needs will increase significantly in coming decades, although with regional differences.¹ Simultaneously, Portugal will experience significant changes in the educational level of its population. Several studies have reported higher morbidity and mortality levels on people with lower educational level.² Will the effects of ageing be counterbalanced by the anticipated rise in Portuguese educational levels?³

Our study begins with a short diagnosis on the world's global ageing phenomenon and its regional implications on future population's health status and needs. It is essential to discuss the way future societies are (or not) preparing themselves to face significant changes of age structures and the corresponding economic and social implications.⁴

In the second part we analyze the Portuguese demographic situation. We characterize its elderly population by sex, age, educational level and trends from the present

1 Rodrigues et al., 2008.

2 Cavelaars et al. 1998, Joung et.al 2000.

3 Fernandes et al., 2008.

4 To consider these changes in an historical perspective will allow us to better understand nowadays reality and prepare the future (Veiga et al., 2004).

until 2021. Then, we evaluate differences in self reported morbidity between people with high and low educational level, comparing them with other European studies. Understanding the impact of demographic ageing in terms of needs for the next twenty years requires a previous reflection on the input that determines the quality of life of the individuals that are growing old.

In methodological terms we focus on the benefits provided by econometric models that will evaluate the extent of the relation between education standards and health status, through logistic regression model. Next, a demographic forecast analysis is made, using the Cohort Component Method, as well as projections by levels of education, supported on general census data.

Global Ageing Society: Regional Differences and Future Trends

Ageing has become a global phenomenon during the 20th century, as the percentage of people aged 65 and older has grown faster than the total population. In 2008, about 7 percent of the world's population was aged 65 years and over.⁵ Meanwhile, the percentage of people aged 0 to 14 years old has declined.

People are living longer everywhere, but the ageing phenomenon is both a question of increasing rates on life expectancy and the consequence of birth rate decrease. World's average life expectancy at birth rose from 47 years in 1950–1955 to 65 years in 2000–2005 and is expected to continue rising. By 2045–2050 it will be 30 years higher than it was in the middle of the 20th century. Between 1950 and 2008 the world Total Fertility Rate fell from 5.0 to 2.6 and it is expected to reach 1.9 by 2045–2050.⁶ A major consequence of this transition from high to low fertility and mortality rates has been the enormous growth of the world's population during the last few decades and in the next ones.

Portugal and the ageing process

In the long term, the changes in Portuguese mortality reflect different political and economic conjunctures, as well as a late and slow demographic transition process.⁷ Portuguese demographic model shows some idiosyncrasies which are related to the country's recent political and social history. In a long term analysis, national demographic increase rates were small, due to high levels of mortality and fertility and regularly overcoming mortality crises.⁸ The main characteristics of morbidity and mortality rates didn't change until the second half of the 20th century, in spite of a

5 PRB, 2008.

6 United Nations , 2005.

7 Veiga, 2003.

8 The last one occurred in 1918; it was caused by a pneumonic flu epidemic. (Rodrigues et al., 2008).

slight reduction after 1890 which led to a slight increase of life expectancy at birth. (Table 1) Nevertheless, several factors interfered and locally altered these indicators: a) differences between life in rural and in urban areas; b) larger feminine participation in the labor market; c) regionally differing ratios of young or elderly people; d) instability of a political and/or economic nature.⁹ Mortality by ages presented a unique model, according to different survival probabilities.¹⁰

Table 1. Mortality General Rates in the 19th century (‰).

Years	Crude mortality rate
1801	30.3
1838	20.8
1843	20.8
1849	25.0
1850	22.7
1862	23.5
1975	24.1
1890	25.5
1895	20.8
1900	20.5

Source: IV^o Recenseamento Geral da População.

Major changes have occurred during the last hundred years. These can be explained by the industrialization process, urban growth and internal migrations. They functioned as the basis of social changes, influenced collective behaviours and spatial concentration in coastal urban areas.¹¹ In the last decade of the 19th century, the first steps to transition process took place. Mortality levels started to decline mainly amongst youngsters. From that point and up to 1920 global mortality rates reduced by 17% and the population growth would have been significant had migratory movements been less negative. The comparison between the total annual growth and the net migratory rates from 1900 onwards (Table 2) makes it clear that Portugal's total growth rates depended on the intensity of migration fluxes (especially emigration).¹² After 1970 internal migration levels increased, reinforcing a new pattern vis-à-vis fertility and mortality ratios.¹³ This new pattern partly explains the population's demographic dynamic to urban coastal areas.¹⁴

Table 2. Global Demographic Trends.

⁹ Veiga, 2004.

¹⁰ Veiga, 2005.

¹¹ Rodrigues et al., 2008.

¹² Baganha, 1998.

¹³ Nazareth, 1988.

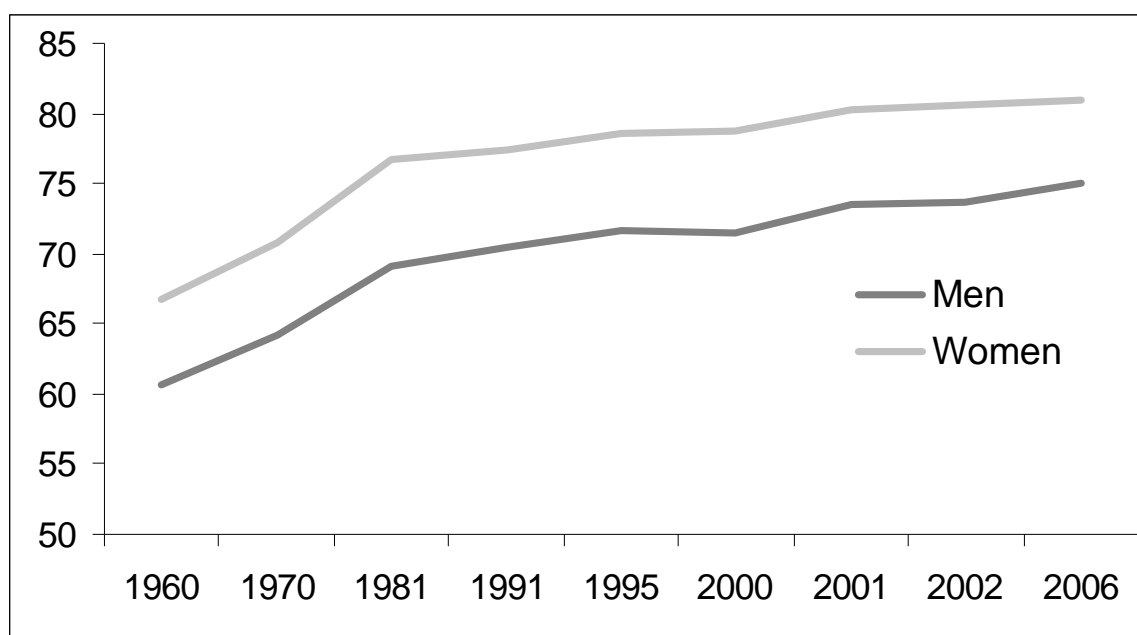
¹⁴ Not considering migrations, the demographic increase would be almost uniform up to the 60's, decaying thereafter and increasing in the 90's due to immigration from Africa, South America (Brazil) and Eastern Europe. After 2007 total growth is only due to migration rates. (EUROSTAT, a) 2008).

Inter-census periods	NR	TR	NM
1900 – 1911	1.20	0.86	-0.34
1911 – 1920	0.79	0.14	-0.65
1920 – 1930	1.26	1.24	-0.02
1930 – 1940	1.15	1.24	0.09
1940 – 1950	1.05	0.89	-0.16
1950 – 1960	1.22	0.48	-0.74
1960 – 1970	1.15	-0.21	-1.36
1970 – 1981	0.85	1.29	0.44
1981 – 1991	0.34	0.03	-0.31
1991 – 2001	0.08	0.45	0.37

Source: *Estatísticas Demográficas*, 1968, p. LXX, 1970–2001 e XIº a XIVº Recenseamento Geral da População Portuguesa, 1970, 1981, 1991 e 2001.

NR: Natural annual growth; TR: Total annual growth; NM: Net Migration.

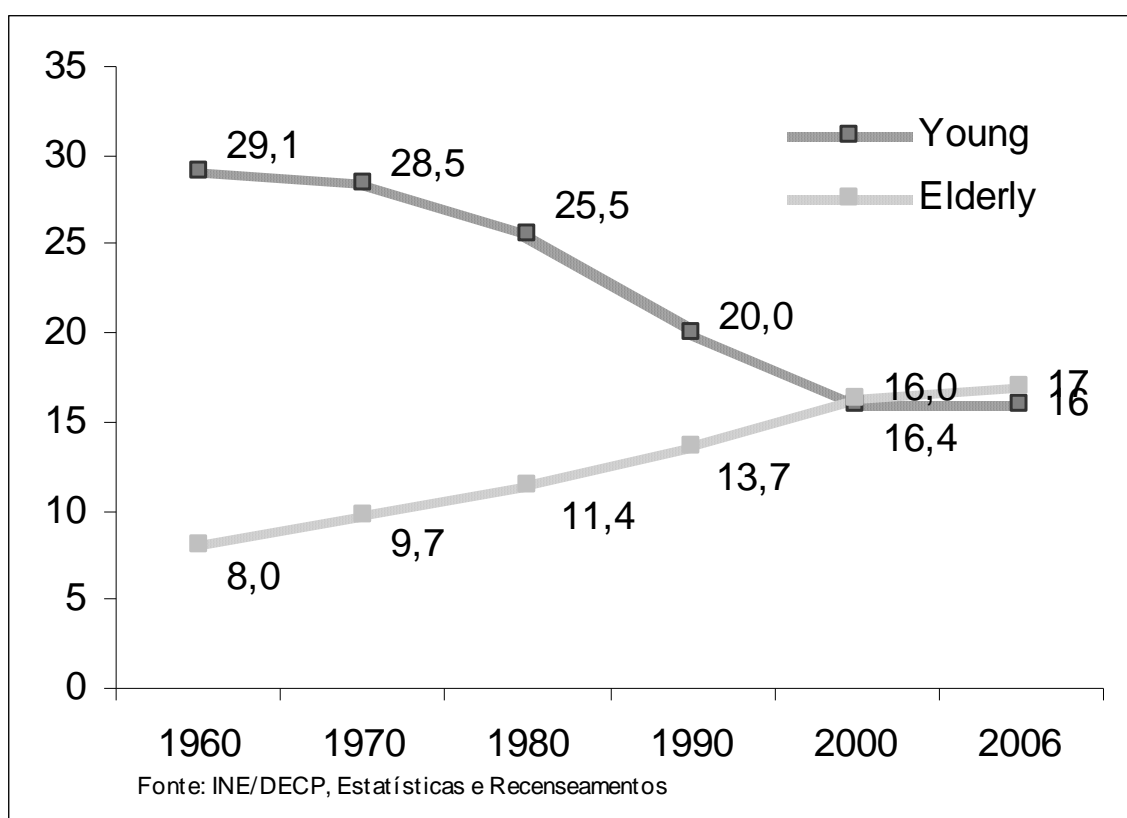
Figure 1. Life Expectancy evolution in Portugal by sex .1890–2006.



Source: INE/DECP, XIIIº and XIVº Recenseamentos Gerais da População Portuguesa.

Life expectancy grew throughout the second part of the century (Figure 1) and stands at 75.2 years for men and 81.6 for women in 2007¹⁵. This is a result of the positive effects of the generalization of efficient means of treatment and the expansion of public and personal hygiene. The main beneficiaries were the most vulnerable groups: firstly, young people, and then the aged. Today, Portugal ranks 8th in the world's ageing process. The turning point came during the 70's.¹⁶ Changes in collective behaviours and new migration trends characterized the last decades of the 20th century.¹⁷

Figure 2. Age distribution of young and elderly people in Portugal, 1960–2006.



Source: INE/DECP, XIII^o and XIV^o Recenseamentos Gerais da População Portuguesa.

In four decades the youngest age groups were reduced by 36 per cent, while people aged 65+ increased by 140 per cent. Today this last group exceeds the first by 76.000 people. Nevertheless, there are both regional and gender differences: old people are more represented in rural areas and are mostly women, although affected by degenerative and chronic diseases. Men live for a shorter time, but in better health.¹⁸

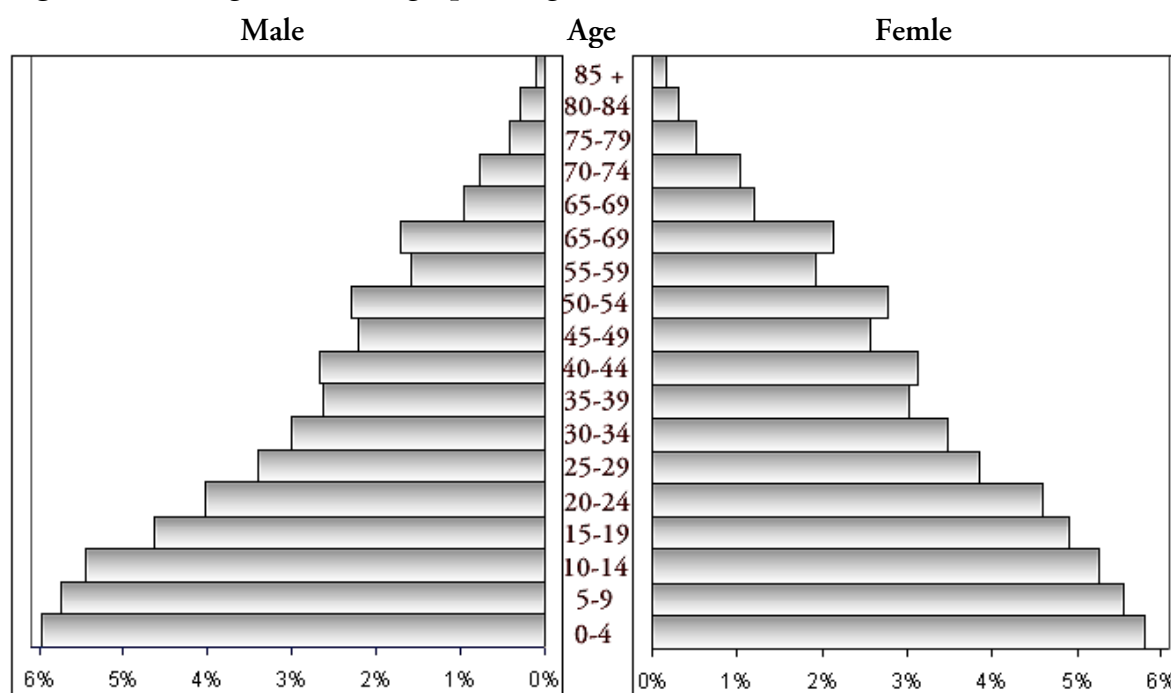
¹⁵ EUROSTAT, b) 2008.

¹⁶ Veiga, 2003.

¹⁷ Carrilho et al., 2007.

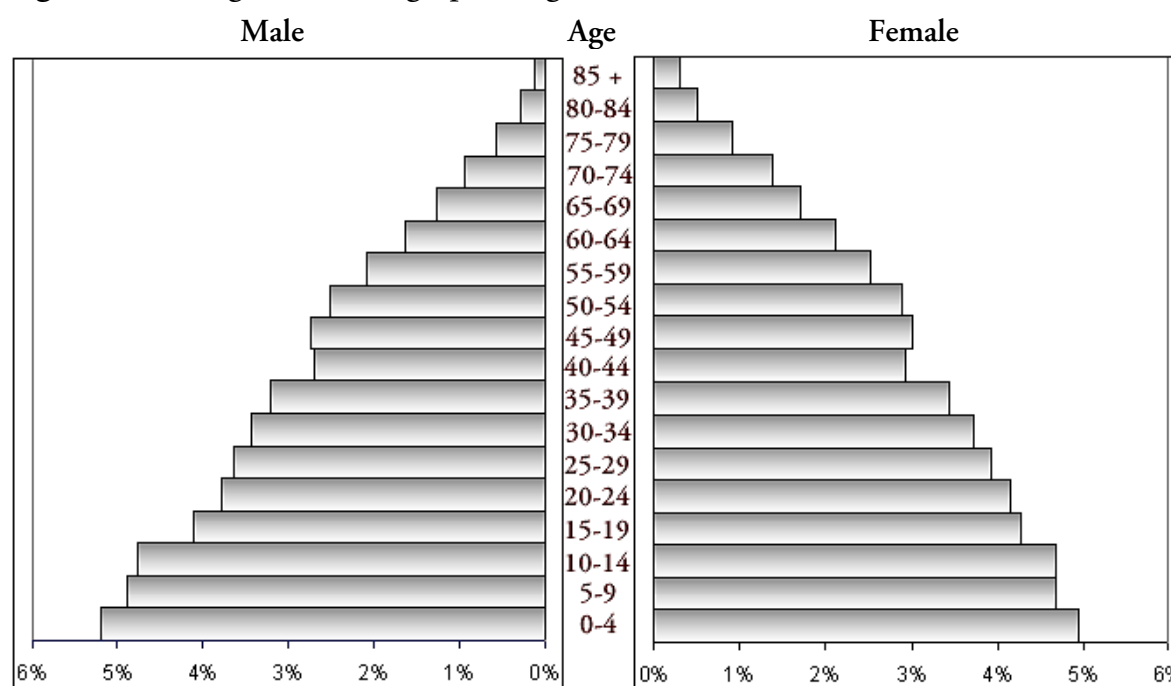
¹⁸ INE; INSRJ, 2000.

Figure 3. Portuguese Demographic Age Structure. 1900.



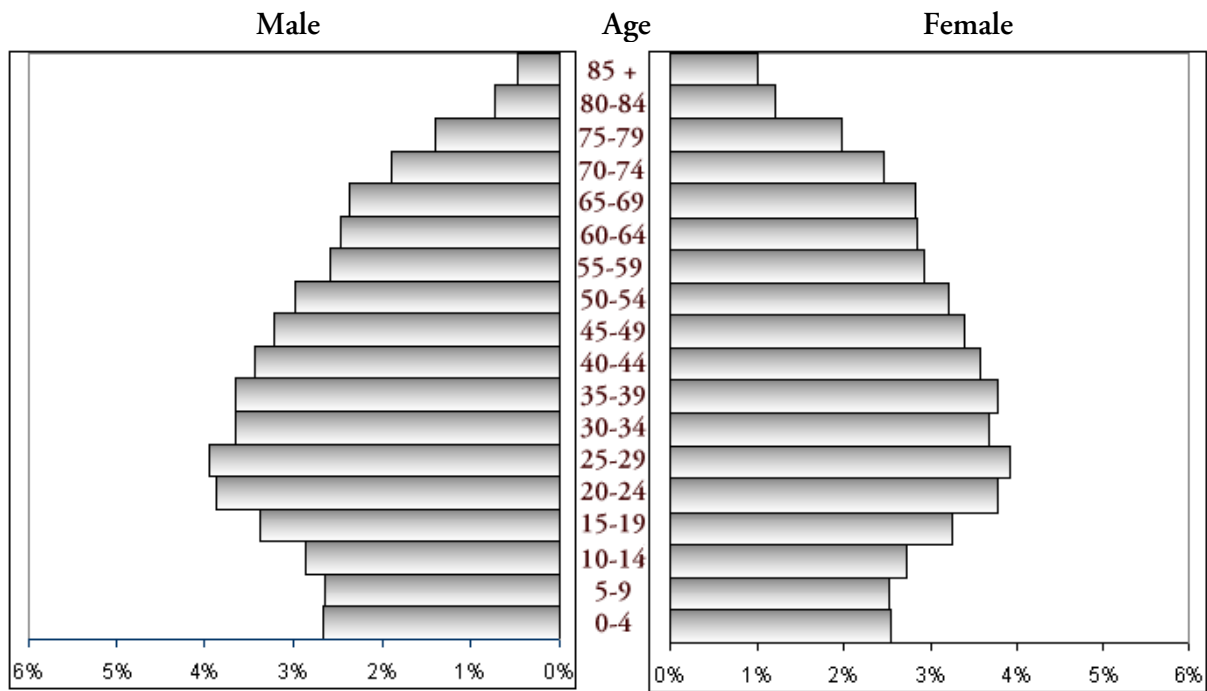
Source: INE, IVº Recenseamento Geral da População Portuguesa.

Figure 4. Portuguese Demographic Age Structure. 1960.



Source: INE, Xº Recenseamento Geral da População Portuguesa.

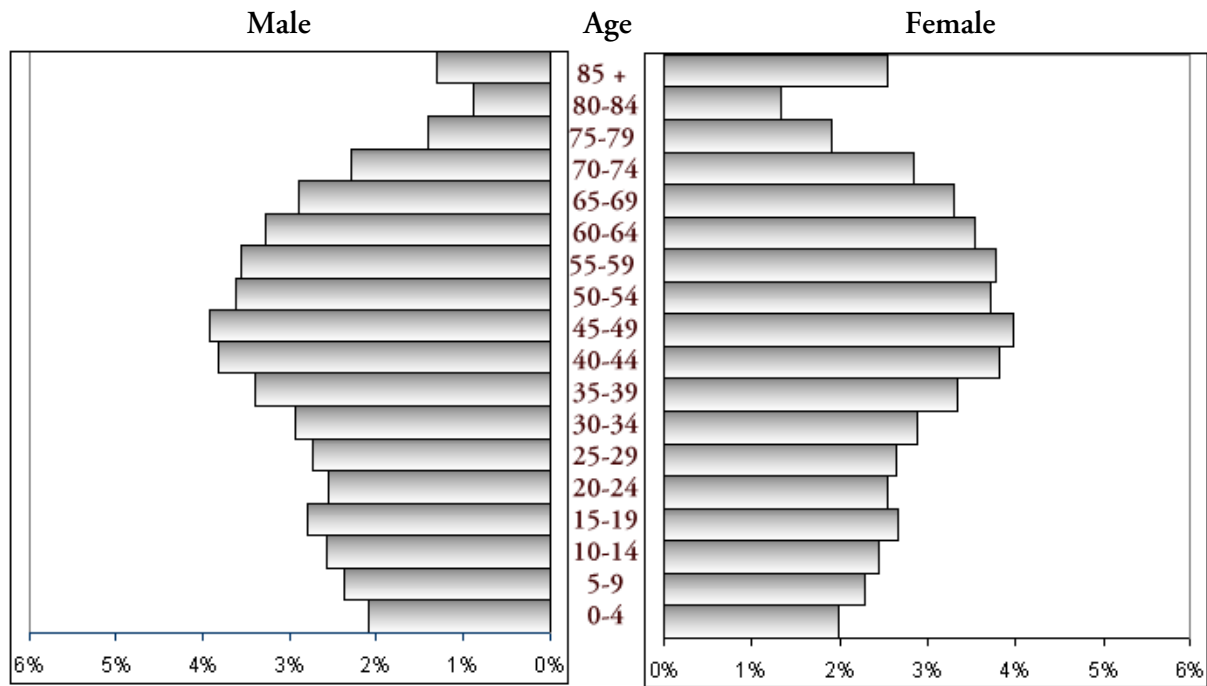
Figure 5. Portuguese Demographic Age Structure.2001.



Source: INE, XIVº Recenseamento Geral da População Portuguesa.

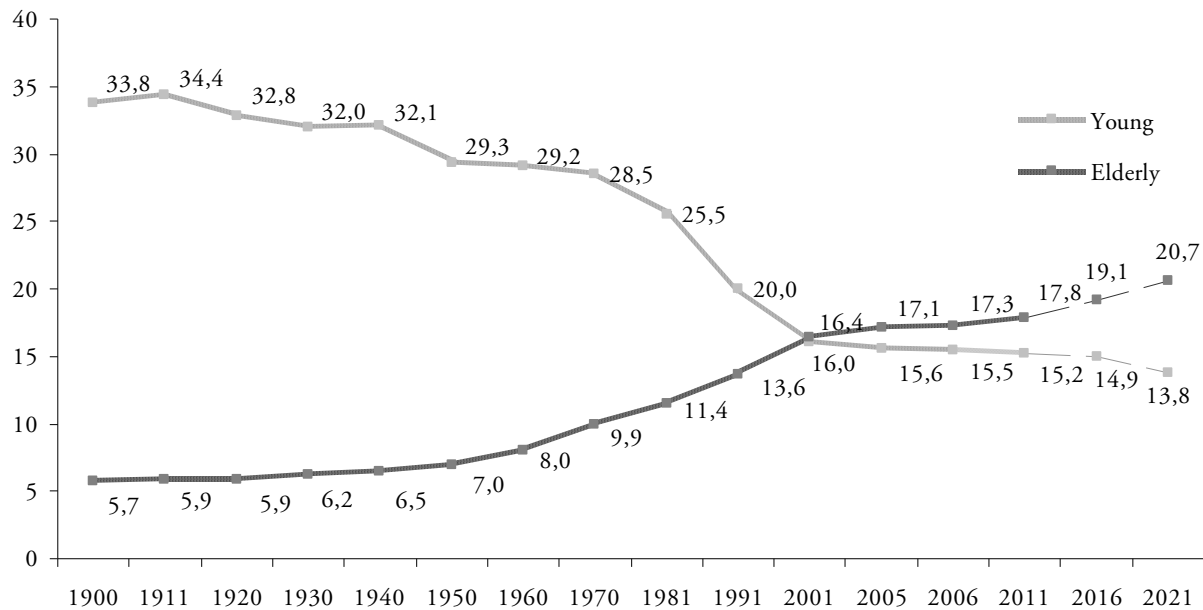
Even allowing for a medium attractive migratory scenario, forecasts confirm a double ageing process, with life expectancies greater than 76 years for men and 83 for women by 2020. By then, the younger generations will represent no more than 13 per cent, whilst old people will exceed 20 per cent. For every 10 youngsters there will be 15 people aged 65 years or more.

Figure 6. Portuguese Demographic Age Structure. 2021.



Source: Henriques, 2005.

Figure 7. Young and Elderly 1900 – 2021.



Source: Henriques, 2005.

Ageing, socio-economic conditions and health

The Portuguese mortality model shows a clear concentration of death amongst older age groups.¹⁹ In such a context growing old in a healthy way has become one of the important goals of policies which aim for a healthy survival. The cumulative effects of adverse inputs, resulting from harmful life styles and food diets have impacts throughout life and will negatively influence older ages. Several chronic pathologies are precociously aggravated inducing morbid irreversible conditions, due to a life style with multiple stress factors, lack of physical exercise, an unbalanced diet or nicotine and alcohol addictions. Socio-economic differences²⁰ and their consequent impact in health unevenness have been studied, discussed and registered for many years under several disciplines. However, we still do not know precisely and clearly the mutual relationship between socio-economic conditions, health status and the supporting needs for the Portuguese population.²¹ Different exposures to specific risks partially explain the differences found in health profiles.²² We can confidently state that socio-demographic factors, like gender, age, marital status, education level and socio-

¹⁹ Veiga, 2005.

²⁰ Huisman, et al, 2004.

²¹ Rodrigues et al., 2008.

²² Casey et al., 2003.

economic status, among many others, constitute powerful determinants for morbidity and mortality.²³

Our work is based on the Joung et al. study²⁴, where, through the analysis of quantitative methods, the extent to which the expected rise in educational levels of the Dutch population could counterbalance the also expected increase in the prevalence of ill-health and health care utilization. In an initial stage, the authors used logistic regression methods to estimate the odds ratio for age and educational level. Separate models were fitted for men and women. In a second step, the estimation results are used to calculate the expected proportion of ill-health for each specific category of sex, age and educational level. The projected proportion of ill-health within the total population was estimated applying these expected proportions to the number of people in the appropriate specific stratum. Their study concluded that the rise in educational level counteracts to a substantial degree the expected increases in ill-health due to population ageing. They prove that changes in educational level must be taken into account where morbidity and health forecasting is concerned.

Data and Methodology

Data

In methodological terms, the present study used two data sets. The first one concerns data from the 1999 National Health Survey, conducted by the Portuguese Institute of Statistics and the National Institute of Health, which is representative of Portuguese population. The National Health Survey provides information of 21,640 individuals aged 25 or more, on the following variables²⁵:

In our INS1999 sample women are relatively overrepresented, standing for 63% of the observations. The distribution of the whole sample by age structure is the following: 21.1 % are aged 25–39; 17.7 % are in the class 40–49; 18.1% are included in the 50–59 aged class; 20.8% in the 60–69 group; and finally 22.1% of the individuals are older than 70. Regarding the educational attainment, in our sample, 21.6 % of the individuals have no education and this percentage is significantly higher for women (24.6%) than for men (16.5%). A significant percentage of the individuals (about 47%) have no more than lowest educational level²⁶ and only a small proportion have attained the highest educational levels (12%). These statistics are in accordance with national figures, which place Portugal in the lowest position within the 15 EU

23 Fernandes et al., 2008; Godinho et al., 1987.

24 2000.

25 INS 1999.

26 This is a total of the first four academic years (4th year, 1st cycle, Primary School).

countries regarding educational attainment.²⁷ As for the health status, 27.8 % of the individuals declared themselves to be in bad health and this prevalence is higher for women (31.5%) than for men (21.6%).

Table 3. National Health Survey: Variables Definition.

Variables	Designation	Code	Categorization
Demography			
Age	Age	Age group	5 Classes: 25–39; 40–49; 50–59; 60–69; 70+
Sex	Sex	Sex	1- Male; 2- Female
Marital Status	Marital Status	Marital Status	1- Married; 2- Widow ; 3- Divorced; 4- Single
Education			
Level of Education	Level of Education	Level of Education	1- No Education; 2- Low level of education (4 years of education); 3- mid level education (6 years + professional training or 9 years of education); 4- High level education (at least 12 years of education)
Health			
Self reported health	Health status	Bad health	0- Good health (Reasonable; Good and Very good); 1- Bad health (Bad or Very bad);
Chronic diseases	Diabetes	Diabetes	0- yes; 1- No
	Bronchitis	Bronchitis	0- yes; 1- No
	Allergies	Allergies	0- yes; 1- No
	High blood pressure	High blood pressure	0- yes; 1- No

Source: 1998/99 National Health Survey.

The second data set is based on the Census 2001 information. It is used to make a forecast for the Portuguese population from 2001–2021. To this purpose, we used the Cohort Component Method. In this framework, components of change are estimated and applied to a base population (present) to form a new population (future). The demographic components (mortality, fecundity and migration) are projected separately and in this order. By projecting each component separately it is possible to assume different future trends for each one, and provide a complete model which we assume to be closer to reality.²⁸ Once the population age groups by each 5 years had been forecasted, we added future projections on education, and calculated future proportions by age and sex for the years 2006, 2011, 2016 and 2021(5x5).

Both methods were used in an independent way. The combination of both data sets was used to infer the future pattern of the Portuguese population health status.

²⁷ OECD, 2007.

²⁸ Caselli et al., 2004.

Methodology

To attain our main objectives, we used a two-step approach. First, we estimated the relationship between health status and socio-economic conditions, using data from the National Health Survey 1999. Then, using the Portuguese demographic forecast analysis by sex, age and educational level, we proposed possible scenarios for future health status.

To determine the current differences in health by age and educational level we used logistic regression models.²⁹ In the model considered in our framework, the dependent variable (the variable to be explained) is health status ($Y=1$ if the individual declares that he is in bad and very bad health and $Y=0$ if he is in good or very good health). The explanatory variables are age, educational level and the existence of certain disease. We considered two separate models for men and women.

In order to analyze the effect of age and education on health status we constructed 5 dummy or binary variables for the explanatory variable Age and 4 dummy variables for the Educational Level. For example, the first dummy variable for Age is a binary variable that is equal to one if the individual's age is within the interval [25, 39] and zero otherwise.³⁰ The estimated probabilities are used, together with the projections of the composition of the future Portuguese population to predict possible scenarios for health status. Contrary to Joung *et al.* (2000), we only used the scenario where it is assumed that the estimated coefficients in the logistic regression remain unchanged over time. This assumption was based on two facts. Firstly, the preliminary estimation results obtained from the 2005/06 National Health Survey suggest that, for Portuguese population, the coefficients (odds ratio) seemed to be stable over time.³¹ On the other hand, evidence for ten European countries (Kunst *et al.* (2004)) also conclude that socioeconomic inequalities in self-assessed health showed a higher degree of stability over time.

Results

The estimated impacts of each explanatory variable on the probability of an individual declaring himself to be in bad or very bad health, in terms of odd ratio (or relative risk), are shown in Table 4.

How can we give an interpretation to the estimated odds-ratio? For example, the value 10.59 that appears in the first line for men's results means that, all other things being constant, a man with no education has a 10.59 greater probability of declaring himself to be in bad or very bad health than a man with a high educational level (the

²⁹ as in Joung *et al.* (2000).

³⁰ More details on the estimation method can be found in Henriques which is available upon request (2005).

³¹ Martins *et al.*, 2008.

reference group). The value 1.515 in line 6 for men's results indicates that, if other things remain constant, a man aged 40–49 reveals a probability of 1.5 of declaring himself to be in bad or very bad health as compared to a man in the 25–39 age groups.

As a whole, the estimation results presented in Table 4 suggest that, as expected, the educational level is positively associated with health status. People with higher educational level declare themselves with better health than people with lower educational levels. Moreover, the estimated impact of education on health status is significantly higher for men than it is for women. As anticipated, our results also suggest that age is associated with health status. Older people have a higher probability of declaring themselves in bad health than younger ones. As for this variable, the results between women and men are not as different as those regarding educational level. These conclusions are analogous to those obtained in other related studies.³² Joung et al. also found that, in general, the odds ratios for men are larger than for women. However, since the increase in educational levels amongst women is expected to be much larger than those of men, taking educational levels into account in the projections has larger consequences for Dutch women than for men. Groot and Van den Brink³³, in their study on health-adjusted life expectancy of the British population, also estimate a significant relationship between the years of education and health status being more pronounced for men than for women.

Table 4. Estimated Odds Ratio for Men and Women.

Dependent Variable: Probability of declaring themselves in bad or very bad health	Estimated Odd Ratio	
Explanatory Variables	Men	Women
Educational Level		
No education	10,6	5,637
Lower level	6,37	3,496
Intermediate	2,48	1,954
Higher	<i>Reference group</i>	
Age		
25–39	<i>Reference group</i>	
40–49	1,52	1,614
50–59	2,71	2,912
65–69	4,99	3,97
70+	5,5	4,444
Others	-	-

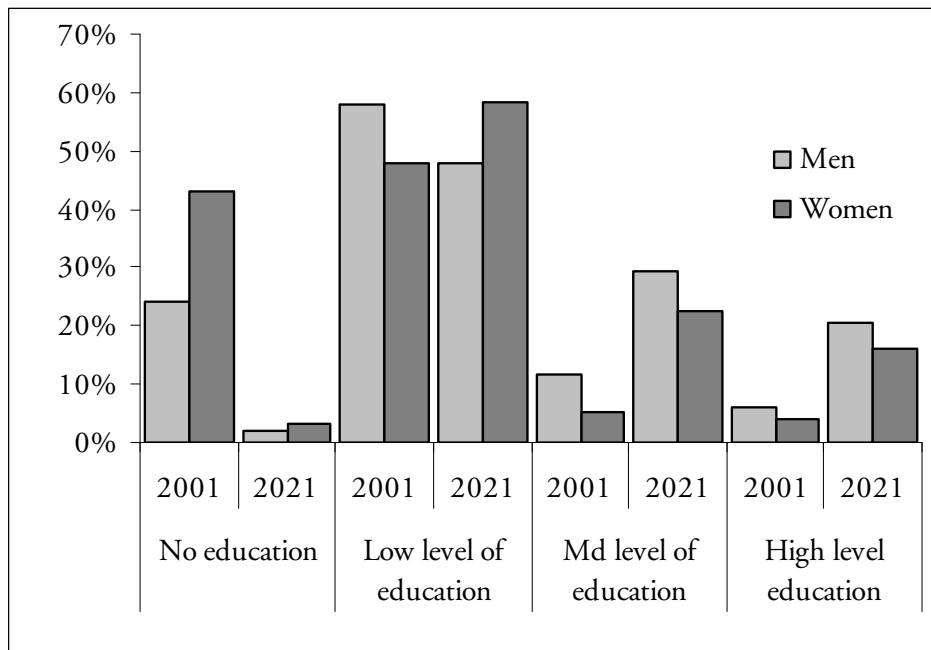
To conclude, our findings corroborate the idea that future changes in the composition of the population by educational level will also affect the population's global average

³² Joung et al., 2000, Cavelaars et al., 1998, Groot et al., 2008.

³³ 2008.

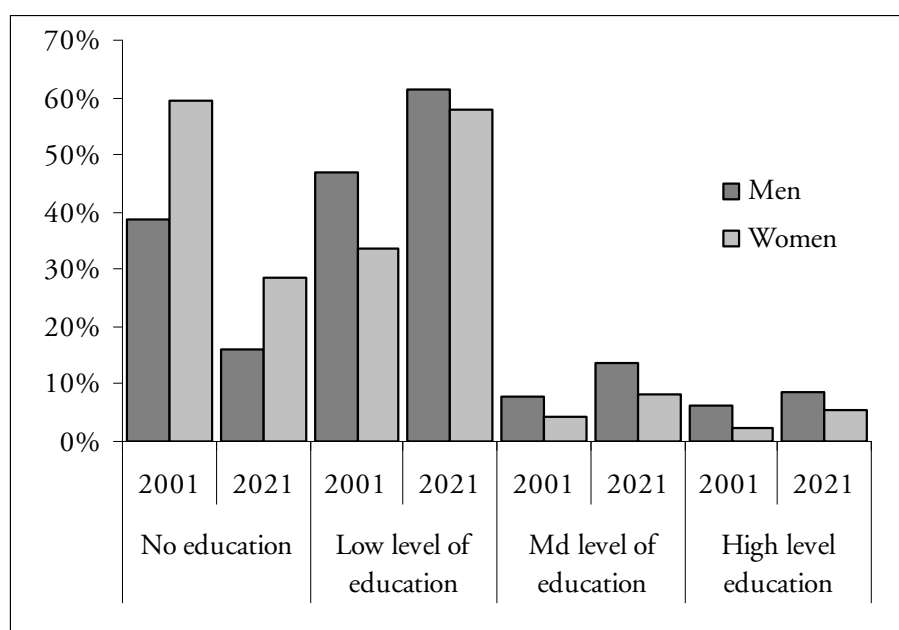
health rate. As in other European countries, huge changes in average educational levels of the Portuguese population are expected in the coming decades. The extent to which the rise in educational levels will counterbalance some of the effects of ageing is as yet unknown. By analyzing the projections of the Portuguese population by sex, age and educational level, we expect to be able to answer this essential question. Figures 8 and 9 present two scenarios on the composition of Portuguese population by educational level, considering people aged 60–69 in 2001 and those who will be over 70 in 2021.

Figure 8. Level of Education by Sex (60–69 years) in 2001 and 2021.



Source: 1998/99 National Health Survey.

Figure 9. Educational levels by Sex (70 or more years) in 2001 and 2021.



Source: 1998/99 National Health Survey.

Among older men and women there are substantial changes in the highest attained education level between 2001 and 2021. As an example, for people aged 60–69, the proportion of women having no education decreases from 41% in 2001 to less than 5% in 2021 and the proportion of women with higher education increases from 4% to 16%. Similar patterns can be found for men, but with a smaller magnitude. These results are in accordance with those found for the Dutch population, and suggest that the negative effect of ageing on health status will be counterbalanced at least partially by higher educational levels. In future research, based on the results from the National Health Survey 2005/06, we intend to measure the impact of the increase in educational levels on the future health care burden associated with ageing phenomena in Portugal.

Conclusions

The purpose of this study was to analyze to what extent future changes in demographic structures by age, sex and educational level will affect the average health status of the Portuguese population. In a demographic global ageing scenario, Portugal stands as a case study with specific interest, due to some major differences related to its historical past. Our estimation results suggest that in Portugal, as in other European countries, there is a significant relationship between health status and educational level. This is particularly relevant in a country as ours, where the educational level attained by older population is still very low. Nevertheless, we have shown that this situation will probably undergo major changes in the near future, due to a successful improvement in educational levels for adult and elderly people. So, the possible negative impact of death concentration on advanced ages, associated to the rise of incapacitating and chronic diseases, can be counterbalanced by the rise in educational levels.

In methodological terms, we have tried to incorporate both econometric and demographic techniques. In both cases, the possible conclusions were limited by major difficulties with data, mostly due to impossibility of crosschecking the information. So, this paper should be considered as an initial essay in applying possible methodologies, according to the available Portuguese information systems on health status and demographic dynamics. The inclusion of education levels on individual death certificates could be of major importance to allow future investigations on this subject, inducing differential trends on morbidity and mortality according to education, as happens elsewhere.

Filipa Castro Henriques is Invited Professor, Department of Political Studies, FCSH – Universidade Nova de Lisboa. *Teresa Rodrigues* is Associated Professor, Department of Political Studies, FCSH – Universidade Nova de Lisboa. *Rosário Fraga O. Martins* is Associated Professor, ISEGI – Universidade Nova de Lisboa.

References

- Baganha, Maria Ioannis, “A emigração atlântica e as migrações internas em Portugal”, *Los 98 Ibericos y el mar*, IV, Lisboa, (1998), 215–228.
- Carrilho, M^a. José, Patrício, Lurdes, “A situação demográfica recente em Portugal”, *Revista de Estudos Demográficos* 40 (2007), 39–75.
- Caselli, Graziella et alii, *Démographie: analyse et synthèse. Histoire du peuplement et prévisions*, INED, Paris (2004).
- Casey, Bernard. Oxley, Howard. White House, Edward. Antolin, Pablo. Duval, Romain, Leibfritz, Willi, “Policies for an ageing society: recent measures and areas for further reform”. *Economics Department working papers*, 369 (2003) <http://www.oecd.org/eco>.
- Cavelaars, A. E. J. M., Kunst, A. E., Geurts, J. J. M., Crialesi, R., Grotvedt, L., Helmert, U., Lahelma, E., Matheson, J., Mielck, A., Mizrahi, A., Mizrahi, A., rasmussen, N. K., Regidor, E., Spuhler, T., Mackenbach, J. P., “Differences in self-reported morbidity by educational level: A comparison of 11 Eastern European countries”, *J Epidemiological Community Health* 52 (1998), 219–227.
- EUROSTAT, a) EUROPOP2008 (EUROstat POPulation Projections 2008-based), *Convergence scenario, national and regional*, 2008.
- EUROSTAT, b) *Statistics in Focus*, 81 (2008).
- Fernandes, Ana. Veiga, Teresa R., Henriques, Filipa de Castro, “Future Trends in Education among older people”, 5, in Joelle Gaymu, Patrick Festy, Michel Poulain, Gijs Beets eds, *Future Elderly Living Conditions in Europe. Quelles conditions de vie pour les Européens âgés de demain?* Paris, 2008.
- Godinho, Joana M. e Lucas João S., “Doença e Morte: Diferenças entre sexos”, V *Jornadas de Economia de Saúde*. Lisboa, 1987.
- Groot, W., Van den Brink, H. M., “Health- adjusted life expectancy of the British population”, *Applied Economics*, 40 (2008), 1373–1386.
- Henriques, Filipa de Castro, *Envelhecimento, Educação e Saúde: uma análise prospectiva 2001–2021*. UNL- ISEGI, Lisboa, 2005.
- Huisman, M., Kunst, A. E., Andersen, O., Bop, M., Borgan, J-K., Borrell, C., Costa, G., Deboosere, P., Desplanques, G., Donkin, A., Gadeyne, S., Minder, C., Regidor, E., Spadea, T., Valkonen, T. & Mackenbach, J. P., “Socioeconomic inequalities in mortality among elderly people in 11 European populations”, *J Epidemiological Community Health*, 58 (2004), 468–475.
- INE/INSRJ, *Esperança de vida sem incapacidade física de longa duração*. 10, Instituto Nacional de Saúde/ Instituto Nacional de Saúde Dr. Ricardo Jorge. Lisboa. 2000.
- Joung, I. M. A, Kunst, A. E., Imhoff, E. Van & Mackenbach, J. P. Education, “Ageing and health, to what extent can the rise in educational level relieve the future health (care) burden associated with population aging in the

- Netherlands?”, *Journal of Clinical Epidemiology* 53 (2000), <http://www.sciencedirect.com>.
- Kunst, A. E., Bos, V., Lahelma, E., Barthé, M., Lissau, I., Regidor, E., Mielck, A., Cardano, M., Dalstra, J., Geurts, J., Helmer, U., Lennartsson, C., Ramm, J., Spadea, T., Strnegger, W., Mackenbach, J.P., “Trends in Socioeconomic inequalities in self-assessed health in 10 European countries”, *International Journal of Epidemiology*, 34 (2004), 295–305.
- Nazareth, Manuel, *Portugal. Os próximos 20 anos*, Vol.III – Unidade e diversidade da demografia portuguesa no final do século XX, Fundação Calouste Gulbenkian, Lisboa, 1988.
- OECD, *Education at a Glance*, 2007.
- Martins, F. O. R., Oliveira, D., Rodrigues, T., “Differences in self reported morbidity by educational level: a comparison between the 1998/99 and 2005/06 Portuguese Health Survey Results”, *European Journal of Public Health*, Volume 18, Supplement 1, November 2008.
- Rodrigues, Teresa, Moreira, Maria João, Henriques, Filipa, *A população portuguesa. Das longas permanências à conquista da modernidade*, Afrontamento, Porto, 2008
- Rodrigues, Teresa, Moreira, Maria João, *As Regionalidades Demográficas no Portugal Contemporâneo*, CEPESE (Working Paper), 2008.
<http://cepe.se.up.pt/principal.php?IDNivel=77>
- Veiga, Teresa, Moreira, Maria João, Fernandes, Ana, Social Changes and Better Health Conditions of the Portuguese Population 1974–2000, *Hygiea Internationalis*, 4: 1, (2004), 255–276. DOI: [10.3384/hygica.1403-8668.0441255](https://doi.org/10.3384/hygica.1403-8668.0441255)
- Veiga, Teresa Rodrigues. “A população portuguesa no último século: permanências e mudanças”, *Ler História* 45, Lisboa (2003), 91–101.
- Veiga, Teresa, “A Dinâmica das Populações Humanas e os Modelos de Mortalidade”, *Fórum Sociológico*, 11/12, Lisboa (2004), 11–29.
- Veiga, Teresa, “Modelos de Mortalidade em Portugal”, *Ler História*, 49, Lisboa (2005), 145–169.
- 2008 *World Population Data Sheet*, PRB, Set.2008 (www.prb.org).
- Nações Unidas, *World Population Prospects*, the 2004 revision, Nova Iorque, 2005.