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Disease, diplomacy and international commerce: the origins of international sanitary regulation in the nineteenth century

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Abstract

During the early nineteenth century, European nations began to contemplate cooperation in sanitary matters, starting a diplomatic process that culminated in the International Sanitary Conferences and the first laws on the control of infectious disease. This article examines the origins of these conferences and highlights certain features that have been neglected in existing scholarship. It argues that while commercial pressures were the main stimuli to the reform of quarantine, these were insufficient in themselves to explain why most European nations came to see greater cooperation as desirable. It places special emphasis on the diplomatic context and shows that the peace of 1815 produced a climate in which many European nations envisaged a more systematic and liberal sanitary regime.

The first International Sanitary Conference, held in Paris, in 1851, is generally regarded as a milestone in international sanitary cooperation. Although there was little agreement among the twelve nations that sent delegates to the conference, it established the principle that quarantine and similar sanitary measures ought to be fixed by international agreement, so as to minimize the expense and inconvenience arising from a multiplicity of practices. The Paris conference applied only to the Mediterranean but all subsequent international forums and laws on the control of infectious diseases stemmed from these tentative steps towards international sanitary collaboration, more than 150 years ago. Yet historians have shown comparatively little interest in the origins of the Paris conference or in attempts to control the spread of diseases across borders prior to 1851. Above all, we have little idea of why the idea of international collaboration suddenly became attractive to many countries in

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the decades before 1851: it was by no means an easy or natural evolution, as quarantine had typically been regarded as an instrument of foreign policy, to be used aggressively in furtherance of national interests.

In so far as an explanation has been attempted, it has stressed the growth of international commerce and particularly the trading interests of Britain and France.[1] The fact that these countries took the initiative would appear to suggest that they saw international agreement as a means of diminishing impediments to their maritime trade. Other factors, such as the growth of political liberalism have also been suggested as reasons why certain states sought to reduce the burden of quarantine, although there is little agreement about how far ideology had a consistent bearing upon sanitary policies.[2] Yet neither explanation seems sufficient in itself to account for the radical shift that was needed for states to contemplate cooperation in sanitary matters. As Peter Baldwin has noted, mercantile interests were far from uniform and tended to be regarded as having a rather narrow view, sometimes incompatible with the national good. Two important questions therefore arise. First, how and with what degree of success did mercantile groups enlist the support of others in their campaign to reform quarantine regulations? Second, how did the reform of quarantine come to be identified, not only with national interests, but with the welfare of humanity in general?

It is not possible here to reconstruct the process whereby the critics of quarantine were able to forge coalitions in their respective countries, but it is possible to examine the international context from which the desire for sanitary cooperation developed. As is well known, the Congress of Vienna (1815) brought to an end an atomized system of international relations in which armed conflict had been common. The system of diplomacy inaugurated at Vienna recognized the existence of different national interests but sought agreements that transcended them. Although this system fell into disarray in 1823, congresses were replaced by smaller conferences on specific topics, and these often proved to be more effective than the rather grandiose gatherings they replaced. It was in this context that the concept of international sanitary cooperation was first articulated, marking a fundamental shift from the state of affairs prior to 1815. While the growth of international trade loomed large in these discussions, other considerations were also important, not least the balance of power and the avoidance of war. Both within individual countries and in the international arena, the proponents of quarantine reform grew in support and stature as their campaign became enmeshed with these broader political and humanitarian concerns.

Quarantine's *ancien régime*

By the middle of the fifteenth century, legislation banning commerce with infected places was common in many Mediterranean countries, particularly those closest to reservoirs of

1 N. M. Goodman, *International health organizations and their work*, London: J. & A. Churchill, 1952, pp. 34–6; Howard-Jones, *The scientific background of the international sanitary conferences*, Geneva: WHO, 1975, p. 11; David P. Fidler, *International law and infectious diseases*, Oxford: Clarendon Press, 1999, pp. 21–37.

2 The classic statement of the relationship between ideology and sanitary policy is Erwin Ackerknecht's essay, 'Anticontagionism between 1821 and 1867', *Bulletin of the History of Medicine*, 22, 1948, pp. 562–93. However, as Peter Baldwin has recently pointed out, the connection between politics and policy is far more complex than Ackerknecht's formulation suggests. See Peter Baldwin, *Contagion and the state in Europe 1830–1930*, Cambridge: Cambridge University Press, 1999.

plague in Central Asia. Although the plague was still regarded as a 'blight of God', prayer and penitence – formerly 'the first and sovereign remedy' – were gradually supplemented by more secular interventions.[3] Some countries, especially the Italian states, also began to develop permanent bureaucracies to administer quarantine and lazarettos, in the belief that plague was a contagious disease that could be prevented by thwarting its transmission.[4] This belief rested on two related observations. First, of all the maladies afflicting Europe, plague alone originated outside the continent; second, it appeared to be a specific disease, with easily recognizable symptoms that could be differentiated from common fevers. Quarantine was invariably imposed whenever the disease was reported in the Levant, which had long been regarded as the conduit of plague into Europe. It was also sometimes imposed against ships from the West Indies, when epidemic disease (most likely yellow fever) was known to be prevalent.[5] In the seventeenth century, these measures were usually *ad hoc* in nature rather than the subject of specific statutes.[6] Even in the Mediterranean, more vulnerable to plague than northern Europe because of its proximity to the Levant, quarantine stations were isolated and their practices irregular. In France, for instance, there were only two quarantine stations along the Mediterranean Sea, at Toulon and Marseilles. Contemporaries were struck by the lack of coordination between these stations and also by the fact that quarantine often continued to be imposed at the ports when the plague was ravaging the interior. This situation led, in 1683, to the first statute relating to quarantine, which began to standardize practices across the country.[7]

In many Mediterranean countries, quarantines came to enjoy a good measure of popular support and were widely credited with the freedom of certain countries from plague. Liberal quarantine regimes like those at Marseilles, however, were generally the exception rather than the rule, and other Mediterranean stations, such as those along the Barbary Coast, became notorious for malpractice and exorbitant charges. But in some European countries, most notably France and Britain, the eighteenth century saw increasing divergence of opinion on quarantine. While such measures continued to command popular support, the medical profession began to divide sharply over the utility of quarantine and the theory of contagion that underpinned it. At the same time, merchants involved in the export trade with the Levant grew increasingly critical of quarantine restrictions, which cost them a great deal through delays, charges and the destruction or damage of goods by fumigation in quarantine houses. Arrangements in the Mediterranean were the main cause of complaint but the

3 *L' ordre public pour la ville de Lyon, pendant la maladie contagieuse*, Lyon: A. Valancol, 1670.

4 Ann G. Carmichael, *Plague and the poor in Renaissance Florence*, Cambridge: Cambridge University Press, 1986, pp. 110–21.

5 Paul Slack, *The impact of plague in Tudor and Stuart England*, Oxford: Clarendon Press, 1985, p. 324. Those who believed that yellow fever was a contagious disease often likened it to plague, some claiming it was different from plague only in degree rather than in kind. For example, Henry Warren, *A treatise concerning the malignant fever in Barbados, and the neighbouring islands: with an account of the seasons there, from the year 1734 to 1738, in a letter to Dr. Mead*, London: Fletcher Gyles, 1740.

6 In England, for example, quarantine was imposed by orders in council, which were to be implemented by the corporations governing ports. See Wellcome Library for the History and Understanding of Medicine, London (henceforth WLHUM), Western MS.3109, Thursday meeting book, Kingston-upon-Hull Corporation, 8 September 1668.

7 'Quarantaines', *Dictionnaire encyclopédique des sciences médicales*, Paris: P. Asselin & G. Masson, 1874, p. 24.

enactment of quarantine statutes in northern countries during the eighteenth century constituted an additional burden.[8]

Perhaps the clearest example of this polarization of opinion was the response to the plague in Marseilles in 1720. The outbreak was immediately traced to a merchant vessel that had arrived from Syria, and neighbouring countries lost no time in imposing quarantine against French shipping; a sanitary cordon was also imposed around Marseilles and other infected provinces. The cordons appeared to prevent plague from spreading beyond southern France but some medical practitioners questioned the contagious nature of the disease. If plague were contagious, why did it appear only at certain times of the year? Might not epidemics be related to other factors, such as seasonal climatic changes and states of the atmosphere? Such ideas had steadily gained ground since the revival of Hippocratic medicine in the Renaissance, and by the late seventeenth century they were being clearly articulated by the English physician Thomas Sydenham (1624–89), amongst others.[9] Many of the medical practitioners who commented on the epidemic in southern France employed such explanations as an alternative or supplement to contagion. The fact that the Levant was afflicted more often than Europe was explained by the fact that it was subject to great heat, the plague 'poison' arising from the rapid putrefaction of dead animals and plants; likewise, plague tended to occur in Europe during the summer, when conditions approximated to those in the East. Quarantine therefore seemed to be unnecessary, as well as injurious to trade.[10]

In Britain, the incorporation of quarantine into statute law provoked similar debates. The first act was passed in 1710, and further legislation followed the arrival of plague in Marseilles, creating a quarantine station in the Medway and elevating the maximum penalty for evasion to death.[11] However, the draconian powers of the 1721 Act were modified as the threat from the Mediterranean diminished.[12] As in France, the broad consensus over preventative measures that had existed in the 1600s was beginning to break down: medical opinion was diverging and exporters were growing increasingly impatient of restrictions on trade. Critics claimed that quarantine in Britain was unnecessary if men boarding ships in the Levant were healthy, as the voyage of seven or eight weeks was long enough to ensure that plague was not present.[13]

Some critics went further and suggested that quarantine in Europe could be relaxed in view of the fact that ships leaving the Levant with foul bills of health were required to perform quarantine at Malta, Leghorn and Venice. But quarantine was far from infallible. In Spain, for instance, the authorities experienced great problems in imposing an embargo against ships from Marseilles, despite posting guards along the Mediterranean

8 *Ibid.*, pp. 26–30.

9 David Cantor, ed., *Reinventing Hippocrates*, Aldershot: Ashgate, 2002.

10 Jean Baptiste Senac, *Traité des causes des accidens, et de la cure de la peste*, Paris: P-J. Mariette, 1744.

11 Arnold Zuckerman, 'Plague and contagionism in eighteenth-century England: the role of Richard Mead', *Bulletin of the History of Medicine*, 78, 2004, pp. 273–308.

12 Slack, *Impact*, pp. 330–2.

13 'Extracts of several letters of Mordach Mackenzie, M.D. concerning the plague at Constantinople', trans. 93, *Philosophical Transactions of the Royal Society*, 47, 1752, pp. 384–95; 'A further account of the late plague at Constantinople, in a letter of Dr Mackenzie from thence', trans. 87, *ibid.*, pp. 514–16.

coast. Ships also attempted to dock in Spanish ports with fraudulent bills of health, which falsely claimed that the ships had sailed from non-infected ports. Cordons imposed along land borders were even more porous,[14] and plague epidemics were often blamed on illicit traders who stealthily crossed borders to evade customs duties and quarantine.[15]

Even supporters of quarantine admitted that this was a problem and some concluded that the answer lay in more efficient systems of disease notification, which would mean that quarantine could be resorted to selectively. The British physician William Brownrigg, for example, conceded that less resort need be had to quarantine if the bills of health issued from plague-infected countries were more reliable.[16] By the 1770s, bills were issued routinely by some of the Italian states and by foreign consuls in the Ottoman dominions. Bills normally declared the time and place from which they were granted, the names and numbers of crew and passengers, and indicated the health status of the vessel. They also recorded whether or not quarantine had been performed and the nature of any merchandise carried.[17]

One of the problems with the system was that consuls had to depend on unreliable sources of information. All it took for a consul to issue a foul bill of health was a single reported case in a Levantine city or its environs, and some British merchants suspected that consuls were deliberately fed false reports by their commercial rivals. 'The Greeks carry on three-fourths of the Dutch as well as the Italian trade', protested a group of Smyrna merchants, 'it is therefore their interest (and unfortunately that of every other nation) to depress ours as much as possible.' For this reason, the merchants, championed by the prison-reformer John Howard, advocated the construction of a model lazaretto in Britain, thereby dispensing with the need to quarantine ships in the Mediterranean. In view of the distance from the Levant, Howard proposed that a quarantine of no longer than forty-eight hours need be performed, if no cases of sickness developed among crew or passengers. Although the British government had hitherto rejected the idea on grounds of cost, the Levantine merchants claimed that a boom in trade with Turkey would more than repay it.[18]

Despite its obvious flaws, quarantine remained firmly entrenched for the rest of the century, both in the Catholic Mediterranean and in the Protestant North.[19] Quarantine was imperfect but it was the art of the possible, and to abandon any form of protection was incompatible with contemporary theories of statecraft, which viewed population as a source of wealth and power. Johann Peter Frank's multi-volume treatise, *A system of complete medical police*, exemplified this line of thinking. An exponent of enlightened absolutism, Frank proposed a comprehensive system to protect and improve the health of all persons through generous state provisions and the regulation of social relations. In this system, quarantine played an important part in protecting enlightened states – like that of his

14 WLHUM, Western MS.963, Balthasar de Aperregui, 'Ordenes relativos a sanidad y lazarettos en el Puerto de Barcelona, con motivo de la peste, en el año de 1714, y siguientes', Barcelona, 1752.

15 William Brownrigg, *Considerations on the means of preventing the communication of pestilential contagion and of eradicating it in infected places*, London: Lockyer Davis, 1771, p. 4.

16 Brownrigg, *Considerations*.

17 *Ibid*., pp. 5–6.

18 John Howard, *An account of the principal lazarettos in Europe*, Warrington: William Eyres, 1789, pp. 25–7.

19 E.g. *Della peste ossia della cura per preservarsene, e guarire da questo fatalismo morbo*, Venice: Leonardo & Giammaria, 1784.

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emperor, Joseph II of Austria – against the ingress of disease from their less diligent neighbours. 'It is one of the foremost tasks of the state to prevent persons or animals, goods, and all objects to which or whom contagions cling, from entering the country', he proclaimed, 'and there is no doubt that governments are entitled to use all suitable means that do not contravene international law in order to achieve this.'[20] Indeed, some writers advocated quarantine explicitly on mercantilist grounds, contrasting the absence of such measures in the plague-ravaged Ottoman provinces with more 'enlightened' regimes that were free from the disease.[21] However, writers such as Paskal von Ferro and Martin Lange argued that quarantine measures ought to be brought into conformity with enlightened government, minimizing inconvenience and disruption of trade.[22]

Despite calls for moderation, quarantine was often employed as a form of commercial protection or was used to sever the economic arteries of rival countries;[23] sanitary cordons were also attractive to states because they could be used to strengthen national and imperial borders. It was partly for this reason that the Venetian republic maintained a sanitary cordon against the adjacent Ottoman provinces of Istria and Dalmatia, but the most striking example is the 1,600 km cordon established by Austria-Hungary along its borders with the Ottoman Empire. The cordon was policed by watchtowers and roving bands of soldiers, ordered to shoot on sight those who crossed the border without performing quarantine. The sanitary functions of the cordon developed gradually from 1710, having originated in the Military Border established to defend against Ottoman invasion. This military and sanitary cordon constituted an important additional source of manpower for the Hapsburg Empire and troops raised in the border provinces to form the cordon were sometimes deployed elsewhere for purely military purposes.[24] Indeed, sanitary cordons were sometimes used to cloak the aggressive intentions of predatory nations. During the plague epidemics in Eastern Europe in 1770, for example, Prussia established a sanitary cordon that encroached upon Polish territory, its ostensibly defensive nature concealing Prussia's predatory intentions.[25]

For these reasons, sanitary matters began to figure prominently in international diplomacy by the 1770s, providing an early indication that some form of dialogue was necessary if damaging disputes and even conflict were to be averted. As the system of diplomacy became more professional,[26] decisions over whether or not to impose quarantine became more difficult and those responsible rarely took action without carefully considering the likely reactions of other states. For instance, when plague appeared in western Russia in 1771, threatening the port of St Petersburg, quarantine was imposed upon all goods brought

20 Johann Peter Frank, *A system of complete medical police*, ed. E. Lesky, Baltimore: J. H. V. Press, 1976, trans. by E. Vlim from 3rd edn., Vienna, 1786, p. 446.

21 Paskal Joseph Ferro, *Untersuchung der Pestanstekung, nebst zwei Aufsätzen von der Glaubwürdigkeit der meisten Pestberichte aus der Moldau und Wallachey, und der Schädlichkeit der bisherigen Contumazen von D. Lange und Fronius*, Vienna: Joseph Edlen, 1787.

22 Martin Lange, *Rudimenta doctrinae de peste*, Vienna: Rudolph Graeffer, 1784.

23 Mark Harrison, *Disease and the modern world: 1500 to the present day*, Cambridge: Polity, 2004, pp. 58–68.

24 Gunther E. Rothenberg, 'The Austrian sanitary cordon and the control of bubonic plague: 1710–1871', *Journal of the History of Medicine and Allied Sciences*, 28, 1973, pp. 15–23.

25 Herbert H. Kaplan, *The first partition of Poland*, New York and London: Columbia University Press, 1969, pp. 129–30.

26 D. McKay and H. M. Scott, *The rise of the great powers 1645–1815*, London: Longman, 1983.

to the city for export, in the hope that this would deter other countries from imposing embargos or quarantines against Russian shipping. But despite active diplomacy, fear of plague and commercial ostracism led most northern European countries to impose quarantine against Russia, much to the disappointment of the British mercantile community in St Petersburg.[27]

Nevertheless, mercantile opposition to quarantine was growing and was becoming quite influential in some regions that depended heavily on international commerce, such as the eastern seaboard of North America. Here, among Republicans such as Dr Benjamin Rush, a signatory of the Declaration of Independence, quarantine had also come to be identified with tyranny.[28] Free trade had long been associated with political liberty,[29] and the growing influence of such doctrines in the Anglophone world led a number of writers to equate quarantine with authoritarian regimes. For Protestant writers such as Dale Ingram and Sir Richard Manningham, the doctrine of contagion was merely a Popish fabrication, originally calculated to exclude certain delegates from the Council of Trent.[30] Yet, opposition to quarantine was not confined to mercantile groups and the doctors with whom they associated: those who travelled regularly by sea also came to resent the costs and delays occasioned by quarantine. The French explorer Corneille le Brun was one of many who complained of the great inconvenience of being detained in Mediterranean lazarettos while returning from the Levant to Europe.[31]

One of the chief problems facing merchants and travellers was the great variety of regulations imposed at ports in the Mediterranean: some maintained forty-day quarantines against all vessels from the Levant, regardless of their bills of health, while others settled for a period of only eighteen days. Irregularities in ships' manifests could also result in the impounding of vessels when there was no disease on board, and for this reason travellers from the Levant often purchased bills of health separately from those of the crew.[32] It was not sufficient, however, to oppose quarantine solely on grounds of inconvenience or even for commercial reasons; its opponents had to attack the doctrine of contagion on which quarantine was based and, even if they did not deny the possibility of contagion, they stressed the vital role of climate and meteorological conditions in epidemic disease. Colonial experience was crucial here, for the seemingly distinctive disease environments of

27 John T. Alexander, *Bubonic plague in early modern Russia: public health and urban disaster*, Oxford: Oxford University Press, 2003, pp. 249–51.

28 Benjamin Rush, *An account of the bilious remitting yellow fever*, Philadelphia: Thomas Dobson, 1794; J. H. Powell, *Bring out your dead: the great plague of yellow fever in Philadelphia in 1793*, Philadelphia: University of Pennsylvania Press, 1949; William Coleman, *Yellow fever in the north: the methods of early epidemiology*, Madison: University of Wisconsin Press, 1987; Martin S. Pernick, 'Politics, parties and pestilence: epidemic yellow fever in Philadelphia and the rise of the first party system', in J. Walzer Leavitt and R. L. Numbers, eds., *Sickness and health in America: readings in the history of medicine and public health*, Madison: University of Wisconsin Press, 1985, pp. 356–71.

29 Carla G. Pestana, *The English Atlantic in an age of revolution 1640–1661*, Cambridge, MA: Harvard University Press, 2004.

30 Dale Ingram, *An historical account of the several plagues that have appeared in the world since the year 1346*, London: R. Baldwin, 1755; Richard Manningham, *A discourse concerning the plague and pestilential fevers*, London: Robinson, 1758.

31 Corneille le Brun, *Voyages de Corneille le Brun au Levant, c'est-à-dire, dans les principaux endroits de l'Asie Mineure, dans les Isles de Chio, Rhodes, Chypres, etc.*, Paris: P. Gosse & J. Neautme, 1732, p. 554.

32 John Taylor, *Travels from England to India, in the year 1789*, London: S. Low, 1799, vol. 1, pp. 114–5.

Asia, Africa, and the Americas made a profound impression upon medical practitioners. Colonial practitioners worked consciously in the tradition of Sydenham and were increasingly vocal in their opposition to simplistic notions of contagion.[33] The surgeon John Wade, employed by the East India Company, declared that he had not encountered a 'single instance of contagion' during his service and added that most epidemics in hot climates were the product of miasma.[34]

Yet opposition to contagion and quarantine was by no means universal among medical practitioners with overseas experience. Senior military and naval medical officers, for example, tended to reaffirm official views on the control of diseases like plague and yellow fever.[35] Support for quarantine was also to be found among those practitioners working for trading concerns such as the English Levant Company. The physician Patrick Russell, who had experienced plague epidemics while working at Aleppo, acknowledged that it was affected by seasonal factors, but he also believed that plague could be communicated through contact between persons and through certain kinds of merchandise, such as clothing. It was therefore wise to maintain the precautions that had served Britain well, cautioned Russell, as the inconvenience caused by quarantine was preferable to the massive disruption that would be caused by an epidemic at home.[36]

Nevertheless, the revolutionary and Napoleonic wars tilted the balance of medical opinion towards those who sought to abolish or, more commonly, to reform quarantine. This may seem counter-intuitive in view of the fact that European armies suffered gravely from both plague and yellow fever,[37] yet overseas campaigns provided practitioners with the opportunity of studying these diseases at first hand, to observe how they spread, under what conditions they seemed to occur, and what effects they had on the human body. Plague and yellow fever were thus demystified and some medical practitioners came to regard them, not as separate diseases, but merely as varieties of common or garden 'epidemic fever'.[38] A growing number of practitioners claimed that these diseases were not contagious

33 Some of the best examples are: James Lind, *An essay on diseases incidental to Europeans in hot climates*, London: T. Beckett & P. A. De Hondt, 1768; John Clark, *Observations on the diseases in long voyages to hot countries, and particularly to those which prevail in the East Indies*, London: D. Wilson and G. Nicol, 1773; Charles Curtis, *An account of the diseases of India*, Edinburgh: W. Laing, 1807. For a discussion of this literature, see W. F. Bynum, 'Cullen and the study of fevers in Britain, 1760–1820', in W. F. Bynum and V. Nutton, eds., *Theories of fever from antiquity to the enlightenment, Medical History* supplement no. 1, London: Wellcome Institute for the History of Medicine, 1981; Richard B. Sheridan, *Doctors and slaves: a medical and demographic history of slavery in the British West Indies, 1680–1834*, New York: Cambridge University Press, 1985; Mark Harrison, *Climates and constitutions: health, race, environment and British imperialism in India 1600–1850*, Delhi: Oxford University Press, 1999.

34 John P. Wade, *A paper on the prevention and treatment of the disorders of seamen and soldiers in Bengal*, London: J. Murray, 1793, pp. 5, 9.

35 Gilbert Blane, *Observations on the diseases incident to seamen*, London: Joseph Cooper, 1785, p. 128.

36 Patrick Russell, *A treatise of the plague*, London: G. G. J. & J. Robinson, 1791.

37 John R. McNeill, 'The ecological basis of warfare in the Caribbean, 1700–1804', in M. Utlee, ed., *Adapting to conditions: war and society in the eighteenth century*, Tuscaloosa: University of Alabama Press, 1982; David Geggus, *Slavery, war, and revolution: the British occupation of Saint Domingue, 1793–1798*, Oxford: Clarendon Press, 1982; Roger N. Buckley, *The British army in the West Indies: society and the military in the revolutionary age*, Gainesville: University Press of Florida, 1998.

38 P. Assalini, *Observations on the disease called the plague, on the dysentery, the opthalmy of Egypt, and on the means of prevention, with some remarks on the yellow fever of Cadiz*, trans. A. Neale, New York: T. J. Swords, 1806.

in any sense other than they could be conveyed in the breath of the sick,[39] and they placed more emphasis on the climatic and sanitary conditions necessary to produce the diseases in epidemic form.[40] The opponents of quarantine looked back at its chequered history, the frequent abuses of sanitary regulations for political ends, and portrayed it as a vestige of a less enlightened era.

Towards an international sanitary system

An additional impetus to the reform of sanitary legislation was provided by the recovery of international trade following the disruption of the French wars. The dynamic force behind the recovery was Britain, now the predominant sea power, although non-European states such as Egypt also played a significant part,[41] ushering in what some historians have referred to as a new wave of globalization.[42]

It is questionable whether the concept of globalization accurately describes the fractured nature of international trade at this time,[43] but the expansion of international commerce undoubtedly became more prominent in discussions over sanitary regulation. On the one hand, certain mercantile interests – particularly those involved in the booming cotton trade with Egypt – increased their demands for the relaxation of quarantine.[44] On the other, there was a heightened sense of the danger posed by infectious diseases originating outside Europe. Although many medical practitioners declared that these diseases were not contagious, epidemics caused alarm among the lay public, dispelling the complacency that followed the retreat of plague. The outbreak of yellow fever in the West Indies during the 1790s, for instance, aroused fears that troops and prisoners sent back to Europe would carry the disease,[45] and vessels were sometimes impounded, much to the frustration of naval authorities.[46]

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39 Margaret Pelling, 'The meaning of contagion: reproduction, medicine and metaphor', in A. Bashford and C. Hooker, eds., *Contagion: historical and cultural studies*, London: Routledge, 2001, pp. 15–38.

40 E.g. Hector M'Lean, *An enquiry into the nature, and causes of the great mortality among the troops at St. Domingo*, London: T. Cadell, 1797; James Clark, *A treatise on the yellow fever, as it appeared in the island of Dominica, in the years 1793–4–5*, London: J. Murray and S. Highley, 1797; J. Mabit, *Essai sur les maladies de l'armée de St.-Domingue en l'an XI, et principalement sur la fièvre jaune*, Paris: École de Médicine, 1804; Victor Bally, *Du typhus d'Amérique ou fièvre jaune*, Paris: Smith, 1814.

41 See A. G. Hopkins, ed., *Globalization in world history*, London: Pimlico, 2002; C. A. Bayly, *The birth of the modern world 1780–1914*, Oxford: Blackwell, 2004.

42 Robbie Robertson, *The three waves of globalization*, London: Zed Books, 2003; Rondo Cameron and Larry Neal, *A concise economic history of the world*, New York and Oxford: Oxford University Press, 2003.

43 See 'Globalization', in Frederick Cooper, *Colonialism in question: theory, knowledge, history*, Berkeley: University of California Press, 2005.

44 *Second report of the select committee appointed to consider the means of improving and maintaining the foreign trade of the country*, PP 1824.

45 National Maritime Museum ADM/F/27, letter from Office of Sick and Wounded Seamen to Admiralty Board, 19 August 1797.

46 In 1794, for instance, the British navy was irked by the prolonged quarantine in Lisbon of a captured French vessel containing valuable merchandise from Saragossa. The seemingly arbitrary extension of the quarantine led to protracted negotiations with the Portuguese secretary of state and other officials. See WLHUM, Western MS.7313, Thomas Mayne, Lisbon, 8 November 1794, to Sir Charles Hamilton, commander, HMS *Rodney*, Portsmouth.

Epidemics of yellow fever in some Mediterranean ports in the early 1800s showed that these fears were justified,[47] while the appearance of plague on Corfu in 1816 caused great alarm because of the enlargement of trade between the northern Atlantic countries and the eastern Mediterranean.[48] Alien epidemics now stood alongside a host of other seemingly new diseases – principally nervous and digestive disorders – that were attributed to the luxurious and frenetic lifestyles produced by commercial and colonial expansion.[49]

This sense of vulnerability meant that most nations – especially those closest to the presumed sources of epidemics – were reluctant to abandon quarantine, their traditional defence against epidemic disease.[50] This was clearly illustrated by the response to the appearance of cholera in European Russia, in 1830, which led most states to fall back on quarantine, despite the lack of consensus about its causation and spread. As with plague and yellow fever, there was little agreement among medical practitioners about whether the disease was contagious or whether quarantine was of any use. For some, the slow and uneven spread of the disease provided evidence that quarantine did not work,[51] while for others it was proof that it had not been sufficiently enforced.[52] Likewise, the spread of the disease from East to West was enough to persuade many that it was in some sense contagious, while the fact that it spread very unevenly – geographically and socially – suggested that other factors were involved.[53] In general, the severity of quarantine and similar measures imposed against cholera depended on the extent to which commercial and manufacturing interests held sway. As Richard Evans has shown, authorities in Hamburg took little action in the fight against cholera during the epidemics of 1832 and 1848, while the Prussian authorities, less dependent upon commerce, insisted on the contagiousness of cholera and the need for restrictions of trade and population movement.[54] However, commercial interests – like the medical profession – were still divided on the issue

47 See for example, J. Tommasini, *Recherches pathologiques sur la fièvre de Livorne de 1804, sur la fièvre jaune d' Amérique*, Paris: Arthus-Bertrand, 1812.

48 WLHUM, Western MS.3883, Maj.-Gen. Sir Charles Phillips, 'Letters and instructions to the officers during the plague at Corfu, 1816'.

49 E.g. Hugh Smith, *An essay on the nerves . . . to which is added an essay on foreign teas*, London: P. Norman, 1799; Thomas Trotter, *Medicina nautica: an essay on the diseases of seamen*, London: T. Cadell and W. Davies, 1797, pp. 9–10; Thomas Trotter, *A view of the nervous temperament*, London: Longman et al., 1807; James Johnson, *An essay on the morbid sensibility of the stomach and bowels*, London: T. & G. Underwood, 1827.

50 James McGrigor, *Medical sketches of the expedition to Egypt, from India*, London: J. Murray, 1804.

51 E.g. James McCabe, *Observations on the epidemic cholera of Asia and Europe*, Cheltenham: G. A. Williams, 1832, pp. 1–4.

52 West Sussex Record Office, Goodwood Papers, MS.1451, Sir Gilbert Blane to the Duke of Richmond, 28 November 1831, 30 November 1831; Richmond to Blane, 17 October 1831, 18 October 1831, 18 January 1832.

53 McCabe, *Observations*, pp. 5–6; William White, *The evils of quarantine laws, and non-existence of pestilential contagion*, London: Effingham Wilson, 1837. See also Pelling, Cholera, pp. 24–5; Michael Durey, *Return of the plague: British society and the cholera of 1831–2*, London: Macmillan, 1979; Harrison, *Climates*, chap. 4.

54 Richard Evans, 'Epidemics and revolutions: cholera in nineteenth-century Europe', in P. Slack and T. Ranger, eds., *Epidemics and ideas*, Cambridge: Cambridge University Press, 1992, pp. 167–8; Richard Evans, *Death in Hamburg: society and politics in the cholera years 1830–1910*, Oxford: Clarendon Press, 1987.

of quarantine, and some thought moderate measures indispensable in preventing more damaging restrictions.[55]

It is perhaps surprising that cholera did not figure prominently in debates over quarantine in the 1830s and 1840s. The most important reason for this was that almost all the quarantine establishments in the Mediterranean had been created to deal with plague and it was not yet clear that cholera would become a perpetual threat. Cholera remained marginal to international discussions of quarantine until the late 1840s, following its second epidemic visitation in Europe, after which time it grew in importance in debates over sanitary regulation. However, at the first international sanitary conference in 1851, it was still less important than plague, and some states, such as that of Austria, had even requested that it be excluded from discussions.

The first suggestion that quarantine might be regulated on an international basis came from France, which entered a more liberal phase of government under Louis Philippe. The Orleanist regime enjoyed a relatively harmonious relationship with the Academy of Medicine, which had become increasingly hostile to contagion and quarantine. The abuse of sanitary cordons by the Bourbon monarchy had led to widespread criticism and had turned many away from quarantine to consider more liberal alternatives. In 1823, for example, a sanitary cordon assembled along the border with Spain to protect against yellow fever was used to restore the Spanish Bourbon monarch to power following a liberal revolt.[56] French merchants and diplomats in the Eastern Mediterranean were also protesting against the disruption caused by quarantine during outbreaks of plague and the high cost of detaining goods and persons in lazarettos.[57] The main causes of complaint were the quarantines imposed against plague after Muhammed Ali became Pasha (Ottoman viceroy) of Egypt in 1805. As part of his programme of modernization, Muhammed Ali began to impose quarantine against shipping from infected ports and took strict measures within his own territories to deal with epidemics.[58] The situation became more serious in 1831, when his army invaded the Ottoman province of Syria, engendering nearly two years of war and political tension between Russia, and France and Britain. In 1833, however, Muhammed Ali established a sanitary board with a consular commission that represented the interests of several foreign powers, arousing cautious optimism about the prospect of more extensive international cooperation.

It was in these circumstances that M. de Ségur Dupeyron, Secretary to the Supreme Council of Health in France, was charged by the Minister of Commerce with investigating the different modes of quarantine operating in the Mediterranean. He examined a number of lazarettos personally and took note of their rules for fixing the length of quarantine.

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55 Baldwin, *Contagion*, pp. 97–8.

56 On the rise of anticontagionist sentiment in France see Ackerknecht, 'Anticontagionism'; Ann F. La Berge, *Mission and method: the early nineteenth-century French public health movement*, Cambridge: Cambridge University Press, 1992, pp. 90–4; E. A. Heaman, 'The rise and fall of anticontagionism in France', *Canadian Bulletin of the History of Medicine*, 12, 1995, pp. 3–25.

57 See WLHUM, Western MS.4911, A. D. Vasse St. Ouen, French consul at Larnaca, Cyprus, to A. R. Roussin, French ambassador at Constantinople, 27 November 1834 to 26 April 1836.

58 La Verne Kuhnke, *Lives at risk: public health in nineteenth-century* Egypt, Berkeley: University of California Press, 1990; Sheldon Watts, *Epidemics and history: disease, power, and imperialism*, New Haven: Yale University Press, 1997, pp. 35–9.

Eschewing the speculation which he felt had been characteristic of medical works, Dupeyron adopted an historical approach, seeing present arrangements in the light of epidemics and quarantine arrangements over several centuries. He concluded that there was a close link between commerce and plague, pointing to the fact that the disease never seemed to occur in those countries whose commerce had been disrupted by war. All epidemics of plague in Europe also appeared to have spread outwards from the Levant, suggesting that the disease was contagious. Although sanitary precautions had been effective in some cases, he felt they were unnecessarily oppressive because they were imposed in an unsystematic way. In view of this, he made a number of suggestions to establish what he termed a 'reasonable and uniform system'. This included quarantines of shorter duration; abolition of quarantines of observation against vessels coming from the West Indies and the USA with clean bills of health; and, most importantly, forbidding arbitrary increases in the duration of quarantine.[59]

When Dupeyron's report was published, the diplomatic climate was not especially conducive to international cooperation. Although Britain and France had been ideologically aligned, in principle, since 1830, the so-called 'liberal alliance' was experiencing difficulties and in 1834–5 France was moving away from Britain in an effort to heal the diplomatic breach that had arisen between the Eastern and Western powers; by 1836, France was far closer to Austria than its erstwhile partner.[60] In 1838, however, the French government, which accepted the thrust of Dupeyron's report, proposed a conference of delegates from various European countries with ports on the Mediterranean, the aim being to agree upon a system of uniform quarantine arrangements. Contemporaneously, in Britain, free-trade agitators in parliament, such as the Benthamite MP Dr John Bowring, kept up the pressure with speeches and publications designed to demonstrate the non-contagiousness of plague and the uselessness of quarantine.[61] In November that year, the British government, along with other nations, agreed in principle to the French proposal.[62]

The most significant of these other powers was Austria, which had numerous quarantine stations along its borders with the Ottoman Empire and along the Danube, as well as substantial commercial interests in the eastern Mediterranean. The Austrians had been protesting for some years about 'impediments thrown in the way of navigation' in the Ionian Sea. The British administration of the Ionian islands appears to have imposed quarantines against vessels from the Levant that sometimes exceeded the fourteen-day period prescribed.[63] For its part, Britain was anxious to secure a reduction in quarantine, not only

59 De Ségur Dupeyron, *Rapport adressé a son exc. le ministre du commerce, chargé de procéder a une enquête sur les divers régimes sanitaires de la Méditerranée*, Paris: L'Imprimerie Royale, 1834.

60 C. K. Webster, *Palmerston, Metternich and the European system 1830–1841*, London: The British Academy, 1934, pp. 19–21.

61 John Bowring, *Observations on the oriental plague, and on quarantine as a means of arresting its progress*, Edinburgh: W. Tait, 1838.

62 Earl of Aberdeen, to Lord Cowley, British Ambassador to France, 27 June 1843, *Correspondence respecting the quarantine laws since the correspondence last presented to parliament*, London: T. R. Harrison, 1846, PP 1846 [718], 45.

63 Prince Esterhazy, Austrian ambassador to Britain, to Palmerston, 19 November 1936, *Correspondence relative to the contagion of plague and the quarantine regulations of foreign countries, 1836–1943*, London: T. R. Harrison, 1843, PP 1843 [475], 54.

for commercial reasons, but because its naval vessels and mail ships were often subjected to long delays at quarantine stations in the Mediterranean.[64]

These tentative steps towards an agreement on quarantine exemplified the system of international relations inaugurated by the Congress of Vienna and which prevailed until the Crimean War.[65] It was fundamentally different to that which existed before 1815, when colonial rivalry between the Atlantic nations intermingled with the continental struggles of the Great Powers. The defeat of France brought to an end any hopes of regaining lost territory in India and North America and, although it was to colonize Algeria between 1829 and 1848, France did not see itself as an imperial rival of Britain until the last quarter of the nineteenth century. Indeed, its interests in Algeria gave France a greater incentive to work with Britain in order to moderate quarantine in Mediterranean ports.[66]

In the forty years after the Vienna congress, the Great Powers sought to work out their differences at the conference table rather than on the battlefield and, in such a system, there was less need or scope for the use of quarantine as a political weapon. Although abuses of quarantine continued to occur, they were increasingly seen as potential causes of discord between nations. Although there was no mention of quarantine in the Vienna settlement, the congress did agree on some related matters, such as freedom of navigation on the Rhine. Like subsequent agreements on traffic on the Danube, this was concluded partly to satisfy economic interests but also because economic cooperation was seen as conducive to peaceful coexistence.[67]

The 'conference system' that evolved following the failure of congress diplomacy remained dedicated to the peaceful solution of political problems. It was also more pragmatic and, in many respects, more successful, involving smaller gatherings of states which aimed to reach agreement on specific matters.[68] Although predominantly driven by the commercial and colonial interests of Britain and France, agreement over such issues as quarantine must be seen in the light of other considerations, with which they became increasingly intertwined, not least the desire to remove potential sources of tension between nations. In this sense, the effort to reach agreement on quarantine closely resembled previous and parallel discussions over navigation. The fact that the focus of sanitary discussions was the eastern Mediterranean made such an agreement all the more desirable, in view of the fact that the Levant had become a potential flash-point in international relations.

64 Palmerston to Sir Frederick Lamb, British ambassador to Austria, 11 June 1838, *ibid*.

65 Harold Nicolson, *The congress of Vienna: a study in allied unity 1812–1822*, London: Constable and Co., 1946; Henry A. Kissinger, *A world restored: Metternich, Castlereagh and the problems of peace 1812–22*, London: Weidenfeld and Nicolson, 1957; Charles Webster, *The congress of Vienna 1814–1815*, London: Thames and Hudson, 1963; Tim Chapman, *The congress of Vienna: origins, processes and results*, London: Routledge, 1998.

66 These efforts were grounded on a report on quarantine in the Mediterranean by the French academy of medicine chaired by Dr R. C. Prus and published in 1846. See George Weisz, *The medical mandarins: the French academy of medicine in the nineteenth and early twentieth centuries*, New York: 1995, p. 77.

67 F. S. L. Lyons, *Internationalism in Europe 1815–1914*, Leyden: A. W. Sijthoff, 1963, pp. 56–64.

68 F. R. Bridge and Roger Bullen, *The great powers and the European states system 1815–1914*, London: Longman, 1980, pp. 41–2.

It is perhaps significant that attempts to convene an international conference coincided with rising tension sparked by another war between the Ottoman sultan and the rebellious province of Egypt, which again raised the spectre of Russian influence in Istanbul. Tension also rose between Britain and France because of French support for Muhammed Ali, but the French were unwilling to risk war with the Austrians and British, who had sent an expeditionary force to the Levant. The situation was defused after Egyptian forces retreated and by the Treaty of London (1840), in which the four principal European powers (Austria, Britain, Prussia and Russia) jointly guaranteed the security of the Ottoman Empire. As the British foreign secretary Lord Palmerston put it, the aim of all governments concerned was to 'agree upon a common course of policy, which may be calculated to accomplish purposes [i.e. the preservation of peace in the Levant] so essential for the general interests of Europe'.[69] The Straits Convention of the following year also made the prohibition of foreign naval traffic through the Bosphorous and Dardanelles a matter of international agreement rather than simply an Ottoman policy, as it had been before.[70] At the same time, there was an improvement in relations between Britain and France, following the dismissal of Thiers in 1840, and the subsequent fall from power of Palmerston and the Whig government. The two countries once again sought to work together amicably to resolve conflicts of interest, and this gave added momentum to discussions over quarantine.[71] According to the quarantine reformer Dr Gavin Milroy, everyone who had studied the subject – statesmen, travellers, merchants and physicians – had come to the conclusion that an international agreement on quarantine was vital to their 'common welfare'.[72]

Metternich claimed that it was now possible to relax quarantine in the Mediterranean because Egyptian measures against plague made its spread westwards less likely. The prospect of similar regulations being introduced in the Ottoman Empire also gave grounds for optimism. In 1838 the sultan asked the Austrian government to send him several experienced quarantine officials to assist in establishing quarantine stations throughout the Ottoman provinces. Most parts of the Empire had been severely affected by plague during the late eighteenth and early nineteenth centuries: in 1812 an estimated 300,000 people died during an outbreak in the greater Istanbul area and, as late as 1836, the disease had claimed the lives of 30,000 people in the Ottoman capital. Although its virulence was decreasing, plague continued to visit Istanbul and the Balkan provinces almost annually through to the middle of the century; moreover, the Empire faced a new threat in the form of cholera, which arrived from Russia in 1821. In the next three decades, seven epidemics of cholera spread through the Ottoman world, having arrived with pilgrims to the Holy cities of Mecca

69 Palmerston to Marquess of Clanricarde, 9 July 1839, correspondence relative to the affairs of the Levant, PP 1841 [304], 8, Session 2.

70 Coleman Phillipson and Noel Buxton, *The question of the Bosphorous and Dardanelles*, London: Stevens and Hayes, 1917, pp. 74–80.

71 Roger Bullen, *Palmerston, Guizot and the collapse of the entente cordial*, London: The Athlone Press, 1974, p. 334.

72 Gavin Milroy, *Quarantine and the plague: being a summary of the report on these subjects recently addressed to the royal academy of medicine in France*, London: Samuel Highley, 1846, p. 5.

and Medina.[73] This new threat from the East presented a great challenge to successive administrations which were attempting to modernize the Empire; they stunted population growth and disrupted the flourishing international trade promoted by railways and steam navigation.[74]

In seeking European expertise, the administrations of Mahmut II (1808–39) and Abdlmecit I (1839–61) were following precedents set in other branches of state, not least in the army. Moreover, the attempt to construct a sanitary infrastructure across the empire was in line with the rapid growth of the Ottoman state during the nineteenth century, with regulations in all ports expected to conform to instructions issued in the Ottoman capital.[75] However, the European powers saw the creation of a 'Commission of Public Health' in Istanbul as another means of exercising influence over the sultan and of securing concessions beneficial to European navigation.[76] Although the influence of foreign representatives on the Constantinople Council of Health,[77] as it became known, was rather less than the European powers had hoped, their representation, like the Straits Settlement of the following year, was symbolic of the sultan's waning independence.[78]

The establishment of the Constantinople Council showed heightened awareness of the need for international cooperation in sanitary matters, which had the effect of bringing Austria into closer cooperation with Britain and France.[79] But despite his initial support for a conference to discuss quarantine, Metternich and other foreign ministers were unable to agree about where to hold the meeting. These wrangles were in no sense untypical, as both Metternich and Palmerston tended to favour conferences over which they could exert control.[80] Talks resumed in 1843, again as a result of French initiative and the British foreign secretary Lord Aberdeen, one of the architects of the new *entente cordiale*, responded enthusiastically, declaring that 'great benefits would result from it to Mediterranean commerce and communications'. However, he felt that prior to offering an invitation to Russia and the Italian states, it would be wise for Britain, France and Austria to first reach agreement between themselves on key issues. He then hoped that Austria would exert its influence on the Italian states to induce them to cooperate. Aberdeen was keen that Russia be involved in the conference because it was a major regional power and any agreement was unlikely to be workable without it. He proposed the neutral port of

73 Donald Quataert, 'Population', in H. Inalcik and D. Quataert, eds., *An economic and social history of the Ottoman empire*, vol. 2, Cambridge: Cambridge University Press, 1994, pp. 787–9.

74 Donald Quataert, *The Ottoman empire: 1700–1922*, Cambridge: Cambridge University Press, 2005, pp. 127–8.

75 The regulations were approved in May 1841 and were accompanied by detailed guidelines for all doctors in the sanitary service of the Ottoman empire. See *Papers respecting quarantine in the Mediterranean*, London: Harrison & Sons, 1860, pp. 81–7.

76 Metternich to Baron Langsdorff, French chargé d'affaires at Vienna, 13 July 1838, PP 1843 [475], 54.

77 The council consisted of sixteen members, with an Ottoman official as president; around half were sent by foreign powers, principally Britain, France and Austria-Hungary. See *Papers respecting quarantine*, p. 94.

78 Convention between Great Britain, Austria, France, Prussia, Russia, and Turkey respecting the straits of the Dardanelles and of the Bosphorous, PP 1842 [350], 44.

79 Webster, *Palmerston*, p. 24.

80 *Ibid*., pp. 6–7.

Genoa as a venue.[81] Other departments of the British government were equally enthusiastic, noting that the mood internationally seemed more conducive to progress than ever before. Mr J. MacGregor of the Office of the Privy Council for Trade declared that 'A very decided tendency has been manifested on the part of the principal Powers, to assimilate in some degree the periods of detention, and at all events to relax very considerably the severity of the restrictions on merchandise and vessels'. He noted that 'the general good understanding which now prevails between this country and foreign Powers . . . encourage[s] the hope that the deliberations of such a conference . . . would result in the adoption of that general system of Quarantine which is so desired'.[82] It is therefore clear that the system of international diplomacy that developed after 1815 – with its overriding objective of preventing war in Europe – was a vital precondition to any agreement on international sanitary regulation. By contrast, the atomized nature of international relations that had existed before the French wars had meant that all attempts to mitigate the effects of quarantine through diplomacy were doomed to failure.

All the signs were, indeed, encouraging, with Britain and France showing their willingness to participate in a conference if it were convened in one of a number of neutral cities. The Austrians, however, were slow to respond and when they did, they did so with less enthusiasm than expected. Metternich considered a conference premature and insisted that the three principal parties first reach an agreement over technical matters such as the minimum and maximum terms of quarantine necessary for humans, the terms for various types of merchandise, and the best methods of disinfecting objects thought susceptible of contagion. This was not unlike Aberdeen's proposal, but the Austrians stated that they required a period of six months in which to consider the matter by themselves; Metternich also stated his preference for any such conference to be held in Vienna.[83]

While France awaited a response from Vienna, the British government commissioned its own investigation of quarantine in the Mediterranean from a former naval officer, Sir William Pym, the Superintendent of Quarantine at the Privy Council. In 1845 he made a detailed report on the numbers of persons and vessels quarantined at different stations, procedures for the handling of goods, charges levied, and so forth. Pym reached a similar conclusion to that of Dupeyron: that quarantine was necessary in some form but that it operated unsystematically. It was this arbitrariness, rather than quarantine *per se*, that posed the chief obstacle to trade in the Mediterranean.[84] On the basis of his investigation, Pym drafted a response to the issues raised by Metternich,[85] but the latter continued to procrastinate, telling British and French officials that he would only consider the matter once he had received information from the Austrian departments of the Interior and of Finance.[86]

81 Aberdeen to Lord Cowley, 27 June 1843, PP 1846 [318], 45.

82 J. Macgregor to Viscount Canning, 2 March 1844, PP 1846 [718], 45.

83 Metternich to Sir Robert Gordon, British ambassador to Austria, 24 May 1844; Gordon to Aberdeen, 31 May 1844; Canning to M. Lefevre, 17 April 1845; Canning to Lefevre, 12 September 1845, PP 1846 [718], 45.

84 Pym to the Earl of Dalhousie, 5 June 1845; Pym to Lefevre, 6 June 1845, PP 1846 [718], 45.

85 Pym to Lefevre, 22 September 1845, PP 1846 [718], 45.

86 Mr Magenis, Austrian ambassador to Britain, to Aberdeen, 15 December 1845, PP 1846 [718], 45.

How is one to explain the apparently contradictory position of the Austrian government? It does seem that there was a genuine desire on the part of Metternich to conclude an international agreement that would be potentially of great benefit to Austrian commerce. The records kept by quarantine stations in the Eastern Mediterranean show that Austrian ships were among those most commonly inconvenienced by quarantine.[87] Steam navigation had led to an increasing volume of trade with the East and there was also increasing pressure from within Austria to relax quarantine regulations along the border of the Hapsburg Empire, for both commercial and humanitarian reasons. Some prominent medical men, such as Professor Sigmund of Vienna, recommended that Austria rely more on sanitary measures than quarantine.[88] The Austrian Ambassador to Britain also told Lord Aberdeen in 1845 that a commission had been established 'with the desire to diminish the expenses of the Cordon Sanitaire, which it is said has completely failed in preventing intercourse across the frontier, and which offers unnecessary interruption to traffic'.[89] Metternich was similarly inclined but Austria's long boundary with the formerly plague-ridden Ottoman Empire meant that others were reluctant to abandon 'tried and tested' sanitary measures. The extent to which other foreign policy objectives affected Metternich's thinking is unclear, except in so far as an agreement between the various powers with interests in the Mediterranean was consonant with his broader aim to reach an accord with Russia as well as the Western powers. His diplomatic correspondence with Britain and France similarly stressed the need to ensure that a conference on quarantine included Russia simply because of its status as a power in the region.[90]

For Britain and France, the chief motives in seeking international agreement were of course related to their commercial and imperial interests. Growing French involvement in Algeria and its trade with the Eastern Mediterranean provided an obvious incentive to reform quarantine and, in the 1840s it took measures unilaterally to reduce quarantine in its Mediterranean ports. Medical opinion, too, was moving increasingly in support of the relaxation or abolition of quarantine. In Britain commercial interests were also becoming more influential and the repeal of the protectionist Corn Laws in 1846 encouraged free traders to seek reductions in other restrictions on trade. Critics of quarantine estimated that its annual cost to Britain amounted to between two and three millions pounds, with similar losses incurred by merchants in the Mediterranean.[91] In the late 1830s, Britain and other nations had also concluded a series of commercial and navigation treaties with the Ottoman Empire, with the aim of opening up areas of trade formerly prohibited to foreign merchants and of agreeing a moderate tariff on imports into the Ottoman dominions.[92] The attempt to

87 See tables of vessels subjected to quarantine at Rhodes, *Papers respecting quarantine*, pp. 66–70.

88 General Board of Health, *Report on quarantine*, London: W. Clowes & Sons, 1849, pp. 78–9.

89 Magenis to Aberdeen, 15 November 1845, PP 1846 [718], 45.

90 Metternich to Langsdorff, 13 July 1838, PP 1843 [475], 54.

91 Speech by Bowring, 15 March 1842, Hansard, *Parl. debates*, col. 610.

92 See 'Copy of the tariff agreed upon by the commissioners appointed under the seventh article of the convention of commerce and navigation between Turkey and England', PP 1839 [549], 47; *Convention of commerce and navigation between her majesty, and the sultan of the Ottoman empire*, London: J. Harrison, 1839, PP 1839 [157], 50; Correspondence respecting the operation of the commercial treaty with Turkey, of August 16, 1838, PP [341], session 2, 8.

reach an agreement on quarantine that involved the sultan was thus part of a more general process, whereby foreign powers were attempting to exploit Ottoman weakness in order to secure concessions on trade and navigation.[93]

But commercial interests were not the only factors that induced Britain to seek international agreement over quarantine. Quarantine was becoming a great inconvenience to the growing number of Britons who travelled to and from India by way of the Levant and there were increasing complaints about the 'absurdities' and 'irregularities' of quarantine in Mediterranean stations, particularly Alexandria.[94] Since quarantines and sanitary cordons had been established in Egypt in the early 1830s, European merchants and diplomatic staff had complained that they had been enforced selectively and that the system was inefficient;[95] the severe plague epidemic that affected Egypt in 1835 was sometimes used in support of these arguments. The tense relationship that existed between the British and Egyptian governments since the early 1830s continued to arouse suspicions that quarantine was being used to damage British interests. Muhammed Ali was deeply suspicious of the East India Company's establishment of a base in Aden and resented the presence of a British garrison adjacent to his territories.[96] The combined European force sent to assist the Ottomans in 1839 had also thwarted his ambitions in Syria.

In view of this, it is hardly surprising that the Egyptian authorities made use of one of the best opportunities they had to monitor the intentions of what they regarded as a hostile power. The advent of steam navigation led to an increasing volume of mail being sent through Egypt, to and from Britain and India, and packet agents in Alexandria and Cairo frequently complained that sanitary fumigation was used as a pretext to intercept, delay or destroy diplomatic communiqués.[97] Dr John Bowring also told the House of Commons in 1842 that 'Official dispatches were opened, perforated with awls, incised by chisels, dipped in vinegar . . . and at length transmitted to their destination in a mutilated, and scarcely legible condition.' He continued that: 'There was no doubt that political objects were sought for in the maintenance of quarantine in the east; and it was equally certain that political interests were promoted by them, and that these, and not the health of nations, were the principal motives for the great severity with which the regulations were enforced abroad.' It was not only the Egyptians who used quarantine in this way, he insisted, but also – to his shame – British consular officials. Yet there was no country that used quarantine for political ends so routinely as Russia. Bowring claimed that its quarantine officials were merely 'political functionaries' that 'arrested and released travellers at will. They took possession of all correspondence . . . they checked or facilitated commerce according

93 Note of the representatives of Austria, France, Great Britain, Prussia, and Russia at Constantinople, to the Porte, 27 July 1839, PP 1839 [205], 50; Correspondence relative to the affairs of the Levant, Part 3, PP 1841 [337], session 2, 8.

94 E.g. Arthur T. Holroyd, *The quarantine laws, their abuses and inconsistencies*, London: Simpkin, Marshall & Co., 1839.

95 *Papers respecting quarantine*, p. 26.

96 Campbell to Lord Palmerston, 27 March 1838, G/17/10, OIOC, British Library.

97 Lt.-Col. P. Campbell, East India Company agent, Cairo, to Peter Amber, 14 July 1835; Campbell to James Melville, 14 July 1837; Alexander Waghorn, EIC agent, Alexandria, to French post office, Alexandria, 18 July 1837, G/17/10, OIOC.

to the passing interests of the moment . . . and in the name of public health', he declared, 'they had introduced a system of universal police and espionage.' In view of this, he insisted, the government ought to do all in its power to ensure that an international agreement was reached. His motion was enthusiastically supported by members of the government, including the Prime Minister, Sir Robert Peel.[98]

The revolutions of 1848 distracted attention from efforts to bring about an international conference on sanitary regulation. However, the French reopened negotiations with renewed vigour and were successful in persuading eleven other states with interests in the Mediterranean (including the Ottoman Empire) to agree to a conference in Paris in 1851. Most countries sent two delegates, a diplomat and a physician, the former in order to ensure that political and commercial matters were given due consideration. As the French Minister of Foreign Affairs insisted, it was necessary to find a *modus operandi* befitting an age of technical and industrial progress, and to strike a mutually beneficial balance between the needs of commerce and of public health. Just as new modes of communication were erasing the tyranny of distance, he argued, it was now time to remove political and commercial impediments that stood in the way of international harmony.[99] The mood internationally was receptive, too. Tension between Britain and France over the Spanish succession evaporated following the removal of the Orleans monarchy in 1848,[100] while the triumph of reaction elsewhere brought stability and a desire to avoid conflict.[101]

The Paris conference is usually considered a failure because its proceedings were marked by disagreement over key issues such as the transmissibility of cholera and because the resulting convention was signed by only three states – France, Sardinia and Portugal – and ratified by Sardinia alone.[102] Although the divisions were primarily between the Mediterranean countries, which were more reluctant to abandon quarantine, and Britain and France, which were eager for commercial and colonial reasons to liberalize it, the fault lines were numerous and often cut across each other. Despite Metternich's earlier optimism, Austrian delegates opposed any attempt to modify maritime quarantine and disinfection regimes in times of plague, and were particularly hostile to British proposals to reclassify susceptible merchandise so as to downgrade the threat from cotton, long regarded as a carrier of plague. Together with Russian delegates, they also opposed British proposals to abandon land-based cordons, which, however imperfect, were regarded as the only means of defending their empires against plague from the Levant. Yet Austrian (but not Russian) delegates backed the French and British position that cholera was not contagious in the same way as plague, and opposed the use of quarantines and sanitary cordons to control it.[103] As Baldwin has noted, public opinion was also important in affecting positions at the conference, often to the detriment of liberalization as in the case of most Italian

98 Hansard, *Parl. debates*, 15 March 1842, cols. 608–18.

99 *Procés-verbaux de la conférence sanitaire internationale, ouverte à Paris le 27 Juillet 1851*, vol. 1, 5 August 1851, pp. 3–4.

100 Bullen, *Palmerston*, pp. 337–8.

101 A. J. P. Taylor, *The struggle for mastery in Europe 1848–1918*, Oxford: Clarendon, 1954, p. 46.

102 Howard-Jones, *Scientific background*, pp. 15–16.

103 *Conférence sanitaire internationale*, 24 October 1851, pp. 23–25; 4 October 1851, pp. 8–9; 18 September 1851, pp. 3–12.

states.[104] Yet the conference agreed in principle upon the basic aim of achieving agreement internationally over sanitary regulations, as well as the desirability of some specific measures, including the strengthening of sanitary surveillance in Egypt and the Ottoman Empire.[105]

Even this limited degree of consensus would have been unthinkable before 1815 but the nature of international relations in the four decades following the Vienna congress was such that it became less acceptable to use quarantines and sanitary cordons for overtly political purposes. From 1815, matters such as navigation and quarantine were considered partly with conflict avoidance in mind, especially in potential trouble spots like the Levant. And, from 1851, the attempt to reach an international consensus gathered momentum, with ten further international sanitary conferences being convened over the next half century, most of which were widely ratified. Unlike 1851, the primary concern at most of these conferences (1881 and 1897 excepted) was to devise an effective but not too disruptive means of preventing incursions of cholera from Asia. Until 1881, the conferences were attended and hosted by European countries only, but, in that year, a conference was held in Washington DC. The USA continued to be involved in European conferences but it simultaneously attempted to develop and lead international sanitary discussions in its own sphere of influence. A conference of South American states had already been held at Rio de Janeiro in 1887, but this was followed in 1902 by a Pan-American Conference at Washington DC, which resulted in the establishment of the Pan-American Sanitary Bureau. A few years later, in 1907, the first European international health organization, the Office International d'Hygiène Publique, was established in Paris.[106]

These measures and those that developed subsequently were the fruit of an evolving international consciousness, of which we see the first signs in the 1830s and 1840s. It is ironic that the growth of such institutions came at a time of mounting international tension. Although the idea of international sanitary cooperation was a brainchild of conference diplomacy, this system broke down with the outbreak of the Crimean War. Indeed, the first conference at Paris, in 1851, was as much the end of an era as the beginning of a new one. In the years that followed, disputes over quarantine escalated in tandem with rivalry between the imperial powers. For instance, after Britain's unilateral ending of the system of Dual Control of the Egyptian debt in 1882, France, its former partner in Egypt, sought every opportunity at international sanitary conferences to oppose British interests, by insisting on strict quarantine for vessels at Suez. As the Suez Canal, which opened in 1869, was a vital conduit for British eastern trade and for communications with India, quarantine measures at Suez affected Britain disproportionately. However the emergence of a united Germany and the formation of the Triple Alliance with Italy and Austria served as a counterweight to French demands. From 1885, after it had become a colonial power in East Africa, Germany and its partners sided with Britain in seeking relaxation of quarantine at Suez.[107] Quarantine was also the subject of contention between Britain and Russia, where

104 Baldwin, *Contagion*, p. 198.

105 *Conférence sanitaire internationale*, vol. 2, Annex to Proc. 29, 11 November 1851.

106 Fidler, *International law*, chap. 2.

107 Mark Harrison, *Public health in British India: Anglo-Indian preventive medicine 1859–1914*, Cambridge: Cambridge University Press, 1994, chap. 5.

it was used by both powers in their attempt to gain territorial and commercial influence in Central Asia.[108] Nevertheless, the foundations of an international sanitary order had been established and the sanitary conferences of the late nineteenth century provided a context in which such disputes could be moderated and their political impact blunted by international consensus.

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108 E.g. Amir A. Afkhami, 'Defending the guarded domain: epidemics and the emergence of an international sanitary policy in Iran', *Comparative Studies of South Asia, Africa and the Middle East*, 19, 1999, pp. 122–34.