



A cartoon from 1892 proposes America close its ports to prevent the influx of disease from abroad.

PANDEMICS

A deadly business

Andy Tatem traces the global tracks of pathogens that have clung to the coat-tails of trade over the centuries.

In 1866, the Archbishop of Canterbury called for Britain to observe a national 'day of humiliation' to atone for the sins that had triggered recurring epidemics of disease. (Such days now occur only when British football teams exit international tournaments yet again.) It wasn't, of course, divine retribution that had brought plague, yellow fever, cholera and rinderpest to the United Kingdom. Rather, it was the expansion of trade networks.

Disease has always followed the world's main arteries of trade. Plague, for instance, was spread by merchant traders in Europe throughout the seventeenth century. Huge yellow-fever outbreaks in the Americas in the nineteenth century were triggered by the slave trade. More recently, outbreaks of respiratory diseases, including avian influenza, have escalated rapidly into pandemics as a result of air travel. In *Contagion*, historian Mark Harrison chronicles the deadly legacy of commerce, and humanity's efforts to cope.

Harrison recounts how nations have attempted to protect themselves from disease, while recognizing that sanitary measures can hurt trade. After city officials admitted a plague outbreak in Oporto, Portugal, in 1899, for instance, it was noted that "it is no light matter to proclaim the existence

of plague in a sea-port town dependent for its prosperity on maritime commerce".

And before modern regulations, ethics could be at odds with the need to make a profit. When, if at all, should a disease outbreak be announced, given the economic consequences of quarantines by trading partners? How can officials convince trading partners that an outbreak is being tackled effectively? How should a nation react to outbreaks in nations they trade with? *Contagion* is full of colourful examples of the various responses to these questions from the past 700 years.

Heavy-handed quarantine was often used to damage rivals' economic prospects. Frosty relations between Britain and Egypt in the late nineteenth century were exacerbated, for instance, when Egypt imposed harsh quarantine measures on ships sailing through the Suez Canal to Europe from cholera-endemic regions such as India. Britain's foreign office stated that these measures "serve no better



Contagion: How Commerce Has Spread Disease
MARK HARRISON
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purpose than the enriching of a set of incompetent and corrupt officials". But Britain's behaviour had at times been no better: in the eighteenth century, the government imposed 40-day quarantines on all ships from the Mediterranean, and fumigated goods with damaging chemicals. This 'plague control' probably had more to do with gaining economic advantages than with halting the spread of disease, and resulted in revolts and conflict.

Claims of protectionism are common in *Contagion*. When diseases arise, importing nations often impose sanctions, from plague-related tit-for-tat trade embargoes by rivals Britain and the Netherlands in the seventeenth century to European bans on US pork in the past decade. An outbreak of fire blight in New Zealand apples in the 1920s prompted Australia to enact a ban on the fruit that lasted for almost 90 years. In 2005, Jim Sutton, then New Zealand's agriculture minister, raged that "Australians cheat in matters of biosecurity and the concept of honest science has no meaning to them".

Among the many histories of pandemics, *Contagion* stands apart for its depth of research and breadth of sources, and its focus on commerce. The narrative is well balanced between the high-level political decision-making surrounding sanitary measures and more focused examples of how individual cities, traders or ships were affected.

If this excellent book has a weakness, it is that it often overlooks the basic epidemiology of trade-borne diseases, leaving most readers guessing as to whether the debated interventions were effective.

As shown by *Contagion*, in an age of global connectivity, governments must tread a fine line between protecting public health and ensuring economic prosperity. This can create delicate situations. With the continued expansion of air travel and economic globalization, historical lessons are hugely relevant. Profit-seeking and public health can still be at odds, and political and commercial interests often take priority over scientific decisions. As they have been for centuries, nations are torn between offending their trading partners and alarming their citizens.

The dilemma is illustrated by the case of violent protests that broke out in South Korea in 2008, costing the country around US\$2.5 billion, when US beef imports were resumed after a 5 year ban following a case of bovine spongiform encephalopathy (BSE). As a 13-year-old South Korean schoolboy put it, "I am afraid of American beef. I could study hard in school. I could get a good job and I could eat beef and just die." ■

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