

**E** This population burst seemed to happen at just the right time to provide labour for the Industrial Revolution. 'When you start moving towards an industrial revolution, it is economically efficient to have people living close together,' says Macfarlane. 'But then you get disease, particularly from human waste.' Some digging around in historical records revealed that there was a change in the incidence of water-borne disease at that time, especially dysentery. Macfarlane deduced that whatever the British were drinking must have been important in regulating disease. He says, 'We drank beer. For a long time, the English were protected by the strong antibacterial agent in hops, which were added to help preserve the beer. But in the late 17th century a tax was introduced on malt, the basic ingredient of beer. The poor turned to water and gin and in the 1720s the mortality rate began to rise again. Then it suddenly dropped again. What caused this?'

**F** Macfarlane looked to Japan, which was also developing large cities about the same time, and also had no sanitation. Water-borne diseases had a much looser grip on the Japanese population than those in Britain. Could it be the prevalence of tea in their culture? Macfarlane then noted that the history of tea in Britain provided an extraordinary coincidence of dates. Tea was relatively expensive until Britain started a direct clipper trade with China in the early 18th century. By the 1740s, about the time that infant mortality was dipping, the drink was common. Macfarlane guessed that the fact that water had to be boiled, together with the stomach-purifying properties of tea meant that the breast milk provided by mothers was healthier than it had ever been. No other European nation sipped tea like the British, which, by Macfarlane's logic, pushed these other countries out of contention for the revolution.

**G** But, if tea is a factor in the combination lock, why didn't Japan forge ahead in a tea-soaked industrial revolution of its own? Macfarlane notes that even though 17th-century Japan had large cities, high literacy rates, even a futures market, it had turned its back on the essence of any work-based revolution by giving up labour-saving devices such as animals, afraid that they would put people out of work. So, the nation that we now think of as one of the most technologically advanced entered the 19th century having 'abandoned the wheel'.