MEDICINE, THE CITY AND CHINA*

by

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THE PREVIOUS Monckton Copeman Lectures have dealt with some of the local and national relationships between the City of London and Medicine. Both doctors and City men have shared a common love of adventure, of pushing beyond the frontiers, of taking risks. Much of the literature of exploration is the work of the medical men of the expeditions, either financed by merchants, or by a government pressurised by the demands of traders in London, Manchester, Bristol and Liverpool. This lecture concerns some aspects of the trade between China and England in the eighteenth and early nineteenth centuries relating to medicine, and in particular the traffic in exotic drugs, the medical men concerned in the trade and the special links which developed between some of these men and the City of London.

The story begins with a rise in the price of pepper. The Dutch, who enjoyed a monopoly, had raised the price from 3*s.* 0*d.* to 8*s.* 6*d.* per pound. As a result, a group of London merchants met in 1599 to form an association to trade with the Indies. On the last day of 1600, Queen Elizabeth I granted them a charter. Thus was formed the East India Company entrusted with the monopoly of trade to the Far East; woollen goods, lead, guns and medicinal plants were exported, and spices for preserving and flavouring meat, medicinal plants, silks, textiles and luxury goods were imported. In the eighteenth century, however, the import of Indian textiles became unprofitable. Thenceforth it was tea, a product unavailable in Europe, which formed the basis of the Company's trade. Tea could only be obtained in China. In 1664, 2lb. 2oz. of tea were bought by the directors as a gift for Charles II at a cost of £4 5*s.* 0*d.*—possibly from the Dutch. By 1783, the amount sold at the Company's sales was 5,857,882 lb. Two years later, as a result of the Commutation Act (1784), which reduced the duty on tea from over 100 per cent to 12½ per cent, fifteen million pounds of tea were sold and, in the final years of the Company, around 1830, the amount exported from China averaged about 30 million pounds. Tea had become so important that an Act of Parliament required the Company to keep a year's supply in stock. Tea from China produced one-tenth of the total revenue of England and the entire profit of the East India Company. But what was China to receive in return? As Sir Robert Hart wrote 'the Chinese have the best food in the world, rice; the best drink, tea; and the best clothing, cotton, silk, fur. Possessing these staples and their innumerable native adjuncts, they do not need to buy a penny's worth elsewhere.' The Emperor Ch'ien Lung rebuffed the Macartney Embassy, which had taken out

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samples of articles made in the manufacturing towns, in the following terms: 'Strange and costly objects do not interest me. As your Ambassador can see for himself, we possess all things. I set no value on strange objects and ingenious and have no use for your country's manufactures.' The only possibility was bullion—gold and silver—and particularly the silver dollars minted in Old and New Spain. England's staple export—woollens—could not be sold to the Chinese at a profit—the Chinese had no use for them. Many ships' cargoes consisted of 98 per cent silver bullion—in 1751, for instance, four ships left England for China loaded with £119,000 of silver and only £10,842 in goods. This Chinese appetite for silver presented difficulties—the economists of the day objected to it as non-productive, and periodical shortages of silver occurred during times of war. Tea had to be purchased, but as time went on the gap between British imports to and exports from China increased considerably —from 1792 to 1807 shipments to England from Canton stood at £27,157,006 and exports at £16,602,338. A trade gap such as this could not be allowed to continue, and luckily a solution was at hand. Although British woollens could be sold only at a loss, the Chinese needed raw cotton. Although cotton was grown in China, periodical crop failures and an enormous demand led to the growth of a profitable trade with India, carried on by both private traders and by the East India Company. Far exceeding this need for cotton was the demand for opium grown in India as a monopoly of the Company, and prohibited in China. The effect of the trade in these two commodities was such that by 1804 little or no silver had to be exported from England to China. Indeed the flow was to be reversed. In the three years 1806–1809, £7 million of bullion was shipped from China to India, and from 1818–1833, the final years of the Company's monopoly, one-fifth of the total exports from China was treasure. And it was opium that had accomplished this; henceforth the British could drink their tea and the Chinese could smoke their opium in comfort, at least so it was argued by the merchants in London, Bombay, Calcutta and Canton, as well as by numerous Chinese dealers in opium. What had begun with a rise in the price of pepper in London was to end in the destruction of the Chinese Empire and the opening up of China to the products of European and American industry, with all the associated consequences.

Now it is necessary here to understand something of that remarkable monopoly which was the East India Company. Briefly, in the words of Northcote Parkinson 'How was the East India Company controlled? By the Government. What was its object? To collect taxes. How was its object attained? By means of a large Standing Army. What were its employees? Soldiers, mostly; the rest, Civil Servants. Where did it trade to? China. What did it export from England? Courage. And what did it import? Tea.' This strange company did not possess its own fleet. Although the ships were called Indiamen, they were hired from men who were given a contract to build. These were called the ships' husbands; one of the most famous, Sir Robert Wigram, began as a ship's surgeon. They provided the capital and managed the ship, appointed her officers, and the commander, even before the keel was laid. The size of the ships ranged from 499 tons (an extra ton meant that a clergyman had to be carried) to 1,200 tons, those ships on the China run being amongst the largest, and presenting an impressive sight when anchored in line at Whampoa. The captain and crew were paid by the owner—a captain £10, a chief mate £5, the surgeon from £5 to £3 and his mate

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from £3 10*s*.0*d* to £1 10*s*.0*d*. per month. The carpenter's mate received as much as the surgeon, and the purser less than the cook. In this topsy turvy world, however, there was a good deal of financial sense, for the officers were allowed their privilege tonnage, and a captain might make £10,000 on a round voyage. On any ship over 755 tons, the captain, for instance, was allowed over fifty-six tons on the outward voyage, the surgeon three tons. Coming home, when the ship was loaded with tea belonging to the Company, the captain was allowed thirty-eight tons and the surgeon three tons. It was this privilege tonnage which made the fortunes of surgeons like Robert Ingram, Thomas Weeding and above all William Jardine.

The voyage began with the loading of the cargo at Blackwall. The ship would then drop down to Gravesend where the human cargo joined her, boys for the Company's service, cadets and recruits; and the livestock, pigs, cows, chickens, geese and turkeys. Ships in the nineteenth century had much to be content with if they had 'a good milch cow and an able surgeon.' Finally, the seamen and crimps had to be paid and then the ship would sail for the Downs to rendezvous with other Indiamen and, in times of war, with their protecting naval vessels. Soldiers and their families might be embarked at Spithead, so that some ships carried well over 400 people. The last mail for India and China came aboard at Portsmouth and the long and potentially dangerous voyage began. The route was dictated by the prevailing winds, but in general the ships stood out for the Azores, calling, if possible, at Madeira, but sometimes ending up off the coast of Brazil. Then on through the South Atlantic, round the Cape and up the Mozambique Channel if bound for India, if for China, by a number of routes. Captain Butler's track went round Tasmania, between Australia and New Zealand, through the South Pacific, between the Philippines and Formosa to the mouth of the Pearl River. Another route took the ships to the Moluccas and through those difficult Eastern Seas, which all Conrad readers come to know so well, to the South China Sea. The Bocca Tigris or Bogue marked the entrance to the River, which was flanked by steep hills, the passage at its broadest part being three miles, at its least one mile. From here to Whampoa, the Yellow anchorage, was about thirty miles. Whampoa itself was thirteen miles from Canton. Here the ships discharged their cargoes into barges and lay waiting for the tea to come aboard. The sailing times from England were regulated by the fact that the first tea crop began to come into Canton in November, the season lasting roughly from then until March, when the foreign community in Canton retired to Macao for the next six months. From Whampoa to Canton the captain would proceed by a ship's boat to take up residence in the Company's factory during his ship's stay. The officers would begin their trading ventures, ready for the voyage home, either chartering their privilege tonnage to the local merchants, or purchasing goods which would have a ready sale in England. The loading of the vessel was of considerable importance. Tea had to be protected from the damp, and all sailing ships leaked. The bilges were, therefore, filled with crates of 'china'—porcelain, armorial plate ordered in Britain, the beautiful objects so coveted in the Western world today. If they were awash, it would not matter, but the vitally important tea was stacked out of harm's way, dry and snug. There were many different ways in which the officers could make a profit, perhaps on the dunnage or packing, which was the captain's perquisite, or on the purchase of silk or lacquer ware. Loaded with tea, the Indiamen would set a

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course for southern Formosa, thence through Pitt's Passage, between the island of Ceram and Buru, south through the Indian Ocean and round the Cape to St. Helena. Fresh supplies would be taken aboard and the final part of the voyage would begin, perhaps in convoy, and so to the Thames, where the cargo would be discharged and the crew paid off.

The Indiamen of 1810 were big ships—nearly the size of the *Victory*—carrying crews of over 100 men, British, Lascars, and Chinese. The risks were appalling—by storm, enemy action and above all by disease. An average of one-fifth of the ships were lost over the years 1702–1812. Scurvy took a great toll, as did infectious disease, both afloat and ashore; it is salutary to remember that three out of four of the Company's servants never returned home. This was the background.

THE TRADE IN EXOTICA

Pepper began our story. The London Guild of Pepperers of the twelfth and thirteenth centuries had been separate from the Spicers. In the fourteenth century, the Pepperers, Spicers and Apothecaries came together in the Fraternity of St. Anthony. The Spicers were scattered throughout the country—mainly Lombards and Genoese dealing in spices and drugs. By the mid-fifteenth century spicers were becoming known as grocers, perhaps a sign of increasing business—and many of them practised as apothecaries. In the City of London, apothecaries constituted a section of the Grocers Company until 1617, when the Society of Apothecaries of London obtained its Charter from James I. The drugs were bought from a variety of sources, those from the East being imported by merchants from the Hanseatic cities—the Easterlings, from which, incidentally, the word sterling derives.

By the sixteenth century, the importation of exotica had begun; the first of these substances to make an impression on pharmacy was guaiacum, then china root and sarsaparilla. By 1604 peace with Spain and the formation of the East India Company led to a great increase in British trade. In 1588 only 14 per cent of drugs had come from outside Europe; by 1621 the figure had risen to 48 per cent and by 1669 it had reached 70 per cent, the majority coming from India and the East Indies. The value of these imports had risen from £600 in 1567 to £6,000 in 1669. 95 per cent of these drug imports came into the Port of London, the trade being mainly in the hands of the East India merchants, who then sold to the London druggists, wholesalers who had remained in the Grocers Company. From them the apothecaries obtained their supplies although the expansion of the trade in the eighteenth century led to the creation of provincial druggists, again offshoots of the grocers.

Drugs however, formed only a small part of the trade with the Indies—not more than 1 or 2 per cent. They came in as part of the privilege tonnage of the officers of the East Indiamen. As demand increased, particularly for certain Chinese drugs—the most important being rhubarb, cassia and camphor—so an attempt was made by Reid, Beale & Co., the sole private British firm in Canton, to supply this demand. A 'Drug Concern' was formed in London, the principals being Cleland White & Co., and D. Scott & Co. Each season the Concern sent out treasure, and about $50,000 of goods such as lead, cochineal and Prussian Blue (which was very good for dyeing unsatisfactory tea) to the Canton firm, which in turn advanced over $100,000 to the Hong

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Merchants and shopmen with which to buy the drugs. Once obtained, the drugs were shipped to England in the privilege tonnage, which the Drug Concern bought up. The trade was very profitable—there was a great demand for camphor, and the Company's officers in Canton were most anxious to buy up drugs. But there were snags for these private traders—the drugs had to be paid for with bullion; there was never enough privilege tonnage available; and the Company's officers could always undercut them if they used up some of their tea tonnage for drugs, particularly at the end of the season. The Drug Concern was always urging its men on the spot to send more drugs home, but lack of tonnage was the main difficulty. An attempt, therefore, was made to break the Company's monopoly by obtaining an annual 'free ship' between England and China. Parliament's permission was sought, but the Company was too strong, permission was not given, the regulations concerning privilege tonnage were tightened up, and the 'Drug Concern' was destroyed.

What were these drugs which China alone could supply? Searching the records of the cargoes of East Indiamen from 1687 onwards, there are entries regarding camphor, rhubarb, china root, dragons' blood, Ginseng, Cambodge, Zingiber, Cassia, Cinnabar and what are called 'various'. The first mention of drugs from China occurs in the records of the Courteen Association, which had been licensed by Charles I in 1635 to undertake a voyage to Goa, the ports of Mallabar, the Coasts of China and Japan 'there to trade'. The *Dragon, Sunne, Catherine, Planter* and two pinnaces, the *Anne* and *Discovery,* left the Downs on 14 April 1636, under the command of Captain John Weddell. Their voyage took them to Goa, Malacca, Macao, and past the Bogue up to the First Bar, within fifteen miles of Canton.

After a number of adventures, by 1637 the *Catherine* was loaded with commodities obtained in Canton and Macao, her cargo including 100 piculs of china root. Fifty years later, in 1687, the *London* and the *Worcester* were despatched from Bombay to Amoy. Amongst the commodities positively ordered on the Company's account were '300 Tubbs of Camphire'. In the log of the *Anson* of her voyage to Whampoa in 1750, kept by the commander, Jonathan Ramsay, is a record of thirteen chests of rhubarb being shipped home in his privilege tonnage, whilst, in 1764, some of the private trade included the following: Captain John Mitford of the *Northumberland,* 6 boxes of rhubarb, Captain James Moffatt of the *Latham,* 8 boxes of rhubarb, Captain John Sandys of the *Norfolk,* 7 boxes of rhubarb, Captain Richard Hall of the *Worcester,* 10 chests of rhubarb and 18 chests of Cambojium, whilst Captain Farham Nairn of the *Lord Holland* shipped home 9 chests of rhubarb and 13 chests of Cambojium.

Rhubarb was of three types—the Russian, the Chinese, and the English, the Chinese being most effective. The roots were dug up when the plant was five or six years old, washed, scraped, and cut up to facilitate drying. They were then strung together and hung up to dry, or heated on stone—in Tartary the roots were hung on the horns of the sheep, or about the tents of the Mongols. Chinese rhubarb was produced in the northern provinces and was exported from Canton. It was one of the most widely used drugs in the eighteenth and nineteenth centuries, although it is almost forgotten today. Rhubarb acts upon the whole digestive tract as a mild tonic, cathartic and astringent; in small doses it increases appetite—in larger doses it serves as a mild purge. It was considered particularly useful for infants and children, and as a general laxative

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for patients with enfeebled digestion. Its peculiar odour and yellow colouring matter could be recognized in the urine and the sweat, and even in the milk of wet-nurses. For the eighteenth-century physician it was a most effective and harmless medication and was used in a variety of prescriptions, with ginger, aloes and as the active constituent of Gregory's Powder, Pulv. Rhei Co.

Cambogia was another and much more severe purgative. It is the gum-resinous exudate of one of the hebadendrons and came in two forms, pipe Gamboge, either hollow or solid cylinders, and cake, or lump Gamboge. It was employed chiefly in cases of dropsy, causing a watery diarrhoea, but also stimulating the kidneys and producing a diuresis. The combination of Gamboge with an alkali such as potassium carbonate was an effective diuretic and, as tincture of Gamboge, the combination was highly praised by continental physicians. Pil. Cambogiae Comp. included aloes, ginger and soft soap, whilst cinnamon was also added. As Pilules de Bontius, Gamboge was used in the treatment of tapeworm infestation.

The camphor tree is a native of China, Taiwan and Japan, belonging to the Lauraceae family. Camphor was produced from the small branches, leaves, wood and roots of the tree. Small pieces were boiled with water in an iron cucurbit, to which an earthen capital was luted. The camphor sublimed and was condensed on straws placed in the capital, being transported in this form to Europe, where it was further purified. Camphor was used in a great variety of diseases. It was credited as a prophylactic against infection. Small pieces of camphor were placed in compartments at the head of the physicians' canes, and when called to a case of infectious disease the compartment would be unscrewed and the physician would smell the camphor throughout the consultation. It was used as an ointment in the treatment of chronic skin disorders, locally for indolent ulcers and bed sores, and, when dissolved in spirit or oil, was rubbed in as an embrocation for sprains, rheumatic pains and chilblains. Taken internally as a mixture, camphor was extensively used in the treatment of advanced typhus, when delirium and other nervous symptoms were manifest, in cholera (when it was given in large doses), in chronic bronchitis, in gout and chronic rheumatism, in irritable and painful diseases of the genito-urinary system, and in nervous diseases—as most psychiatric conditions were described before the nineteenth century.

China Root, or *Smilax chinensis,* was also much in demand; it is better known as Sarsaparilla, the name Linnaeus gave to *Smilax sarsaparilla*—the *Smilax* from North America, which grows in Peru, Mexico, Guyana, Brazil and Mexico, as well as in China, and which has never been used in our pharmacopoeias. The root of this creeper was introduced into Europe early in the sixteenth century, and soon became famous when its administration cured the Emperor Charles V's gout. It transpired, however, that it was really China root that had been given to the Emperor. The China root had a great reputation in the treatment of secondary syphilis—especially for the nocturnal pains, the ulcerations of the throat and the skin eruptions, and was combined with mercurials to good effect. It was also regarded as a tonic and alterative—cleansing the blood and restoring the digestion—and as an anti-rheumatic. The Lisbon Diet drink became very popular in the eighteenth century and consisted of Sarsaparilla, red and yellow sandal rose root, guaiacum wood, sassafras, mezerea bark (another anti-syphilitic) and sulphide of antimony. Dr. Leake, in 1727, even wrote a book on this

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compound, claiming that he had travelled to Lisbon to obtain the correct formula—which, fortunately for his purse, he refused to reveal.

Cinnabar is the red or crystalline form of mercuric sulphide. The actions of mercury are still familiar to us today—the salivation, the effect on the nervous system and on the skin. It was widely used as an anti-phlogistic, an anti-syphilitic, an alterative and a deobstructant. Metallic mercury was even administered by mouth in doses of one or two pounds in order to remove intestinal obstruction, the metal being recovered after the administration of a cathartic.

Cassia refers to the bark of the *Cinnamomum aromaticum*, a native of China, but has been confused with the bark of *Cinnamomum Zeylanica* growing particularly in Ceylon. It was imported in bundles tied with strips of bamboo and was cheaper than the Ceylon variety. The undeveloped flowers were also imported as Cassia buds, but were not used medicinally. The bark was used as a stimulant, but chiefly as an aromatic adjunct to other substances. The confection was often used as a stimulant, a carminative and antacid and was frequently used in cases of mild diarrhoea.

Zingiber or ginger was either black or white. Its properties depend upon its constituent volatile oil, and it was used principally to give warmth and flavour to other drugs.

Dragons' blood was said to have been first obtained in Socotra and then taken by the Arabs to China. The fruit of *Calamus draconis*, or *Daemonorops Propinguus*, on which the resin collects, is said, when stripped of its skin, 'to reveal underneath the figure of a dragon, the wings expanded, a slender neck, a hairy or bristle back, a long tail and feet armed with talons'. The resin was used as a mild astringent and was one of the ingredients of Helvetius' pill; it was a constituent of Locatelli's balsam, which was used for skin disease. In some parts of England it had a reputation as a love-charm. Maidens whose swains were unfaithful or had been neglectful, procured a piece, wrapped it in paper and threw it on the fire, saying: 'May he no pleasure or profit see, Till he come back again to me.'

Lastly, there was ginseng—the dried root of *Panax ginseng*, which had an unsurpassed reputation in Chinese medicine as a panacea. *Panax quinquefolia* grows wild and cannot be cultivated, being found chiefly in Tartary and Korea. All the ginseng gathered in the Empire was Imperial property, and was sold only to those who had the privilege of dealing in it, at its weight in gold. Its high price limited its use to the wealthy. The root is generally divided into two or three fingers, connected at their base. It was regarded as a restorative in all cases of debility. Presents of the root were often made, and accompanying the gift would be a small, beautifully finished double silver kettle in which the ginseng tea would be brewed. William Lockhart describes his visit to a ginseng merchant in Shanghai, a man of literary tastes and ability, by profession a physician, but devoting himself to the sale of ginseng. After tea, the precious roots would be brought out of their strong boxes, each wrapped in fine silk, the visitor cautioned not even to breathe on them, and the courteous physician would discourse on the many merits of the drug and the numerous cures it had effected, finally replacing the roots in their tiny containers, and so back to the strong boxes.

Among the various parcels of drugs were a wide variety of substances used in Chinese medicine, such as *Angelica polymorpha, Lithospermum erythrorhizon, Paeonia lactiflora, Magnolia officinalis*, and many others.

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If these were the major drugs coming from China during this period, then opium was almost the only drug travelling in the reverse direction and was of far greater commercial significance.

OPIUM

The 'sleep-giving poppy', *Papaver somniferum,* was first introduced to China in the seventh or eighth century by Arab merchants trading in drugs, precious stones, brocade and rose water. Before the T'ang Dynasty, the poppy seems to have been unknown in China. The Arabs came by sea to Canton and certainly by the end of the T'ang period the poppy was cultivated in Szechwan. Numerous references occur in the early Chinese literature to the poppy and its medicinal values, and by the end of the fifteenth century opium was being manufactured as well as imported. In the later part of the Ming Dynasty (ending in 1644) tobacco cultivation and smoking were introduced into China from the Philippines. Among various substances opium was added to tobacco and thus the habit of opium smoking began. The authorities tried to check the tobacco habit, but, like the vice it is, tobacco smoking spread rapidly. The invention of the hookah helped to make tobacco smoke more pleasant and less injurious. Slowly, opium replaced tobacco and, by 1729, it was necessary to issue an edict, prohibiting the sale of opium, and of opium-smoking houses; it had little effect. What became an insatiable demand for opium continued; William Lockhart, in his evidence to the Royal Commission on Opium of 1894, estimated that in the years he was in China, between 1838 and 1864, ten per cent of the adult male population took opium in moderate quantities and about three to five per cent in excess. About 100,000 cwt. was imported from India in 1894 and 100,000 cwt. was produced locally. Opium could be smoked, eaten, taken in an infusion, or mixed with alcohol, which as tincture of laudanum became the preferred mode for Europeans and the Chinese gentry. India, where the opium industry was of considerable antiquity, was the great source of supply. At first the British had allowed the old Moghul system to continue, but, in 1773, the Company assumed a monopoly of the sale of opium in its territories, and in 1797 of its manufacture. In time this monopoly produced one-seventh of the total revenue of British India. The opium trade was the largest commerce of the period in any one commodity—and, as such, of enormous economic importance to both India and Great Britain. Tea could only be obtained in exchange for cotton and opium and opium imports into China by 1823 consistently exceeded those for cotton. It was a private trade, for the Company, whilst monopolising its production and sale in India, would have nothing to do with what happened afterwards. Moreover, the Hong Merchants would have nothing to do with it officially either, for the opium traffic was completely outside the Canton commercial system—it was, in fact, a smuggling, illegal traffic.

There were three main areas of poppy cultivation—Bengal, which included Bihar and Orissa; the Native States of Central India; and Turkey; Patna opium, Malwa opium, and Turkish opium, in that order of superiority. 'A pipe of Old Patna, that soother of all sorrows, the manna of the mind'—it sounds suspiciously like the advertisement on my tin of tobacco today. The crops were grown by the Ryots on advance payments originally from the zemindars, or landowners, later from the

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government, the whole process being based upon a complex system of advances leading to what was virtually an economic slavery. The Ryots manured, ploughed, harrowed and watered the ground, for the poppy was a demanding plant to grow. The seed was planted in the autumn, usually succeeding a crop of Indian corn, and the juice was collected in March, April and May. Allowed to dry, it was then transported with poppy petals, leaves and stalks to the factories, where it was processed and refined over the next six months. In Bengal the resin was brought to the factory in Patna, where it was balled, stacked and its consistency tested. During the ripening process the balls were carefully examined, and any in which gas might be forming were punctured with a sharp stylus. 450 boys were engaged in stacking, turning, arranging and rubbing the balls with dried and crushed poppy petals. 6,520,000 lb. of opium were produced yearly, 240,000 lb. being reserved for use in India during the course of a year. The opium fleet then sailed down the Ganges to Calcutta, where the crop was sold at public auction.

From India the opium was sent to Singapore, Java and Macao, which acted as the distributing centre for the Chinese trade, for it was unsafe to send the opium to Canton. Difficulties with the Portuguese eventually led to the Lintin system, in which a depot ship was moored at Lintin, an island at the mouth of the Pearl River, to receive the chests of opium, and then to tranship them to the Chinese brokers.

Canton was still the centre for the distribution of opium to China, but the private merchants were not satisfied, for the Canton arrangements were too insecure and the trade was expanding. They began to explore the east coast of China for themselves. In Calcutta the first of the opium clippers, the *Red Rover* had been built in 1829 and had sailed from Calcutta on 28 December loaded with 800 chests of opium—the purpose being to defeat the north east monsoon, and defeat it she did. The way had been opened for the *Sylph,* the *Falcon,* the *Water Witch* and many others in a long line of famous clipper ships to carry more and more opium in and out of season to China. At last there were ships which could beat the weather. The next step was to sail these fast and handy ships directly up the coast of China. The first voyage by the *Agnes,* belonging to Rustomjee, a Parsee merchant, was a failure, but in 1832 the East India Company ship *Lord Amherst* sailed from Macao to reach Amoy, the Yang-tze and Wei-hai-Wei, attempting to open up trade whilst charting the coast.

Plans were made by Jardine & Matheson and by the Dents—the two leading firms in Canton—to expand the fleet, for after the expiry of the East India Company monopoly, it would be a cut-throat trade. Jardine Matheson's clippers *Red Rover, Sylph* and *Falcon,* and Dent's *Water Witch,* became the most famous clippers of the time—their exploits are described by Basil Lubbock in his book on the opium clippers. War, treaties and conventions did little to stem the use of opium, both imported and local, so that by 1890 the average importation of opium into China was 78,360 piculs or chests, the custom dues on it, collected by the Chinese Customs, presided over by an Englishman, Sir Robert Hart, £2m. sterling. The poppy, moreover, grew everywhere, large rice bowls heaped with the drug were exposed at the door of almost every shop in every town and village—'In fact, the whole country reeks and stinks of opium', a ghastly example today to those who speak out for the legalisation of 'hash', if only they could take note of the lessons of history.

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THE MEDICAL MEN

From the beginning the East India Company had provided surgeons for their marine. John Woodall, whose book, *The Surgeon's Mate,* appeared in 1617, was appointed Surgeon-General to the Company in 1614. Applicants for appointments as surgeons were examined regarding their fitness for the post, and in 1733 a board was appointed to examine prospective assistant surgeons. Between 1745 and 1800, the London Corporation of Surgeons granted a diploma, really a certificate, that the applicant was certified as qualified to serve as a hospital mate or a surgeon's mate in the Navy, Army or on an Indiaman. For the appointment of surgeon to the East India Company previous apprenticeship was not necessary and the standard of the examination was lower than that for the Grand Diploma, seeing that in the earlier years of their service those who were approved held the subordinate rank of Mate and were treated as pupils. In 1798, the East India Company agreed to accept the Diploma of the R.C.S. Ed., although the Army Board remarked, 'several gentlemen have appeared with the Edinburgh Diploma who were very young and were indifferently qualified, being so destitute of a due degree of preliminary education as to be unable to translate the pharmacopoeia, or to read Latin directions to prescriptions'.

In 1800, at a Committee of Shipping, it was 'Ordered, That no Person be permitted to proceed as Surgeon of any of the Company's Ships, who shall not have performed one Voyage in the Company's Service, as Surgeon's Mate, or acted Twelve Months in that Situation in His Majesty's Service, in a Hot Climate, until the Persons before mentioned, shall have obtained Births, with an Exception only in Favour of such Persons, who, during the Suspension of the standing Order before mentioned, have been permitted to proceed as Surgeons, without having performed a Voyage as Surgeon's mate.

'Dr. Hunter, examiner of Medical Journals resides at No. 9, Charles Street, St. James's Square. Any Journal left with Mr. Pepys, Cutler, No. 24, in the Poultry, will be forwarded to the Doctor's House.'

In the second edition of Hardy's *Register*, published in 1813, the regulations for appointment of Surgeons lay down that:

> the surgeon and the surgeon's mate do produce a certificate from the examiners of the Royal College of Surgeons, and also from the Physician appointed by the Company, of their being qualified for such stations.
>
> Dr. Wm. Dick, Physician to the Company, 8, Hertford Street, Mayfair, for examining surgeons and surgeon's mates; and the surgeons are to deliver him their medical journals on their return home, for examination.
>
> N.B. The surgeons of regular ships are allowed for private trade as follows—To and from China six tons; but in ships for India are allowed six tons outward; and four tons, thirty-two feet, homeward. They are also allowed fifteen shillings per man on the voyage for medicines and attendance upon the military and invalids.

The surgeon had to keep a journal of his practice and to record his medical observations during the voyage. Whenever the ship was in port, his journal was to be deposited with the ship's log book in the keeping of the commanding officer, but entries were to be made daily either by the surgeon, or by his mate. These medical journals were to be handed over to the Company's physician in London on the completion of the voyage. Unfortunately, it has been impossible to trace their present-day location—

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but they must present a treasure trove of maritime medical history. The surgeon and surgeon's mate, unlike the other officers, did not wear the East India Company uniform, but in all other respects their appointments were made in much the same way as were those of the other officers—they were selected by the ship's husband and then presented, complete with their certificates, to the Company for their approval.

The Society of Apothecaries had obtained a monopoly of the supply of drugs to the Navy, Army and East India Company in 1703. The Navy Stock Company had been formed from amongst the members of the Society to deal with this lucrative business. The contents of the surgeon's chest was decided upon by the physicians, the amounts of drugs being minutely calculated, according to the size of the ship and the number of men aboard. This monopoly came to an end in 1805, but the Society still continued to supply drugs to both the Navy and the East India Company —in 1811, for instance, it supplied £24,917 of drugs to the Navy, and £21,582 to the East India Company. As for surgical instruments, at first surgeons provided their own instruments, the cost of which was quite high. In the Navy, until 1779, the allowance for a senior surgeon was £33 9*s.* 0*d.*, but, by 1781, the amount had almost doubled to £62 0*s.* 0*d.* Even by 1825, the surgeon paid for his own instrument chest, although its contents were regulated first by the Corporation, and then by the College of Surgeons. The chest was collected, locked and sealed, from the College premises, in case some of the instruments were sold before the voyage began, and only opened when the ship sailed. The contents remained little changed during the late eighteenth and first half of the nineteenth centuries, many of them being made by Stodart, a firm trading in the Strand between 1791 and 1839. A typical set made in 1800 is in the Museum of the Royal College of Surgeons and contains five amputation knives, a finger saw, trephines, bullet forceps, a dental key and tourniquets. A case used in an Indiaman has not been located.

Conditions on board were certainly not luxurious. The officers were housed in the steerage in little canvas compartments on the gun deck, which could be demolished very quickly when there was a likelihood of action, the surgeon's mate sharing an enclosure with the two junior mates and the midshipmen. When no passengers were aboard, the officers were allowed to move into the great cabin. The surgeon's cockpit was situated in the airless orlop deck, below the gun deck, and here was set up his casualty station. Indiamen were not infrequently in action and there are many stirring tales of their encounters with the French. Only a man of exceptional calibre could survive these harsh conditions, as well as the risks of tropical disease. Three out of four of the Company's servants never returned from their adventures. Of those that did, some came back rich, but a surprising number remained poor and were forced to apply for a pension on leaving the sea.

Men of this calibre, William Jardine and Sir Robert Wigram, founded two commercial empires, whilst Thomas Weeding also became a well-known businessman in the City.

Robert Wigram was born in Wexford on 30 January 1744. His father, John, had been Master of the privateer *Boyne* when he was lost at sea without even seeing his son. Robert's mother, however, managed to send him off to London when he was eighteen with £200 in his pocket and an introduction to a Dr. Allen, a London

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physician (possibly Joseph Allen, surgeon to Lord Anson on his circumnavigation of the globe), who greeted the youngster with the warning that he had come 'young man, to a place where, if you tumble down, no-one will pick you up'.

After serving a two-year apprenticeship with Dr. Allen, he sailed for India as a surgeon's mate in the East India Company Ship, *Admiral Watson*, on 20 February 1764. He made a lifelong friend in the second officer, William Taylor Money, who was later to command one of Wigram's ships. He was successfully examined at the Corporation of Surgeons on 7 May 1767, for his diploma. This was apparently quite a searching examination and there were present the Master, Mr. Crane, Robin Adair (Surgeon to H.M. Forces), Mr. Young, and amongst five other surgeons present was Percivall Pott.

Another voyage began on 2 March 1768, aboard the *Duke of Richmond*, bound for St. Helena, and a third in the *British King* in 1770, bound for St. Helena, Bencoolen and Whampoa. On his return from this voyage, as he had contracted an 'attack of ophthalmia' in China which made surgery difficult and having 'gained a perfect knowledge of the trade of India and China, I had great advantage as a drug merchant. The Dutch and Germans, being furnished with most of their drugs from London, my great knowledge turned my little capital to very great advantage, and I afterwards became a general merchant over the whole world, a brewer, shipbuilder, India husband, and great promoter of Huddarts Patent for hemp cables'. In 1788 he made his first venture in ship-owning by purchasing the *General Goddard*, of 799 tons; in 1790 the *True Briton* of 1198 tons was launched for him. Over the following twenty years he became the largest ship-owner dealing with the East India Company, owning the *London*, the *Rockingham*, the *Lascelles*, the *Pershore*, the *Valentine*, *Woodcot*, *Walpole*, *Contractor*, *General Elliott*, *Walthamstow*, *Lady Jane Dundas*, *Windham*, *Marquis of Ely*, *Tottenham*, *Wexford*, *Retreat*, *and Woodford*. One of his vessels, the *General Goddard*, commanded by his old friend, William Taylor Money, attained contemporary fame when she lay in wait for the Dutch Batavia Fleet off St. Helena, and captured seven of them—ruining at one blow the Dutch East India Company. The prize money exceeded £61,000 and Captain Money received a vote of thanks and a presentation sword from the merchants of St. Helena.

In December 1802, Wigram became Member of Parliament for Fowey. He was a great admirer of William Pitt, and the story goes that one night in the House, when things had gone badly for Pitt, Wigram rose and attended him to the door. Mr. Pitt made a note of who had been his friends that night, asking soon afterwards 'Who was the little man in shorts?', and Wigram was made a baronet. In November 1805, he was elected Member of Parliament for his native town of Wexford, which he had left forty-four years before with £200 in his pocket. He purchased the famous Blackwall Yard Estate in 1805, became Chairman of the new East India Docks which opened in 1810 and owned most of the shares in Meux's Brewery. His great agency house was situated in Crosby Square, Bishopsgate. He had twenty-three children and would ride to Blackwall accompanied by six or seven of his sons, all fine handsome men. One became Bishop of Rochester, another a Queen's Counsel and Member of Parliament for Cambridge, another Vice-Chancellor, and William 'the most obstinate of the East India Directors', according to Macaulay, and one of

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the longest serving. Most of the children were, like their father, remarkable for their longevity. Sir Robert died on 6 November 1830, aged eighty-six.

Some of his sayings have been preserved and are no doubt echoed today by those toiling in the City to make their fortunes. 'I always', said Sir Robert, 'lived respectably and as I had no opportunity (when young) of making acquaintances which I could value, I made none. I never did undertake any business of moment without consultation with my wife, and can truly say it has much promoted my fortune.' He had a wholesome old-fashioned dread of speculation and speaks of 'how near I was, by Addington's loan, of completely ruining the old house'. He objected to banking for the reason that 'I never will have to do with a business where I must mistrust those with whom I have to deal'. Finally, his life would not be complete without mentioning Mr. Henson, his confidential clerk. One year, when there was every reason to believe the profits would be exceptionally large, there was an unaccountable delay in producing the accounts. The reason, said Mr. Henson, was that 'I never knew a man make so much one year but he was sure to knock it all down the next'. One final message from Sir Robert 'Remember the strength of the bundle of sticks'.

William Jardine was a man of a different stamp again, a true merchant adventurer. Born on 24 February 1784, on a farm in Dumfriesshire, the fourth child of Andrew Jardine, the boy was left fatherless at the age of nine. Little is known of his early life, but it appears that he attended classes in anatomy, medical practice and obstetrics at Edinburgh between 1800 and March 1802, when he received a diploma from the Edinburgh College of Surgeons. About the same time, there was another William Jardine, an ex-naval surgeon, living in Dumfries—whether he was a relative I have been unable to discover, but it may have been he who started his namesake on his career at sea. Our William Jardine came to London and was accepted as a Surgeon's mate for service in the East India Company's ship, the *Brunswick,* one of the large 1,200-ton Indiamen which had been built for the China run. The surgeon was Henry Everingham, also destined to desert the sea for business, and a friend of Thomas Weeding, surgeon of the Glatton, and a later business associate of Jardine. Unfortunately, I have been quite unable to trace any information on these two men. Jardine's first voyage was comparatively uneventful, apart from a damaged rudder, which forced the ship to put into Bahia. But the voyage was completed in good time and the *Brunswick* anchored at Whampoa on 7 September 1802. There she remained until she sailed for home on 24 October—arriving at Gravesend on 24 April 1803. Jardine's next post was as surgeon to the *Brunswick*, his mate being William Rae—and this time the ship was to be in trouble. She left on 25 February 1804, embarked about 350 officers and men of the 66th Regiment, for whose care the two surgeons would be responsible and for whom Jardine was paid 10*s.* per head, and set off in convoy for Trincomalee. Details of the voyage are lacking, as the *Brunswick* was captured by Admiral Linois in the *Marengo,* assisted by the *Belle Poule*, off Point de Galle. The surgeon's mate, William Rae, had been taken by the press-gang in Bombay, so Jardine had to face the prospect of the battle alone and unassisted. Luckily, it was a bloodless affair. Jardine was left aboard the *Brunswick* with the prize crew, witnessed a running fight with a convoy of outward-bound Indiamen, and was shipwrecked on the Cape of Good Hope, the *Brunswick* being a total loss.

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Over the next fourteen years or so, William Jardine was to make seven voyages to China; the story of some of those voyages has been graphically told by Captain A. R. Williamson, former Marine Superintendent of the firm Jardine founded, that great enterprise known in China as the E Wo Hong and elsewhere throughout the world as Jardine, Matheson & Co.

Despite the wonderful collection of material in the Jardine Matheson Archives, now at Cambridge University, little has so far been discovered concerning Jardine's personal life or medical experiences. His medical report books remain untraced, although the logs of the ships in which he served contain occasional references to births and deaths during the long voyages. During his years at sea, Jardine had made some good friends—Thomas Weeding and Henry Everingham, his fellow professionals, and Henry Wright, the purser on the *Glatton*. He had the opportunity in Canton to live in the Company Mess and to meet the Hong merchants, as well as the resident Europeans. There was no welfare state then, and none of today's hypocrisy about money—survival meant earning a living, competing in business with Armenians, Parsees, the Company, and fellow Scots, not to mention some Englishmen. By 1817, he had decided to quit medicine and to go into business. His London agent was Thomas Weeding and, in 1818, he, Jardine and Framjee Cowasjee of Bombay, entered into a loose agreement to own and operate the *Sarah*, a new ship trading between Bombay and China. In 1822, Jardine took temporary control of the Canton Firm of Charles Magniac & Co.; Magniac returned home and, by 1827, Jardine was in sole charge. A year later James Matheson was a principal in Charles Magniac & Co.; Henry Wright, the ex-purser of the *Glatton* in Jardine's day, and Andrew Johnstone, Jardine's nephew and also a surgeon aboard East Indiamen, together with Alexander Matheson, formed the firm. Over the next five years the Magniac interests were acquired and, on 1 July 1832, Jardine Matheson and Company came into being.

The early history of the firm has been dealt with extensively by Greenberg in his excellent book on British trade and the opening of China. Jardine was a shrewd businessman and, by the time he returned home in 1839, he was a very wealthy man. It must be said that opium was the foundation of his fortune; and opium brought him into contact with another remarkable medical man, the Rev. Charles Gutzlaff. Jardine had determined to bypass Canton if he could; in 1832 he sent two small brigs up the East Coast filled with opium and piece goods. Their voyages were not too successful, but, undiscouraged, Jardine chartered a larger ship, the *Sylph*, and sent her off to Shanghai and Tientsin. Aboard her as surgeon and interpreter was Gutzlaff.

Gutzlaff had arrived in China from Singapore and Siam in 1831, following the death of his English wife and fellow missionary. A brilliant linguist, he was also remarkably Chinese in appearance and appeared so natural to the Chinese that, on some parts of the coast he was hailed as 'the child of the Western ocean'—a descendant of one of their countrymen who had emigrated to a distant country. He was just the man for Jardine—in the words of James Innes, one of the Canton merchants 'I would give a thousand dollars for three days of Gutzlaff'. 'After much consultation with others and a conflict in my own mind, I embarked in the *Sylph* . . . on October 20th, 1832'. The *Sylph* was a fast sailing vessel, well-manned and armed, and carrying

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opium. Jardine had written to Gutzlaff—

> Tho' it is our earnest wish that you should not in any way injure the grand object you have in view by appearing interested in what by many is considered an immoral traffic, yet such a traffic is absolutely necessary to give any vessel a reasonable chance . . . the more profitable the expedition the better shall we be able to place at your disposal a sum that may hereafter be usefully employed in furthering the grand object you have in view and for your success, in which we feel greatly interested . . . . We have only to add that we consider you as surgeon and interpreter to the expedition and shall remunerate you for your services in that capacity.

In his writings, Gutzlaff makes his disapproval of opium and the opium trade quite clear, 'that illicit trade in opium cannot be excused in any way. The drug is destructive of health and highly demoralising to the consumer.' But he saw that as things were in China, trade would have to be 'left to itself to work its own way'.

Gutzlaff wrote several interesting books—a two-volume work, *China Opened*—an encyclopaedic survey of all to do with China and its people, a *Journal of Three Voyages along the Coast of China in 1831, 1832 and 1833*, in which he describes his adventures in the *Lord Amherst* and in the *Sylph;* and *The Life of Taou-Kwang, late Emperor of China*, published posthumously in 1852, for Gutzlaff had died at Victoria, Hong Kong, on 9 August 1851 at the age of forty-eight.

The contemporary attitude toward opium was very curious; Gutzlaff continually deplored its use and yet took an active part in helping Jardine. Jardine was warmly spoken of by the missionary doctors. William Lockhart, for instance, wrote that 'Mr. Jardine was always ready to aid Dr. Peter Parker with his professional knowledge, in consultation as well as in operations, and took a warm interest in all that was done at the Ophthalmic Hospital in Canton, which was opened in 1835.' Peter Parker had been sent out from America by the American Board of Commissioners for Foreign Missions—his hospital flourished—long lines of sedans waited outside—patients sat all night in the streets waiting to be seen the next day. Between 1835 and June 1846, when the hospital was closed owing to the disturbed state of affairs 'upwards of 9,000 persons had been released from their sufferings'.

In 1844 The Medical Missionary Society reported 'Since the publication of the last report we have had to deplore the death of two of the earliest supporters of the Society—Wm. Jardine, Esq., and J. R. Morrison, Esq., and we would take this opportunity of recording our appreciation of the important services they rendered to the Society and our high estimate of their benevolent characters. Theirs was not a charity that gave of their abundance merely to the subscription in aid of its funds; they entered heart and soul with every good work, and their time and attention were ever ready to give counsel and assistance to benevolent undertakings.' Amongst the latter was the education of Dr. Wang-Fun, a young Chinese, who was sent to study medicine in Edinburgh, financed by merchants; he was the first western-trained Chinese to practise in his native land.

In January 1839, Jardine retired and sailed for England. He had been entertained to a farewell dinner in the Company's factory, at which over eighty persons were present. The opium trade was under attack, both in China and in England, and Jardine moved in to its defence. He was interviewed by Lord Palmerston, to whom he advocated the forward policy supported by the extensive China interests in the

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City and by the Manchester Free Traders. The troubles in China had had their repercussions in Ashburton, a tiny place of about 4,000 souls, supplying those useless woollen goods to China, which the Hong merchants had had to accept—who better to be their Member of Parliament than William Jardine—a partner in one of the two largest Canton firms, a firm moreover closely linked with important merchant banks in the City, and poised for even more remarkable adventures in the vast country of China. Jardine was adopted as the Liberal Candidate and on 30 June 1841, was elected unopposed, his opponent, James Mackillop, who was connected with the rival firm of Dent and Co., withdrawing from the conflict. It was a victory for the forward policy, for free trade, and for the Ashburton Woollen Industry, or so it was considered. But the industry did not pick up and, despite Jardine's benevolent subsidies to his constituents, Ashburton declined, until it was finally disenfranchised in 1868.

On 27 February 1843, Jardine died from 'effusion of water in the chest'; his partner, James Matheson, who had returned to England in 1841, being called in to fight the resultant by-election, which he won by a majority of forty-five, the largest ever recorded except for that in the freak election in 1784. Matheson held the seat until 1847, when he was succeeded by his brother, Thomas, and later by George Moffat, Jardine Matheson's principal tea broker, he in turn being replaced by Robert Jardine, the nephew of William. Jardine Matheson & Company was to go from strength to strength, and William Jardine's interests foreshadowed the future interests of this great firm. Shipping, banking, insurance and everything to do with the China trade concerned him. He became a partner in the Lombard Street firm of Magniac, Jardine & Co., when he bought out the Smith family interests. Jardine Matheson shipped back to England the first private cargo of tea after the Company's monopoly had ceased. Four cargoes were sent to Glasgow, Hull, Falmouth and Liverpool, and Jardine's Pickwick tea mixture was on the market. In Canton, according to an official report to Pekin 'The resident barbarians dwell separately in the foreign factories. In the E-Wo (Creek) factory is one named Jardine, and who is nick-named "the iron headed old rat".' Perhaps William Jardine might have appreciated the description. He had survived those tough years at sea and in China and had prospered. Starting with little money or patronage, but endowed with brains and courage, Jardine symbolises much of the early history of the China trade. By our standards it was a rough affair, there was little room for the queasy, the weakling, the idle; it needed courage and ability and faith in oneself. I think we can be proud of our medical forebears who played such a prominent part in the development of this trade. It is an unfinished story, a relatively unexplored field of medical history; perhaps a future Monckton Copeman Lecturer will deal with other aspects.

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