

THE HISTORY OF MEDICINE ON BANKNOTES

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Our story begins nearly five thousand years ago in the far distant land of China. Here reigned Huang Ti, the Yellow Emperor in about 2000 BC, the first in a long line of emperors and now revered as the ancient Chinese god of medicine. He is reputed to have written the "Nei-jing Su-wen", a classic book of internal medicine. It takes the form of a dialogue between the Emperor and a minister Chi Bo in which the minister answers all his master's many searching questions about all aspects of human health and disease. Even today, Chinese medical students are expected to be familiar with it. Huang Ti, with his characteristic head-dress bearing long tasselled fringes for and aft can be seen on the 1944 100 yuan note of the Federal Reserve Bank of China, a Japanese puppet bank set up during the Second World War.

A thousand years later the Babylonian King Hammurabi held sway in the Middle East from 1792 to 1750 BC. He is credited with drawing up a famous Codex of Laws. These were inscribed on tall basalt pillars. At the top of the pillar which now resides in the Louvre Museum in Paris, we can see a vignette depicting Hammurabi receiving the Codex from the seated Sumerian Sun-god, Shamash. This vignette is faithfully reproduced on the back of the 1973 5 dinars note of Iraq. Laws 215 to 223 refer to the rewards and punishments recommended for the successful and incompetent surgeons of the day. For example, a surgeon would get paid five shekels of silver for opening the eye abscess of a nobleman and saving his sight. If, however the nobleman *lost* his sight then so did the surgeon!

Moving nearer home, we encounter the Greek god Apollo on the 500 million drachmai note of 1944. Apollo was a god not only of medicine but also of the sun, music, archery and other attributes. He fell in love with the mortal girl Coronis who became pregnant by him. He then left her to pursue his other amours, whereupon she took herself another lover. On

learning of this, he had her killed, and her body was placed on a funeral pyre. When Apollo heard that she had been pregnant with his own child, in a fit of remorse he sped to the pyre and did a miraculous post-mortem extraction of the babe who was quite unharmed. (This may well be the first reported Caesarean section!) To atone for his dastardly treatment of the boy's mother, Apollo arranged for him to be instructed in the arts of medicine and healing. The boy grew up with even greater powers than his father and became revered as Asklepios, *the* God of Medicine for the Greeks. He established himself at Epidauros and performed many miraculous cures, usually by means of dreams. Later a huge healing complex was built there with a temple, baths, sports stadium &c. We see Asklepios on the Belgian 5000 francs note of 1971, with the Epidauros temple in the background.

About one millenium later there was born another person who was to have a dramatic and far-reaching effect on the practice of medicine - Jesus Christ. Of humble birth, he performed, as we all know, many miraculous cures during the last two years of his short life on earth. The lame, the blind, the mentally ill and even the dead he restored to health and happiness. His philosophy of 'Love thy neighbour as thyself' fostered the close association of medicine and nursing with the Christian religion. Thus medical missionaries have sought to improve both the physical and spiritual health of those around them. The Christ-child appears with his mother, Mary, on several Hungarian notes, such as the 10 pengo note of 1936.

In 980 a notable Persian physician was born. Ali Al-Husayn Ibn Abd, Allah Ibn Sina was his original name but he was more commonly known in the West as Avicenna. The 1981 Iranian note for 200 riyals shows the modern concrete monstrosity of his tomb in Hamadan. Avicenna had a truly incredible mind, **for not only was he a physician**, but he was also expert in Islamic law, engineering, architecture and music. He wrote two great books during the course of his stormy life - *The Book of Healing* and *The Canon of Medicine*. The latter was to be the standard textbook of medicine in the Arabic and Western worlds for the next 500 years.



Andreas Vesale (or Vesalius, as he is more commonly known), was a Belgian surgeon and anatomist who wrote his famous book *On the Fabric of the Human Body* in 1543. In it he revolutionised a large number of anatomical concepts which had remained unchanged since Galen's time. There is an interesting story told about his student days. At that time dissection was forbidden in Belgium, so to obtain a skeleton Vesalius and a friend scaled the town wall, cut down a body hanging from the gallows there, smuggled it into his lodgings and prepared the skeleton from it. Vesalius is commemorated on the Belgian 1971 note for 5000 francs.



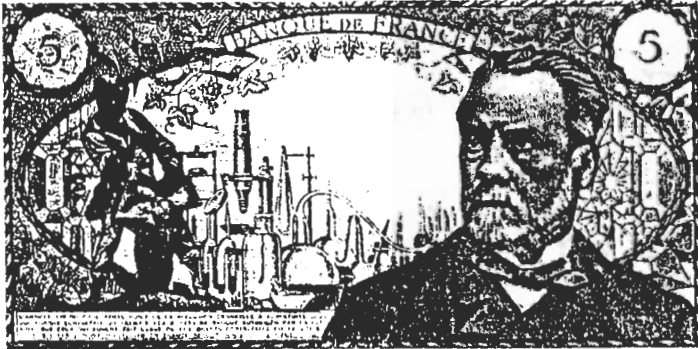
The Netherlands 20 gulden bank-note of 1955 shows the kindly features of the Dutch physician, Hermann Boerhaave. Although he only had 12 beds under his direction in Leyden Hospital, his care and management of patients was so detailed and meticulous that he soon acquired a name for himself by his methods. Indeed, he eventually became known as the 'Father of the Bedside Manner'.

Moving into the nineteenth century, we come to that famous medical missionary, David Livingstone. Born at Blantyre, Scotland in 1811, he undertook both medical and theological training to fit him for what he perceived as the great task of bringing the word of Christ and medical relief to the African continent. He embarked on four epic journeys, travelling thousands of miles through every type of difficult terrain and amassing a great wealth of knowledge. His achievements were truly prodigious. The current Clydesdale Bank 10 pound note commemorates his activities.

The year 1854 saw the start of the terrible Crimean War, which inspired a young lady governess to go out to Turkey and do something positive for the sick and injured British troops. Florence Nightingale (seen on our own 10 pound note) arrived in Scutari on the day of the Battle of Inkerman, and immediately set about reforming the Barracks Hospital which had been in a dreadful condition. She had the place swept clean, foul straw and bedding burnt and new mattresses purchased. She discharged all the existing female staff and engaged in their place only young ladies of good repute to be nurses. Thus began a long career of organising nursing services in Britain and its colonies. In 1857 the Army Medical School was formed, followed by the Nightingale School for Nurses in 1860, and several other nursing organisations in later years.

The French 5 franc note of 1966 depicts in great and colourful detail the many beneficial discoveries of the famous French chemist, Louis Pasteur. His studies of racemic and tartaric acid are illustrated by the mirror-image crystals on the front of the note. The open and closed flasks indicate his fermentation studies. Silkworm disease investigations are represented by a silkworm hanging inside a jar. The sheep in the border

are for anthrax, and the cockerel for chicken cholera. Finally, rabies is signified by the rabbits (which were used to prepare the effective vaccine) and the statue of a boy wrestling with a rabid dog. This lad was the second person to be saved by Pasteur's new vaccine; the statue still stands outside the Pasteur Institute which is shown on the reverse of the note.



In 1927 the Nobel Prize for Medicine was awarded to the dour-looking Dr Julius Wagner-Jauregg, an Austrian psychiatrist who noticed that occasionally a patient with a chronic mental illness would miraculously improve after suffering an acute illness with a high fever. Dr. Wagner-Jauregg hit on the idea of giving selected mental patients a dose of malaria to induce a high fever and then aborting the malarial attack with quinine. He performed this experiment on patients suffering from General Paresis of the Insane, a form of tertiary syphilis which was reckoned to be incurable. He was surprised and delighted to find that some of his subjects had a noticeable and welcome remission of their symptoms. Unfortunately the improvement was only temporary but even so, it was a breakthrough in the treatment of a hitherto incurable condition. The Austrian 500 schillings note of 1953 bears the good doctor's likeness.

Another Austrian psychiatrist is to be seen on the current 50 schillings note - Dr. Sigmund Freud. He, of course is well-known for his forays into the hidden world of the personality and its reactions to the environment.



He introduced to the public such terms and concepts as the Id, Ego and Super-ego. He explored, too, the world of sexual feelings and responses; when told by his patients of sexual incidents in childhood, he surmised that these were fantasies rather than reality. Now, it is considered by some that in all probability his patients were relating real happenings.

Two brilliant Brazilian physicians are illustrated on current Brazilian bank-notes. Oswaldo Cruz developed an early interest in the infectious diseases which were so prevalent in Brazil at the turn of the century. He investigated various ways of manufacturing vaccines against yellow fever and eventually was able to produce one on a large enough scale to rid Rio de Janeiro of the disease in 1904. He then turned his attention to producing vaccines against other killer diseases such as plague, typhoid and tetanus. Eventually a completely new research centre, the Oswaldo Cruz Institute, was opened in 1907 and this still carries out valuable research and development of vaccines and sera.



The second, Carlos Chagas, is perhaps unique in the annals of medicine in the way he discovered a disease entity. Most medical investigators start by examining the features of a known disease. Chagas, on the contrary, had the foresight to suspect that a disease *might* exist and went looking for it. When visiting the poor in the small poverty-ridden villages, he noticed that the hovels of wattle and mud harboured large numbers of biting insects, known locally as "Barber Bugs" for their propensity for biting the faces of sleeping victims. Chagas wondered if these bugs might be the carriers of a vector causing some as yet undiscovered disease. When he examined these bugs he found that they did indeed carry an organism - a trypanosomal parasite which was eventually proved to cause gross dilatation of the oesophagus and colon, as well as damaging the heart. The condition was named Chagas' Disease and it remains a serious cause of disability and death amongst the poor of Brazil. The 10,000 cruzados note shows a vignette of the life cycle of the parasite, *Trypanosoma cruzi*, as well as Chagas's portrait.

Another Nobel Prize-winner is to be found on the current Australian 50 dollar note. This shows a portrait of a benign, smiling Lord Florey who was responsible for the development of the commercial production of penicillin during the Second World War. The note shows a montage of vignettes associated with Florey's career. These include the entrance to the William Dunn School where he was Professor of Pathology at Oxford, and the mice, agar plates and penicillium mould so important to his Prize-winning studies.

The characteristic ulcerated lesion of yaws features on the 1 gourde note of Haiti. This recalls a doctor who was much better known for his inhumanity than for his medical work, Papa Doc Duvalier, who graduated as a physician in Haiti in 1934. He took part in the USA-sponsored anti-yaws campaigns in Haiti in 1946 and 1947. After becoming Director of the Public Health Service he entered politics and ultimately made himself President-for-life. His subsequent brutal repression of his people needs no telling.

Bank notes may be a relatively recent phenomenon but, as we have seen, they depict a wide variety of aspects of medicine culled from many thousands of years.

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Select Bibliography

For those interested in learning more about the hobby of collecting bank-notes (notaphily) I would recommend the following publications:-

- 1 Narbeth, Colin C. *Collecting Paper Money* (Batsford, 1986).
- 2 *Standard Catalogue of World Paper Money*, 6th Edition, 2 Volumes, (Krause Publications, 1990), Vol 1, 5th ed 1986; Vol 2, 6th ed 1990.

The International Bank-note Society meets monthly in London. Information can be obtained from the Secretary - Suresh Gupta, 11 Middle Row, Kensington, London W10 5AT.

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