

The special exhibit

Neuroeconomics and money

The field of neuroeconomics, which lies at the interface between neurology and economics, is concerned with research into economically relevant stimulations to the brain and the neurological effects they produce. Neuroeconomics researchers seek to give us a better understanding of how we humans make purchase-related decisions. Experiments examine the behaviour of test participants by means of nuclear spin or magnetic resonance imaging (MRI). The results show that the rationally thinking *homo oeconomicus* appears to be fictional. So far, researchers have tried in vain to locate a “buy button” in the human brain. Decisions to buy are shaped by many factors. Environmental, social and psychological influences, upbringing, education as well as totally banal needs and desires all induce a person to decide differently in two almost identical situations.

“Socks were put on sale at two different stalls in a pedestrian shopping area. At one stall, a packet of three pairs cost €15; at the other, one pair of socks cost €3. The packets of three were bought by 70 per cent of test participants, although it would have been cheaper to buy three separate pairs. Without counting, the people assumed the price per packet to be lower. ...”

(Interview with Bernd Weber in the *Süddeutsche Zeitung*, 4 April 2009)

Answer to the question regarding the display cabinet – Which coins are more valuable?

The question can be answered “correctly” only in terms of the owner’s needs. Some coins rise in value as collectors’ items. However, they cannot be used for day-to-day consumer purchases.

a Cash money in euro coins of different nominal values

It is possible to purchase goods and/or services to the value of €9.50 throughout the euro area.

b Silver commemorative coin with a proof-like finish of the Federal Republic of Germany, issued in 2012 to mark the 300th anniversary of the birth of Frederick II of Prussia

Only in Germany can goods and/or services be purchased to the value of €10 using this coin. The coin itself costs twice its nominal value to buy due to the prevailing high price of silver. It can be resold as a collector’s item for three times its nominal value.

c Euro starter kit with German euro coins

Goods and/or services to the value of €10.23 can be bought throughout the euro area using the coins from the starter kit. As a collector’s item, the full starter kit still in the original packing is worth more than twice the value of the coins.

Portrayals of good fortune on banknotes



Bhutan, 100 ngultrum, undated (1978)

After the constitutional monarchy was established in Bhutan in 1968, King Jigme Singye Wangchuk (shown here) was crowned in 1974. This was the highest nominal value banknote of the first series of notes issued in Bhutan. The right side of the front of the banknote shows eight Buddhist symbols of good luck representing, for example, wealth, a long life, success, the reach of religious teaching and the teachings of Buddha. The golden fish symbolises good fortune in general. Some of these symbols have since featured on all of Bhutan's notes. They demonstrate how deeply rooted the country's cultural consciousness is in Mahayana Buddhism. This spirituality serves as a useful starting point in explaining the gross national happiness index which was named after King Wangchuk, and which incorporates much more than the purely economic figures of the gross national product. The theoretical considerations behind the gross national happiness index inspired countries such as Germany to start a discussion at government level in 2011 about new ways of measuring prosperity and progress.



Japan, Great Imperial Japanese National Bank, 1 yen, 1877

Before the Japanese Central Bank (Nippon Ginko) was established in 1882, notes were brought into circulation by different issuers. The front of one such note is decorated with the Japanese coat of arms and a seal. The reverse shows Ebisu, the Japanese god of luck, who symbolises both good fortune for fishermen and success in commerce. This is thematically in keeping with the image of sailors looking out to sea on the front of the banknote. Other Japanese gods of good fortune are associated with agriculture or the high arts and stand for wisdom, a long life and contentedness. The Bank of Japan subsequently used the Shinto gods of fortune, who dispense blessings and wealth, in the design of one of the first banknotes it issued.



Scotland, Bank of Scotland, 10 pounds, 1938

More than 300 years ago, shortly after the first banknotes entered circulation in Europe and coinciding with the first banknotes issued by the Bank of England, the tradition-steeped Bank of Scotland brought out its own paper money. At the beginning of the 19th century the Scottish banknotes, like many other European notes, ceased to have a document-like appearance, but instead portrayed allegorical figures. Unlike the Bank of England, which chose the image of Britannia for its notes from the late 18th century onwards, the Bank of Scotland's notes featured Fortuna, the ancient Roman goddess of fate, fortune and chance. Amongst her many traits, Fortuna is generally described as a capricious and blind goddess who might bring good or bad luck to anyone, and is often portrayed holding a cornucopia filled with fruits. As a variation on this theme, the artist of our Fortuna filled the cornucopia with coins in reference to money.