YOU DON'T NEED TO BARTER WHEN YOU HAVE COINS

THE FUNCTION OF MONEY

IN CONTEXT

FOCUS
Banking and finance

KEY EVENT
Kublai Khan adopts fiat money in the Mongol Empire during the 13th century.

BEFORE
3000 BCE In Mesopotamia the shekel is used as a unit of currency: a unit of barley of a certain weight equals a certain value of gold or silver.

700 BCE The oldest known coins are made on the Greek island of Aegina.

AFTER
13th century Marco Polo brings promissory notes from China to Europe, where they are used by Italian bankers.

1696 The Bank of Scotland is the first commercial operation to issue bank notes.

1971 President Nixon cancels the convertibility of the US dollar to gold.

In many parts of the world people are increasingly moving towards a cashless society in which goods are bought with credit cards, electronic transfers, and mobile-phone chips. But dispensing with cash does not mean that money is not used. Money remains at the heart of all our transactions.

The disturbing effects of money are well known, inciting everything from miserliness to crime and warfare. Money has been used as a tribute (sign of respect), in religious rites, and for ornamentation. "Blood money" is paid as recompense for murder; brides are bought with "bride money" or given away with dowries to enrich their husbands. Money lends status and power to individuals, families, and nations.

The Tiwa tribal people of Assam, India, exchange goods through barter during the Jonbeel Mela, an age-old festival to preserve harmony and brotherhood between tribes.

A barter economy

Without money, people could only barter. Many of us barter to a small extent, when we return favors. A man might offer to mend his neighbor's broken door in return for a few hours of babysitting, for instance. Yet it is hard to imagine these personal exchanges working on a larger scale. What would happen if you wanted a loaf of bread and all you had to trade was your new car? Barter depends on the double coincidence of wants, where not only does the other person happen to have what I want, but I also have what he wants.

Money solves all these problems. There is no need to find someone who wants what you have to trade; you simply pay for your goods with money. The seller can then take the money and buy from someone else.

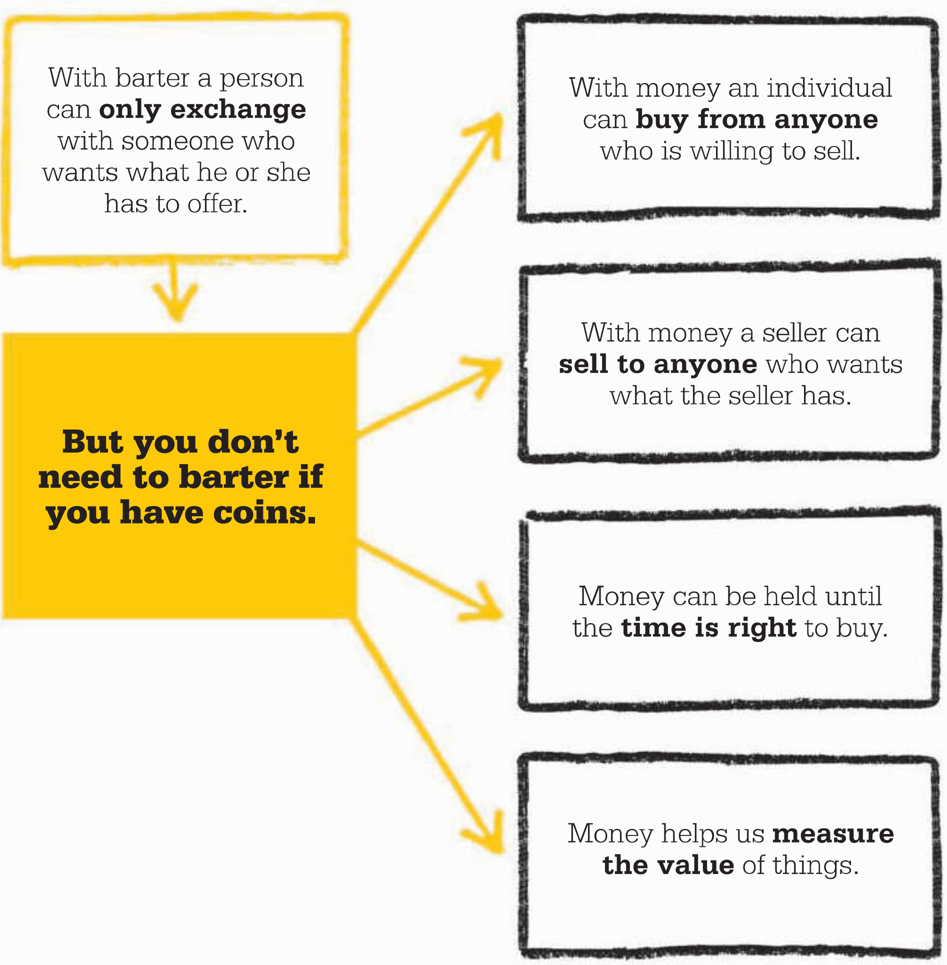
See also: Financial services 26–29 ▪ The quantity theory of money 30–33 ▪ The paradox of value 63

Money is transferable and deferrable—the seller can hold on to it and buy when the time is right. Many argue that complex civilizations could never have arisen without the flexibility of exchange that money allows. Money also gives a yardstick for deciding the value of things. If all goods have a monetary value, we can know and compare every cost.

Different kinds of money

There are two kinds of money: commodity and fiat. Commodity money has intrinsic value besides its specified worth, for example when gold coins are used as currency. Fiat money, first used in China in the 10th century, is money that is simply a token of exchange with no value other than that assigned to it by the government. A paper bank note is fiat money.

Many paper currencies were initially "promises to pay" against gold held in reserve. In theory dollars issued by the US Federal Reserve could be exchanged for their gold value. Since 1971, the value of a dollar has no longer been convertible to gold and is set entirely by the US Treasury, without reference to its gold reserves. Such fiat currencies rely on people's confidence in a country's economic stability, which is not always assured. ■

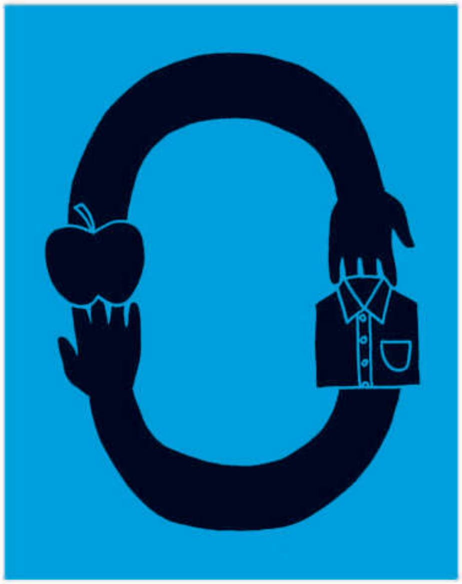


Shelling out

Wampum were strings of white and black shell beads treasured by the indigenous North Americans of the Eastern Woodland tribes. Before the European settlers arrived in the 15th century, wampum was used mainly for ceremonial purposes. People might exchange wampum to record an agreement or to pay tribute. Its value came from the immense skill involved in making it, and in its ceremonial associations.

When Europeans arrived, their tools revolutionized wampum making, and Dutch colonizers mass-produced the beads by the million. Soon, they were using wampum to trade and buy things from the native peoples, who had no interest in coins, but valued wampum. Wampum soon became a currency with an accepted exchange rate. In New York eight white or four black wampum equaled one stuiver (a Dutch coin of the time). The use and value of wampum diminished in the 1670s.

This Shawnee shoulder bag is decorated with wampum beads, which developed into a currency for some North American tribes.



SUPPLY CREATES ITS OWN DEMAND

GLUTS IN MARKETS

IN CONTEXT

FOCUS
The macroeconomy

KEY THINKER
Jean-Baptiste Say
(1767–1832)

BEFORE
1820 British economist Thomas Malthus argues that underemployment and overproduction can occur.

AFTER
1936 John Maynard Keynes states that supply does not create its own demand—it is possible for a lack of demand to cause production to slow, creating unemployment.

1950 Austrian economist Ludwig von Mises argues that Keynes' denial is at the basis of Keynesian fallacies about economics.

2010 Australian economist Steven Kates defends Say's law and calls Keynesian economics a "conceptual disease."

People produce commodities and sell them **to earn money**.

Nobody wants to hold on to money because it **falls in value**, so…

… people swap money for the **other products** they want.

Supply creates its own demand.

In 1776, when Adam Smith wrote *The Wealth of Nations* (pp.54–61), he noted that merchants around him commonly felt there were two reasons why business failed: a scarcity of money or overproduction. He debunked the first of these myths by explaining the role of money in an economy, but it was left to a later French economist, Jean-Baptiste Say, to dismiss the second. His 1803 work, *A Treatise on Political Economy*, is devoted to explaining the impossibility of overproduction. Say claimed that as soon as a product is made, it creates a market for other products "to the full extent of its own value." This means, for example, that the money a tailor receives when he makes and sells a shirt is then used to buy bread from the baker and beer from the brewer. Say believed that people had no desire to hoard money, and therefore the total value of commodities supplied would equal the total value of goods demanded. The common expression of what is known as Say's law has become

See also: Free market economics 54–61 ▪ Economic equilibrium 118–23 ▪ Depressions and unemployment 154–61

"supply creates its own demand." In fact, Say never used this phrase; it was probably coined in 1921 by the US economist Fred Taylor in his *Principles of Economics*.

The idea was important to Say because if supply creates an equal value of demand, there can never be overproduction, or "gluts," in the economy as a whole. Of course, firms could mistake the level of demand for a commodity and overproduce, but as the Austrian-born US economist Ludwig von Mises (p.147) later said, "the bungling entrepreneur" would soon be driven from that market by losses, and the unemployed resources would be reallocated to more profitable areas of the economy. In fact, it is impossible to overproduce overall, because human wants are far greater than our ability to produce commodities.

Say's law has become a forum for conflict between the classical and the Keynesian economists. The former, such as Say, believe that production, or the supply side of the economy, is the most important factor in growing an economy. Keynesians argue that growth comes only with increased demand.

Why keep money?

In his 1936 masterpiece *The General Theory of Employment*, John Maynard Keynes (p.161) attacked Say's law, focusing on the role of money within the economy. Say had suggested that all money earned is spent on purchasing other commodities. In other words the economy works as if it were based on a system of barter. Keynes, however, suggested that people might sometimes hold money for reasons other than for buying goods. They might, for instance, want to save some of their income. If these savings were not borrowed by others (such as through a bank) and invested in the economy (as capital for running a business, perhaps), the money would no longer be circulating. As people hold on to their money, demand for goods eventually becomes lower than the value of the goods produced. This state of "negative demand" is known as "demand deficiency," and Keynes said it would lead to pervasive unemployment.

Given the dire state of the world economy during the Great Depression of the early 1930s, Keynes's argument seemed a powerful one, especially when contrasted with a world based on Say's law, which said that unemployment would only occur in some industries for a short time. ■

Say believed that supply and demand operate through a type of barter. We swap the money we earn for goods we want. In this image meat is bartered for vegetables in an Incan marketplace.

Jean-Baptiste Say

The son of a French Protestant textile merchant, Jean-Baptiste Say was born in Lyons, France, in 1767. At the age of 18 he moved to England, where he spent two years apprenticed to a merchant before returning to Paris to work at an insurance company. He welcomed the French Revolution of 1789, both for its ending of the religious persecution of the protestant Hugenots, and for its removal of an essentially feudal economy, opening up more prospects for commerce.

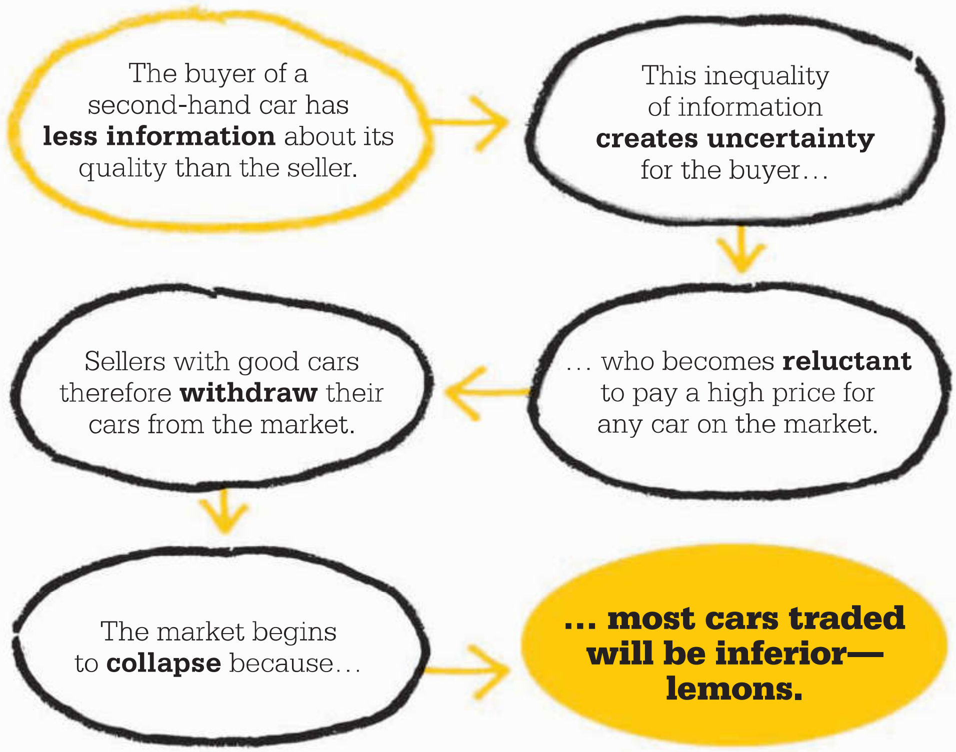
In 1794, Say became editor of a political magazine in which he promoted the ideas of Adam Smith. In 1799, he was invited to join the French government, but Napoleon rejected some of his views, and Say's work was censored until 1814. During this time he made a fortune by setting up a cotton factory. In his later years he lectured on economics in Paris. He died after a series of strokes in 1832, aged 66.

Key works

1803 *A Treatise on Political Economy*
1815 *England and the English*
1828 *Complete Course of Practical Political Economy*

MOST CARS TRADED WILL BE LEMONS

MARKET UNCERTAINTY



IN CONTEXT

FOCUS
Markets and firms

KEY THINKER
George Akerlof (1940–)

BEFORE
1558 English financier Sir Thomas Gresham advises that "bad money drives out good."

1944 John von Neumann and Oskar Morgenstern publish the first attempt to analyze strategic behavior in economic situations.

AFTER
1973 US economist Michael Spence explains how people signal their skills to potential employers.

1976 US economists Michael Rothschild and Joseph Stiglitz publish *Equilibrium in Competitive Insurance Markets*, a study of the problem of "cherry picking" when insurance companies compete for customers.

Until US economist George Akerlof started studying prices and markets in the 1960s, most economists believed that markets would allow everyone willing to sell goods at a certain price to make deals with anyone who wanted to buy goods at that price. Akerlof demonstrated that in many cases this is not true.

His key work, *The Market for Lemons* (1970), explains how uncertainty caused by limited information can cause markets to fail. Akerlof stated that buyers and sellers have different amounts of information, and these differences, or asymmetries, can have disastrous consequences for the workings of markets.

See also: Free market economics 54–61 ▪ Market information and incentives 208–09 ▪ Markets and social outcomes 210–13 ▪ Signaling and screening 281

Asymmetric information

The buyer of a second-hand car has less information about its quality than the seller who already owns the car. The seller will have been able to assess whether the car is worse than an average similar car—whether, it is a "lemon"—an item with defects. Any buyer that ends up with a lemon feels cheated. The existence of undetectable lemons in the market creates uncertainty in the mind of the buyer, which extends to concerns about the quality of all the second-hand cars on sale. This uncertainty causes the buyer to drop the price he is willing to offer for any car, and as a consequence prices drop across the market.

Akerlof's theory is a modern version of an idea first suggested by English financier Sir Thomas Gresham (1519–79). Gresham observed that when coins of higher and lower silver content were both in circulation, people would try to hold on to those of a higher silver content, meaning that "bad money drives good money out of circulation." In the same way sellers with better-than-average cars to sell will withdraw them from the market, because it is impossible for them to get a fair price from a buyer who is unable to tell whether that car is a lemon or not. This means that "most cars traded will be lemons." In theory this could lead to such low prices that the market would collapse, and trade would not occur at any price, even if there are traders willing to buy and sell.

A car dealer can reduce a buyer's risk when selling a car by offering guarantees. In many cases markets adjust to account for asymmetric information.

Adverse selection

Another market in which lemons affect trade is the insurance market. In medical insurance, for instance, the buyers of policies know more about the state of their health than the sellers. So insurers often find themselves doing business with people they would rather avoid: the least healthy people. As insurance premiums rise for older age groups, a greater proportion of "lemons" buy policies, but firms are still unable to identify them accurately. This is known as "adverse selection," and the potential for adverse selection means that insurance companies end up with, on average, much greater risks than are covered by the premiums. This has resulted in the withdrawal of medical insurance policies for people over a certain age in some areas. ■

George Akerlof

Born in Connecticut in 1940, George Akerlof grew up in an academic family. At school he became interested in the social sciences, including history and economics. His father's irregular employment patterns fostered his interest in Keynesian economics. Akerlof went on to study for an economics degree at Yale, then gained a PhD from MIT (Massachusetts Institute of Technology) in 1966. Shortly after joining Berkeley as an associate professor, Akerlof spent a year in India, where he explored the problems of unemployment. In 1978, he taught at the London School of Economics before returning to Berkeley as professor. He was awarded the Nobel Prize for Economics in 2001, alongside Michael Spence and Joseph Stiglitz.

Key works

1970 *The Market for Lemons*
1988 *Fairness and Unemployment* (with Janet Yellen)
2009 *Animal Spirits: How Human Psychology Drives the Economy* (with Robert J. Shiller)