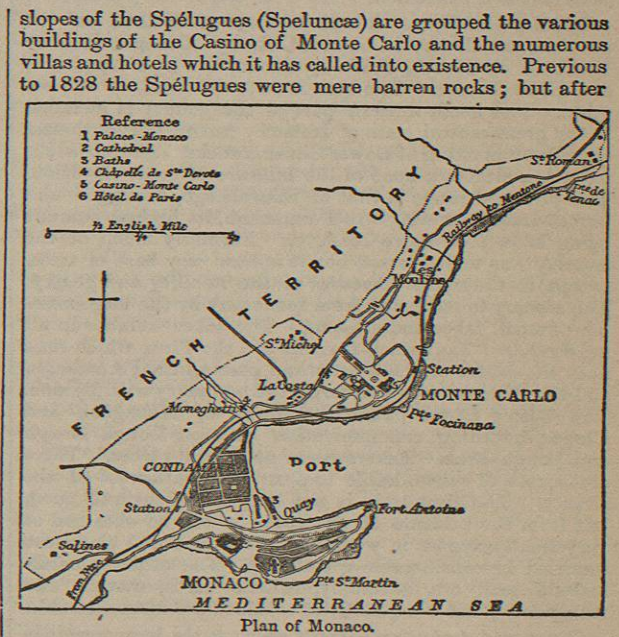


Table with columns: Date, Name, Founder, Place. Lists various monastic orders and their origins, including Monks of Lerins, Benedictines, and various religious congregations.

Table with columns: Date, Name, Founder, Place. Continuation of monastic orders, including Daughters of the Good Shepherd, Sisters of Charity, and various religious societies.

MONACO (French *Monégue*), the smallest of the sovereign principalities of Europe, with an area of 8.34 square miles, a population (1878) of 7049, and an army of 72 men, is situated on the coast of the Mediterranean, 9 miles east of Nice, and bounded on all sides by the French department of the Maritime Alps. Previous to 1861, when the communes of Mentone (Menton) and Rocca-bruna (Roquebrun) were sold to France for 4,000,000 francs, the area was about a third larger; but the population, which with those portions again included would now be 15,000, was only about 8000. Monaco has long had the reputation of being one of the most beautiful and sheltered spots on all the Franco-Italian coast; non Corus in illum Jus habet aut Zephyrus; solus sua littora turbat Circeus, said Lucan; and a luxuriant growth of aloes and prickly pears (introduced in 1537), palm-trees, eucalyptus, lemon-trees, and geraniums gives a warmer colour to the scene than Lucan can have known. The town occupies the level summit of a rocky headland, rising about 195 feet from the shore, and still surrounded with ramparts. Though largely modernized, the palace is a fine specimen of Renaissance architecture; the new "cathedral" (French Renaissance style), the new church of St Charles, and the museum may also be mentioned. Behind the rock, between Mont Tête de Chien and Mont de la Justice, the high grounds rise towards Turbie, the village on the hill which takes its name from the *tropea* with which Augustus marked the boundary between Gaul and Italy. On the eastern side lies the little port or bay of Monaco; along the lower ground at the head of the bay stretches the village of Condamine with orange-gardens, manufactures of perfumes and liqueurs, and the chapel of Ste Dévote, the patron saint of Monaco; farther to the east, on the rocky



Plan of Monaco. They were traversed by the new road to Mentone, Count Rey caused them to be covered with soil by Italian convicts; and since 1858, when the first stone of the Casino was laid, the process of artificial embellishment has been carried

out on the most magnificent scale. The gaming establishment is now in the hands of a joint-stock company with a capital of 15,000,000 francs. None of the inhabitants of Monaco have access to the tables; and their interest in the maintenance of the *status quo* is secured by their complete exemption from taxation, and the large prices paid for their lands. Gambling-tables were set up at Monaco in 1856; but it was not till 1860, when M. Blanc, expelled from Homburg, took possession of the place, that Monte Carlo began to be famous.

A temple of Heracles Monœcus was built on the Monaco headland at a very early date, probably by the Greeks of Massilia. Monœci Portus or Portus Herculis is frequently mentioned by the later Latin writers. From the 10th century the place was associated with the Grimaldi, a powerful Genoese family who held high offices under the republic and the emperors; but not till a much later date did it become their permanent possession and residence. In the beginning of the 14th century it was notorious for its piracies. Charles I. (a man of considerable mark, who, after doing great service by sea and land to Philip of Valois in his English wars, was severely wounded at Crécy) purchased Mentone and Rocca-bruna, and bought up the claims of the Spinola to Monaco. The princes of Monaco continued true to France till 1524, when Augustin Grimaldi threw in his lot with Charles V. Honoré I., Augustin's successor, was made marquis of Campagna and count of Canosa, and people as well as rulers were accorded various important privileges. The right to exact toll from vessels passing the port continued to be exercised till the close of the 18th century. Honoré II., who renewed the alliance with France in 1641, was compensated for the loss of Canosa, &c., with the duchy and peerage of Valentinois and various lesser lordships; and duke of Valentinois long continued to be the title of the heir-apparent of the principality. The National Convention annexed the principality to France in 1793; restored to the Goyon Grimaldis by the Treaty of Paris in 1814, it was placed by that of Vienna under the protection of Sardinia. King Albert of Sardinia took the opportunity of disturbances that occurred in 1848 to annex Mentone and Rocca-bruna; but this high-handed proceeding was condemned by the protocol of 1856, and Charles III. (born 1818) entered upon his full rights. With the transference of Nice to France in 1860 the principality passed again under French protection.

See Charles de Venasques, *Genealogia et Historia Grimaldis gentis arbor* (really the work of Honoré II.).

MONAGHAN, an inland county of Ireland in the province of Ulster, is bounded E. by Armagh, S.E. by Louth, S. by Meath, S.W. by Cavan, W. by Fermanagh, and N. by Tyrone. The area is 318,806 acres, or 498 sq. miles. The north-western part of the county is included in the great central plain of Ireland; but in the south-east there is an uprising of Lower Silurian rocks. The surface is irregular, although none of the hills are of great elevation. The principal range is that of Slievebeagh, a rugged and barren tract extending into Fermanagh, its highest summit being 1254 feet above sea-level. Formerly much of the country was under forest, but it is now very bare of trees, except in the many demesnes of the nobility and gentry. The scenery is redeemed from monotony by the large number of small lakes and streams. The lakes number in all nearly 200. The principal rivers are the Finn, which rises near the centre of the county and passes into Fermanagh, and the Blackwater, which forms the boundary with Tyrone. The Ulster Canal passes the towns of Monaghan and Clones, affording communication between Lough Neagh and Lough Erne. Eskers occur at several places. There are seams of unworkable coal in the south-west of the county. The limestone is not only abundant and good, but from the position of the rocks it can be obtained at very small expense in working. Freestone and slates are quarried in considerable quantities. The other minerals include lead ore, antimony, fuller's earth, marble, and manganese; but the quantities obtained are inconsiderable.

Climate and Agriculture.—Partly owing to the large proportion of bog and water the climate is somewhat moist. The soil in the more level portions of the county is very fertile where it rests on limestone, and there is also a mixed soil of deep clay, which is capable of high cultivation; but in the hilly regions a strong retentive clay prevails, which could be made productive only by careful drain-

ing and culture. Spade husbandry generally prevails. The most common manure is a compost of lime and burned turf mould. Marl is abundant, but is little used, and gypsum also is found.

The number of holdings in 1881 was 17,849, of which as many as 10,784 did not exceed 15 acres in extent, and 2870 of these did not exceed 5 acres; 6454 ranged between 15 and 50 acres, and only 24 were above 200 acres. The area of arable land was 278,755 acres, or 87 per cent. of the whole, while 5258 were under plantations, 7580 bog and marsh, 5239 barren mountain land, and 21,682 water, roads, and fences. The following table shows the areas under the different crops in 1850 and 1882:—

	Wheat	Oats	Other Cereals	Potatoes	Turnips	Other Green Crops	Flax	Meadow and Clover	Total
1850	5,861	80,946	7,467	22,105	7,190	2,543	10,157	11,399	147,668
1882	1,228	53,997	1,665	21,321	7,562	1,933	12,348	31,480	131,134

Horses numbered 10,229 in 1872, and 10,666 in 1882. In the same years mules numbered 300 and 469, and asses 4314 and 3476. The number of cattle in 1872 was 81,333, and in 1882 only 72,266, an average of 25.9 to every 100 acres under cultivation, the average for Ireland being 25.8. Sheep between 1872 and 1882 declined from 17,964 to 8858, a very inconsiderable number; pigs increased from 26,008 to 29,972; goats from 8873 to 12,391; and poultry from 341,874 to 434,260.

According to the latest return, the land was divided among 1470 proprietors, who possessed 311,440 acres, with a total annual value of £261,882. The average size of the properties was 211 acres, and the average value per statute acre 17 shillings. The following seven proprietors possessed upwards of 10,000 acres: E. P. Shirley, 26,386; marquis of Bath, 22,762; earl of Dartrey, 17,345; Lord Rossmore, 14,839; Sir John Leslie, 13,621; Viscount Templetown, 12,845; A. A. Hope, 11,700.

Manufactures.—The only manufacture of consequence is linen, which of late years has been on the increase. The number of scutching mills in 1881 was 55, of which 45 were wrought by water, 8 by steam, and 2 by water and steam.

Administration.—The county includes 5 baronies, 23 parishes, and 1850 town lands. Assizes are held at Monaghan, and quarter-sessions at Carrickmacross, Castleblayney, Clones, and Monaghan. There are 8 petty sessional districts within the county, and part of another. It includes the poor-law unions of Carrickmacross and Monaghan, and portions of Castleblayney, Clogher, Clones, Coote-hill, and Dundalk. It is in the Belfast military district, sub-district of Armagh. There is a barrack station at Monaghan. In the Irish parliament two members were returned for the county and two for the town of Monaghan, but at the Union Monaghan was disfranchised.

Population.—The population in 1841 was 200,442; but in 1851 it had diminished to 141,823, in 1871 to 114,969, and in 1881 to 102,748, of whom 50,077 were males and 52,671 females. At the last census 78 per cent. of the inhabitants were Roman Catholics, 13 per cent. Episcopalians, and 11 per cent. Presbyterians. The number of emigrants from 1st May 1851 to 31st December 1881 was 56,408, or about 1840 persons per annum; while during the twenty years ending 31st March 1881 the annual rate of emigration was 13.8 per 1000 of the population. The death-rate to every thousand of the population for the ten years ending 1881 was 16.9, the birth-rate 23.4, and the marriage-rate 3.6. The towns possessing more than 1000 inhabitants are—Monaghan 3369, Clones 2216, Carrickmacross 2002, Castleblayney 1810, and Ballyblay 1654. Monaghan, the county town, received its name *Muinnechan* (the town of monks) from a monastery founded there at a very early period. The town was incorporated by James I., but it was little more than a hamlet till towards the close of last century. Besides the usual county buildings, it contains a Roman Catholic college, and National model schools.

History and Antiquities.—In the time of Ptolemy, Monaghan formed part of the territory of the Scoti. Subsequently included in the district of Oriel or Orgial, and long known as Macmahon's country, it became shire ground in the reign of Elizabeth.

The antiquarian remains of Monaghan are comparatively unimportant. At Clones there is a round tower in good preservation, but very rude in its masonry; another at Inniskeen is very dilapidated. Near Clones there are two large raths. Although there are several old Danish forts, there are no mediæval castles of importance. The only monastic structure of which any vestiges remain is the abbey of Clones, which was also the seat of a bishopric. The abbey dates from the 6th century, but was rebuilt in the 14th century after destruction by fire. On the site of the Franciscan abbey at Monaghan a castle was erected, which was in a ruinous condition in the time of James I.

MONARCHIANISM, in its technical Christological sense, designates the view taken by those Christians who,

within the church, towards the end of the 2d century and during the 3d, opposed the doctrine of a hypostatic Logos (hypostasianism) or of an independent personal subsistence of the Divine Word. It is usual (and convenient) to speak of two kinds of monarchianism,—the dynamistic and the modalistic. By monarchians of the former class Christ was held to be a mere man, miraculously conceived indeed, but constituted the Son of God simply by the infinitely high degree in which he had been filled with Divine wisdom and power. This view was represented in Asia Minor about the year 170 by the anti-Montanistic Alogi, so called by Epiphanius on account of their rejection of the Fourth Gospel; it was also taught at Rome about the end of the 2d century by Theodotus of Byzantium, a currier, who was excommunicated by Bishop Victor, and at a later date by Artemon, excommunicated by Zephyrinus. About the year 260 it was again propounded within the church by PAUL of Samosata (*q.v.*), who held that, by his unique excellency, the man Jesus gradually rose to the Divine dignity, so as to be worthy of the name of God. Modalistic monarchianism, conceiving that the whole fulness of the Godhead dwelt in Christ, took exception to the "subordinationism" of some church writers, and maintained that the names Father and Son were only two different designations of the same subject, the one God, who "with reference to the relations in which He had previously stood to the world is called the Father, but in reference to His appearance in humanity is called the Son." It was first taught, in the interests of the "monarchia" of God, by Praxeas, a confessor from Asia Minor, in Rome about 190, and was opposed by Tertullian in his well-known controversial tract. The same view—the "patripassian" as it was also called, because it implied that God the Father had suffered on the cross—obtained fresh support in Rome about 215 from certain disciples of Noetus of Smyrna, who received a modified support from Bishop Callistus. It was on this account that Hippolytus, the champion of hypostasian subordinationism, along with his adherents, withdrew from the obedience of Callistus, and formed a separate community. A new and conciliatory phase of patripassianism was expounded at a somewhat later date by Beryllus of Bostra, who, while holding the divinity of Christ not to be *idia*, or proper to Himself, but *πατρική* (belonging to the Father), yet recognized in His personality a new *πρόσωπον* or form of manifestation on the part of God. Beryllus, however, was convinced of the wrongness of this view by ORIGEN (*q.v.*), and recanted at the synod which had been called together in 244 to discuss it. For the subsequent history of modalistic monarchianism, see SABELLIUS.

MONASTICISM. See **MONACHISM.**
MONASTIR, BITOLLA, or TOLI MONASTER, a city of Macedonia, now the chief town of the Turkish vilayet of Roumelia, is situated at a height of 1880 feet above the sea, in a western inlet of the beautiful, fertile, and many-villaged plain which, with a breadth of about 10 miles, stretches for 40 miles eastward from Mount Peristeri (7714 feet high) to the Babuna chain. It is embosomed in rich masses of foliage, and crossed by a rough-channelled mountain stream, the Drahor, which joins the Czerna or Karasu, a tributary of the Vardar. The military advantages of its position at the meeting-place of roads from Salonica, Durazzo, Uskiub, and Adrianople led the Turks about 1820 to make Monastir the headquarters of the Roumelian *corps d'armée*. Since then its general and commercial importance has greatly increased. A considerable amount of gold and silver work (especially clasps and filigree) is made by the local craftsmen. The population is about 40,000.

Monastir—so called from the monastery of Bukova (The Beeches), some hundred feet up the slope of Peristeri—is identified with the

ancient Heraclea Lyncestis on the Egnatian Way; and its bishopric is still called the bishopric of Pelagonia from the ancient name of the plain. In 1833 the town was the scene of the massacre of the Albanian boys.

MONBODDO, JAMES BURNETT, LORD (1714-1799), author of works on the *Origin and Progress of Language* (published in 1773), and *Ancient Metaphysics* (1779), was one of the most marked characters in Scottish literary circles in the 18th century. He was born in 1714 at Monboddo in Kincardineshire, studied at Aberdeen and Groningen, and quickly took a leading position at the Edinburgh bar, being made one of the Lords of Session in 1767. Many of his eccentricities, both of conduct and opinion, appear less eccentric to the present generation than they did to his contemporaries; though he seems to have heightened the impression of them by his humorous sallies in their defence. He may have had other reasons than the practice of the ancients for dining late and performing his journeys on horseback instead of in a carriage. His views about the origin of society and language and the faculties by which man is distinguished from the brutes afforded endless matter for jest to the wags of his day; but readers of this generation are more likely to be surprised by the scientific character of his method and the acuteness of his conclusions than amused by his eccentricity. These conclusions have many curious points of contact with Darwinism and Neo-Kantism. His idea of studying man as one of the animals, and of collecting facts about savage tribes to throw light on the problems of civilization, bring him into contact with the one, and his intimate knowledge of Greek philosophy with the other. In both respects Monboddo was far in advance of his neighbours. His happy turn of Virgil's line—

"Tanta molis erat humanam condere gentem"—

might be adopted as a motto by the Evolutionists; and Neo-Kantians would find it hard to believe that he published his criticism of Locke in 1773. His studied abstinence from fine writing—from "the rhetorical and poetical style fashionable among writers of the present day"—on such subjects as he handled confirmed the idea of his contemporaries that he was only an eccentric concocter of supremely absurd paradoxes. He died, 26th May 1799, at the advanced age of eighty-five.

MONCTON, a town of the Dominion of Canada, in Westmoreland, New Brunswick, 89 miles by rail north-east of St John, is a port at the head of navigation on the Petitcodiac, and the seat of the workshops and general offices of the Intercolonial Railway. The population, about 1200 in 1871, was 5032 in 1881; the growth of the place has been favoured by the establishment of sugar-refining factories, and factories for cotton and brass and iron wares since the Canadian Parliament in 1879 adopted a policy of protection. For the year 1881-82 the exports amounted to \$64,817, and the imports to \$252,571.

MONDONEDO, an ancient city of Spain, 27 miles north-north-east from Lugo, in the province of that name, is situated on the Sixto, a small tributary of the Masma, on the Atlantic side of the Cantabrian chain, in a sheltered site surrounded on all sides by considerable hills. The population in 1878 was 10,112. The principal buildings are the cathedral, a Corinthian structure of the 17th century, an ex-convent of Franciscan friars of Alcantara, which is now used for a theatre and a public school, and the civil hospital. The industries, which are unimportant, include lace-making, linen-weaving, and leather manufacture.

According to local tradition, the bishopric of Dumium, near Braga, was transferred to San Martin de Mondoñedo (three leagues from Mondoñedo) in the 8th century; it was brought to Mondoñedo itself by Doha Urraca in the beginning of the 12th century; for about sixty years prior to 1233 the see was at Ribadeo. After having

been for nearly a century and a half in the hands of the Moors, Mondohedo was recaptured by Ordoño I. in 858; and the Christian possession was made permanent by Alfonso III. in 870. It was taken by surprise by the French in 1809.

MONDOVI, a city of Italy, in the province of Cuneo, 15 miles east of Cuneo and about 55 west of Genoa by rail, was formerly the chief town of the Sardinian province of Mondovì, and between 1560 and 1719 the seat of a Piedmontese university. The central quarter occupies the summit of a hill 1670 feet high, and contains the hexagonal piazza, a citadel erected in 1573 by Emanuel Philibert, the cathedral of St Donatus, a spacious episcopal palace, and the statue of Beccaria, who was a native of the town. At the foot of the hill along the banks of the

Ellero (a tributary of the Po) lie the industrial and commercial suburbs of Breo, Borgatto, Pian della Valle, and Carassone, with their potteries, tanneries, marble-works, &c. The mansion of Count San Quintino in Pian della Valle was the seat of the printing-press which from 1472 issued books with the imprint Mons-Regalis; and in modern times the Ducal press founded by Emanuel Philibert has acquired a great reputation. The population of the town was 9637 in 1871, with the suburbs 11,958; that of the commune 17,726 in 1861, and 17,902 in 1881.

Breo is identified with a certain Colonia Bredolensis; but Mondovì proper—Mons Vici, Mons Regalis (Monteregale), or Vicodunum—probably did not take its rise till about 1000 A.D. The bishopric dates from 1388.

MONEY

1. *Definition and Functions of Money.*—The precise definition of Money is a question presenting no small difficulty, and it has been complicated by the attempts of some writers to define the term so as to lend support to their favourite theories. The real difficulties of the subject are, however, chiefly connected with paper-money, and as that side of the question has been dealt with in the article BANKING (*q.v.*) it will here be sufficient to adopt the clear and careful description of money given by a distinguished American economist as being "that which passes freely from hand to hand throughout the community in final discharge of debts and full payment for commodities, being accepted equally without reference to the character or credit of the person who offers it and without the intention of the person who receives it to consume it or enjoy it or apply it to any other use than in turn to tender it to others in discharge of debts or payment for commodities."¹ In this passage the essential features of money are plainly set forth, though, as is frequently the case in economics, particular cases hard to bring within the description may be found.²

The functions which money discharges in the social organism are—at least in the opinion of all writers worth noticing here—clearly manifest. The most important is that of facilitating exchanges. It is not necessary to dwell on the great importance of this office. The mere consideration of industrial organization shows that it is based on the division of employments; but the earliest economic writers saw clearly that division of employments was rendered possible only by the use of a medium of exchange. They saw that the result of increasing specialization of labour was to bring about a state of things in which each individual produced little or nothing directly adapted to satisfy his own wants, and that each one was to live by exchanging his products for those of others. They saw, moreover, that this was not feasible without some object which all would be willing to accept for their peculiar products, for otherwise, the difficulty of getting those together whose wants were reciprocal would be a complete hindrance to the development of exchange, which alone made division of labour possible. A second function hardly inferior in importance to the one just mentioned is that of affording a ready means of estimating the comparative value of different commodities. Without some common commodity as a standard of comparison this would be almost impossible. "If a tailor had only coats and wanted to buy bread or a horse, it would be very troublesome to ascertain how much bread he ought to obtain for a coat or how many coats he

¹ F. A. Walker, *Money, Trade, and Industry*, p. 4.

² For further information as to the discussions relative to the proper definition of "Money," the reader may consult J. S. Mill, *Prin. of Pol. Econ.*, B. iii. ch. 12, § 7; Jevons, *Money*, pp. 248 sq.; B. de Laveleye, *Marché Monétaire*, pp. 226 sq.; and especially Mr H. Sidgwick's article "What is Money?" in the *Fortnightly Review* (April 1879), also his *Principles of Political Economy*, pp. 231 sq.

should give for a horse;"³ and as the number of commodities to be dealt with increased the problem would become harder, "for each commodity would have to be quoted in terms of every other commodity." Indeed it may be reasonably maintained that the idea of general value could not be formed without the existence of money, and all that is known of savage races tends to bear out this view.⁴ The adoption of some one commodity renders the comparison of values easy. "The chosen commodity becomes a common denominator or common measure of value in terms of which we estimate the values of all other goods,"⁵ and thus money, which in its primary function renders exchanges possible by acting as an intermediate term in each exchange, also makes exchanges easier by making them definite. Another function of money comes into being with the progress of society. One of the most distinctive features of advancing civilization is the increasing tendency of people to trust each other. Thus there is a continual increase in relations of contract, as may be seen by examining the development of any legal system. Now a contract implies something to be done in the future, and for estimating the value of that future act a standard is required; and here money, which already acts as a medium of exchange and as a measure of value at a given time, performs a third function, by affording an approximate means of estimating the present value of the future act, and in this respect may be regarded as a standard of value, or, if the phrase be preferred, of deferred payments.⁶ Some writers attribute a fourth function to money, inasmuch as they regard it as being a means of easily storing up value. Doubtless it does supply this need, which is a specially pressing one in early civilizations owing to the insecurity which then exists, but with the progress of settled government the need becomes less extreme. Other forms of investment grow up, and the habit of hoarding money becomes unusual. It is therefore better to regard the functions of money as being only three in number, viz., to furnish—(1) the common medium by which exchanges are rendered possible, (2) the common measure by which the comparative values of those exchanges are estimated, and (3) the standard by which future obligations are determined.

2. *Causes which Determine the Value of Money. Quantity of Money needed by a Nation.*—The problem of the determining causes of the value of money is a particular case of the general problem of values, but there are circumstances which render the inquiry more than usually complicated. Before considering these it will be well to deal with a use of the phrase "value of money" which has led to much con-

³ Mill, *Prin.*, B. iii. ch. 7, § 1.

⁴ W. Bagehot, *Economic Studies*, pp. 42-43. ⁵ Jevons, *Money*, p. 5.

⁶ For an ingenious argument against the use of the terms "measure" or "standard" of value, see F. A. Walker, *Money*, pp. 4 sq., 12, and *Money, Trade, and Industry*, pp. 27 sq., 60 sq. The shorter title is uniformly used here for his larger treatise.

fusion. In mercantile phraseology the value of money means the interest charged for the use of loanable capital. Thus, when the market rate of interest is high money is said to be dear, when it is low money is regarded as cheap. Whatever may be the force of the reasons in favour of this use, it is only mentioned here for the purpose of excluding it. For our present subject, "the value of a thing is what it will exchange for; the value of money is what money will exchange for, or its purchasing power. If prices are low, money will buy much of other things, and is of high value; if prices are high, it will buy little of other things, and is of low value. The value of money is inversely as general prices, falling as they rise and rising as they fall."¹ Now in the general theory of value it appears that the proximate condition which determines it is the equation between supply and demand; and this is clearly the case with reference to money. These terms, supply and demand, need, however, some elucidation. Let us consider what is meant by the supply of, and demand for, money. The supply of a commodity means the quantity of it which is offered for sale. But in what shape does the sale of money take place? By being offered for goods. "The supply of money, then, is the quantity of it which people are wanting to lay out;" or, to put the point more concisely, it is "all the money in circulation at the time." Again, to take the case of demand,—the demand for a commodity is the purchasing power offered for it.² Demand in the special case of money consists of all the goods offered for sale. There is, however, a peculiar feature in the case of money which arises from its position as the medium of exchange, viz., that money is, so to say, in a "constant state of supply and demand," since its principal service is to act as the means of purchasing commodities.³ From this it follows that the factors which determine the value of money within a given time are: (1) the amount of money in circulation, and (2) the amount of goods to be sold. On closer examination it will, however, appear that there are other elements to be taken into account. In the first place, the quantity of money is not by itself the sole element on the supply side. In some instances a coin will not circulate more than two or three times in a year, while another coin may make hundreds of purchases. In determining the value of money these varying rates of circulation have to be considered, and by taking an average we may establish the existence of a fresh element to be estimated, namely, the average rapidity with which money does its work, or, to use Mill's expression, "the efficiency of money." On the side of demand, again, it is not the quantity of commodities that is the determining element, but the amount of sales, and the same article may, and generally does, pass through several hands before it reaches the consumer. From this it follows that (if the consideration of credit in its various forms be omitted) the value of money is inversely as its quantity multiplied by its efficiency, the amount of transactions being assumed to be constant. This formula requires, however, some further explanations before it can be accepted as a full expression of the truth on the subject. It must be noticed that it is not commodities only that are exchanged for money. Services of all kinds constitute a large portion of the demand, while the payment of interest on the various forms of obligation requires a large amount of the circulating medium. The potent influence of credit also must be dwelt on. This latter force is the main element to be considered in dealing with variations of prices; but

¹ Mill, *Prin.*, B. iii. ch. 8, § 1.

² For a clear statement of this, see J. E. Cairnes, *Leading Principles*, part i. ch. 2.

³ The leading exception to this is in the case of money which is hoarded for an indefinite period, and is therefore withdrawn from circulation.

so far as it is based on a deposit of metallic money it may be looked on as a means of increasing the efficiency of money, and therefore as coming within the formula given above. In its other aspects it lies outside the range of this article. Some interesting conclusions may be deduced from the results we have arrived at. One of these is that the "increased development of trade," or "expansion of commerce," of itself tends to lower not to raise prices; for, by increasing the work which money has to do while the amount remains the same, it raises its value.⁴ Another consequence is that a large addition may be made to the money in a country without any effect being produced on prices. This is evident, since money only acts on prices by being brought into circulation; therefore, if the money which is added to the national stock is not used in this way, prices will remain unaffected.

We have now sufficiently considered the proximate conditions which determine the value of money; the next step is to inquire: What is the ultimate regulator of its value? The value of freely-produced commodities is—according to the ordinary theory of economists—determined by their "cost of production," or, where the article is produced at different costs, by the cost of production of the most costly portion. We have now to consider how far this theory applies to the special case of money. Gold and silver, the principal materials of money, are the products of mines, and are produced at different costs; therefore the cost of the part produced at greatest cost ought to determine their value. This theory is, however, true only under certain conditions—namely, that competition is perfectly free, and that there are accurate data for computing the cost of production, and even then it is true only "in the long run."⁵ Moreover, cost only operates on value by affecting supply. "The latent influence," says Mill,⁶ "by which the values of things are made to conform in the long run to the cost of production is the variation that would otherwise take place in the supply of the commodity." From these considerations it follows that cost of production does not so influentially affect the value of money as some writers have supposed. In former periods it was a common proceeding on the part of the state to either restrict or stimulate coinage and mining for the precious metals. At all times the working of gold and silver mines has been rather a hazardous speculation than a legitimate business. "When any person undertakes to work a new mine in Peru," says Adam Smith,⁶ "he is universally looked upon as a man destined to bankruptcy and ruin, and is upon that account shunned and avoided by everybody. Mining, it seems, is considered there in the same light as here, as a lottery, in which the prizes do not compensate the blanks;" and all subsequent experience confirms this view. With regard to the adjustment of supply to meet an altered cost of production, the difficulties are, if possible, still greater. The supply of money is so large compared with the annual production, that any change can operate but slowly on its value. The total stoppage of fresh supplies from the mines would not be felt for some years in the increased value; and an increased amount of production, though more rapid in its operation, takes some time to produce an effect. "Hence the effects of all changes in the conditions of production of the precious metals are at first, and continue to be for many years, questions of quantity only, with little reference to cost of production."⁷ On these grounds it is apparent that cost of production is not, for short periods, the controlling force which governs the value of money, and even for long

⁴ This view, which seems to most persons a paradox, is well put by Adam Smith, *Wealth of Nations*, p. 81 (ed. M'Culloch); also by J. E. Cairnes, *Essays on Political Economy*, p. 4.

⁵ *Prin.*, B. iii. ch. 3, § 2.

⁶ *Wealth of Nations*, p. 78 (ed. M'Culloch).