soluble silicate itself is a powerful detergent, and it possesses certain advantages when used with hard waters, so that, taking its cheapness into account, the question whether its introduction into soap is a fraud may be fairly discussed and much said in its defence.

Framing.—The frames into which hard soaps are ladled for cooling and solidification consist of rectangular boxes made of iron plates and bound and clamped together in a way that allows the sides to be removed when required. The solidification is a very gradual process, depending, of course, for its completion on the size of the block; but before cutting into bars it is essential that the whole should be set and hardened through and through, else the cut bars would not hold together. Many ingenious devices for forming bars have been produced; but generally a strong frame is used, across which steel wires are stretched at distances equal to the size of the bars to be made, the blocks being first cut into slabs and then into bars.

Soft Soap.—As already said, soft soaps are made with potash lyes, although in practice a small quantity of soda is also used to give the soap some consistence. There is no separation of underlyes in potash soap, consequently the product contains the whole constituents of the oils used, as the operation of salting out is quite impracticable owing to the double decomposition which results from the action of salt, producing thereby a hard principally soda soap with formation of chloride of potassium. Owing to this circumstance it is impossible to "fit" or in any way purify soft soap, and all impurities which go into the pan of necessity enter into the finished product. The making of soft soap, although thus a much less complex process than hard soap making, is one that demands much skill and experience for its success. From the conditions of the manufacture care must be taken to regulate the amount and strength of the alkali in proportion to the oil used, and the degree of concentration to which the boiling ought to be continued has to be determined with close observation.

Toilet Soaps, &c.—Soaps used in personal ablution in no way differ from the soaps previously alluded to, and may consist of any of the varieties. It is of consequence that they should, as far as possible, be free from excess of alkali and all other salts and foreign ingredients which may have an injurious effect on the skin. The manufacturer of toilet soap generally takes care to present his wares in convenient form and of agreeable appearance and smell; the more weighty duty of having them free from uncombined alkali is in many cases entirely overlooked. Transparent soaps are prepared by dissolving ordinary soap in strong alcohol and distilling off the greater portion of the alcohol till the residue comes to the condition of a thick transparent jelly. This, when cast into forms and allowed to harden and dry slowly, comes out as transparent soap. A class of transparent soap may also be made by the cold process, with the use of cocoa-nut oil, castor oil, and sugar. It generally contains a large amount of uncombined alkali, and that, with its unpleasant odour of cocoa-nut oil, makes it a most undesirable soap for personal use. Toilet soaps of common quality are perfumed by simple melting and stirring into the mass some cheap odorous body that is not affected by alkalis under the influence of heat. The finer soaps are perfumed by the cold method; the soap is shaved down to thin slices, and the essential oil kneaded into and mixed with it by special machinery, after which it is formed into cakes by pressure in suitable moulds.

Glycerin soap ordinarily consists of about equal parts of pure hard soap and glycerin (the latter valuable for its emollient properties). The soap is melted by heat, the glycerin is stirred in, and the mixture strained and poured into forms, in which it hardens but slowly into a transparent mass. With excess of glycerin a fluid soap is formed, soap being soluble in that body, and such fluid soap has only feeble lathering properties. Soap containing small proportions of glycerin, on the other hand, forms a very tenacious lather, and when soap bubbles of an enduring character are desired glycerin is added to the solution. Soaps are also prepared in which large proportions of fine sharp sand, or of powdered pumice, are incorporated, and these substances, by their abrading action, powerfully assist the detergent influence of the soap on hands much begrimed by manufacturing operations.[1]

Medicated soaps contain certain substances which exercise a specific influence on the skin. A few medicated soaps are prepared for internal use, among which are croton soap and jalap soap, both gentler cathartics than the uncompounded medicinal principles. Medicated soaps for external use are only employed in cases of skin ailments and as prophylactic washes. Among the principal varieties are those which contain carbolic acid, petroleum, borax, camphor, chlorine, iodine, mercurial salts, sulphur, and tannin. Arsenical soap is very much employed by taxidermists for the preservation of the skins of birds and mammals. It consists of a mixture of white arsenic, hard soap, and slaked lime, say 4 oz. of each, with 12 oz. of carbonate of potash, the whole being made into a stiff paste with water.

The following table indicates the average composition of several commercial soaps:—

	Water.	Fatty Acid.	Soda. Combined.	Soda. Free.	Potash.	Soluble Silica.	Glycerin.	Other Salts.	Loss.
Tallow soap	28·8	58·0	6·8	1·6	...	..	..	2·3	·25
Marseilles soap, mottled	10·15	76·0	8·65	0·25	...	..	..	4·95	
Palm-oil soap	35·4	49·9	7·0	1·0	...	..	..	1·1	5·6
Yellow soap	22·23	62·95[2]	8·03	..	...	..	..	6·79	
Cocoa-nut oil soap	58·74	32·82	4·26	1·50	...	..	..	2·26	0·42
Silicate soap	50·4	5·2	10·7	..	...	33·4	..	..	..
Soft soap	43·3	41·9	..	..	10·2	..	4·6	..	..

Soap Analysis.—Here it will be sufficient to mention a few tests which can be executed without special chemical knowledge. To determine the water in a soap—a most important question—a few thin slices are weighed and dried in a stove at 105°C. so long as loss of weight continues. The loss of weight is the measure of uncombined water in the sample. Added salts, such as alkaline silicates, sulphates, &c. and insoluble earthy admixtures are detected by boiling a sample with alcohol, in which only the soap proper dissolves. The residue is collected in a filter, washed with hot alcohol, and weighed. An excessive proportion of surplus alkali can be detected by dissolving the soap in hot water and adding a sufficiency of saturated solution of common salt to salt it out. The alkali remains in solution and can be determined by the amount of a standard acid solution it neutralizes.

Commerce.—Marseilles has long been recognized as the most important centre of the soap trade, a position that city originally achieved through its ready command of the supplies of olive oil. The city is still very favourably situated for obtaining supplies of oils both local and foreign, including sesame, ground nut, castor oil, &c. In England the soap trade did not exist till the 16th century. In the reign of Charles I. a monopoly of soap-making was farmed to a corporation of soap-boilers in London,—a proceeding which led to serious complications. From 1712 to 1853 an excise duty ranging from 1d. to 3d. was levied on soap made in the United Kingdom, and that heavy impost (equal when 3d. to more than 100 per cent.) greatly impeded the development of the industry. In 1793, when the excise duty was 2¼d. on hard and 1¾d. on soft soap, the revenue yielded was a little over £400,000; in 1815 it was almost £750,000; in 1835, when the duty was levied at 1¼d. and 1d. respectively (and when a drawback was allowed for soap used in manufactures), the revenue was almost £1,000,000; and in 1852, the last year in which the duty was levied, it amounted to £1,126,046, with a drawback on exportation amounting to £271,000. What the manufacture has risen to since that time there is no accurate way of estimating. (W. D.—J. PA.)

SOAP BARK. A vegetable principle known as "saponin," and chemically analogous to the arabin of soluble gums and to mucilage, forms with water a lather, and is on that account available as a substitute for soap. Saponin is obtainable from soap nuts, the fruit of a tree, *Saponaria officinalis* and allied species; but its most important source is the Quillai bark of Chili yielded by a large tree, *Quillaja saponaria*. The inner bark of the tree, reduced to powder, is employed in Chili as a substitute for soap.

SOBIESKI, JOHN, king of Poland. See JOHN III., vol. xiii. p. 714, and POLAND, vol. xix. p. 295.

SOCAGE is a form of tenure. Bracton, Britton, and other old writers derived the word from the French *soc*, "a ploughshare." Modern etymologists, however, prefer to derive it from the Old English *soc*, "a franchise" or "privilege," or the land over which such franchise or privilege was exercised. Socage differs from knight service in being agricultural rather than military in its nature, and from frankalmoign in being based on temporal rather than spiritual services. It is either free or villein. Free socage *in capite* was abolished by 12 Car. II. c. 24. That form of free socage called common socage is the ordinary modern freehold tenure. Varieties of it are burgage, gavelkind, and petit serjeanty. Scutage, while it existed, was another variety. The only representative of villein socage is the comparatively rare tenure of ancient demesne confined to manors, described in Domesday Book as *terræ regis*. Socage tenure is said to have formerly existed in Scotland. The descent of socage lands in Scotland seems to have been to all the sons equally, as was originally the case in England. (See BURGAGE, GAVELKIND, REAL ESTATE, SCUTAGE.)

[1] "Soap powders" and "soap extracts" are simply preparations of alkalis.

[2] Including resin acids.

SOCIALISM

Origin of name.

THE word "socialism" is of comparatively recent origin, having been coined in England in 1835. In that year a society which received the grandiloquent name of the "Association of all Classes of all Nations" was founded under the auspices of Robert Owen; and the words "socialist" and "socialism" were first used during the discussions which arose in connexion with it. As Owen and his school had no esteem for the political reform of the time, and laid all emphasis on the necessity of social improvement and reconstruction, it is obvious how the name came to be recognized as suitable and distinctive. The term was borrowed from England by a distinguished French writer, Reybaud, in his well-known work the *Reformateurs modernes* (1839), in which he discussed the theories of Saint-Simon, Fourier, and Owen. Through Reybaud it soon gained wide currency on the Continent, and is now the accepted world-historic name for one of the most remarkable movements of the 19th century.

The name was thus first applied in England to Owen's theory of social reconstruction, and in France to those also of Saint-Simon and Fourier. The best usage has always connected it with the views of these men and the cognate opinions which have since appeared. The word, however, is used with a great variety of meaning not only in popular speech and by politicians but even by economists and learned critics of socialism. The general tendency is to regard as socialistic any interference with property undertaken by society on behalf of the poor, the limitation of the principle of *laissez-faire* in favour of the suffering classes, radical social reform which disturbs the present system of private property as regulated by free competition. It is probable enough that the word will be permanently used to express the tendency indicated in these phrases, as a general name for the strong reaction that has now set in against the overstrained individualism and one-sided freedom which date from the latter half of the 18th century. The application is neither precise nor accurate; but it is use and wont that determine the meaning of words, and this seems to be the tendency of use and wont.

Even economic writers differ greatly in the meaning they attach to the word. The great German economist Roscher defines it as including "those tendencies which demand a greater regard for the common weal than consists with human nature." Adolf Held says that "we may define as socialistic every tendency which demands the subordination of the individual will to the community." Janet more precisely defines it as follows:—"We call socialism every doctrine which teaches that the state has a right to correct the inequality of wealth which exists among men and to legally establish the balance by taking from those who have too much in order to give to those who have not enough, and that in a permanent manner, and not in such and such a particular case,—a famine, for instance, a public calamity, &c." Laveleye explains it thus: "In the first place every socialistic doctrine aims at introducing greater equality in social conditions, and in the second place at realizing those reforms by the law or the state." Von Scheel simply defines it as the "economic philosophy of the suffering classes." Of all these definitions it can only be said that they more or less faithfully reflect current opinion as to the nature of socialism. They are either too vague or they are misleading, and they quite fail to bring out the clear and strongly marked characteristics that distinguish the phenomena to which the name of socialism is properly applied. To say that socialism exacts a greater regard for the common weal than is compatible with human nature is to pass sentence on the movement, not to define it. In all ages of the world, and under all forms and tendencies of government and of social evolution, the will of the individual has been subordinated to the will of society, often unduly so. It is also most misleading to speak as if socialism must proceed from the state as we know it. The early socialism proceeded from private effort and experiment. A great deal of the most notorious socialism of the present day aims not only at subverting the existing state in every form but all the existing political and social institutions. The most powerful and most philosophic, that of Karl Marx, aimed at superseding the existing governments by a vast international combination of the workers of all nations, without distinction of creed, colour, or nationality.

Still more objectionable, however, is the tendency not unfrequently shown to identify socialism with a violent and lawless revolutionary spirit. As sometimes used, "socialism" means nothing more nor less than the most modern form of the revolutionary spirit with a suggestion of anarchy and dynamite. This is to confound the essence of the movement with an accidental feature more or less common to all great innovations. Every new thing of any moment, whether good or evil, has its revolutionary stage in which it disturbs and upsets the accepted beliefs and institutions. The Protestant Reformation was for more than a century and a half the occasion of national and international trouble and bloodshed. The suppression of American slavery could not be effected without a tremendous civil war. There was a time when the opinions comprehended under the name of "liberalism" had to fight to the death for toleration; and representative government was at one time a revolutionary innovation. The fact that a movement is revolutionary generally implies only that it is new, that it is disposed to exert itself by strong methods, and is calculated to make great changes. It is an unhappy feature of most great changes that they have been attended with the exercise of force, but that is because the powers in possession have generally attempted to suppress them by the exercise of force.

In point of fact socialism is one of the most elastic and protean phenomena of history, varying according to the time and circumstances in which it appears and with the character and opinions and institutions of the people who adopt it. Such a movement cannot be condemned or approved *en bloc*. Most of the current formulæ to which it has been referred for praise or censure are totally erroneous and misleading. Yet in the midst of the various theories that go by the name of "socialism" there is a kernel of principle that is common to them all. That principle is of an economic nature, and is most clear and precise. The central aim of socialism is to terminate the divorce of the workers from the natural sources of subsistence and of culture. The socialist theory is based on the historical assertion that the course of social evolution for centuries has gradually been to exclude the producing classes from the possession of land and capital and to establish a new subjection, the subjection of workers, who have nothing to depend on but precarious wage-labour. The socialists maintain that the present system (in which land and capital are the property of private individuals freely struggling for increase of wealth) leads inevitably to social and

[1] The aim of the present article is essentially to give a history and exposition of socialism in its leading phases and principles. The point of view is objective,—to explain what socialism has been and is. A controversial or critical article on the many vexed questions suggested by the subject would have been inconsistent with the plan of this work.