come into the story. What, then, is left for it ? A collection of anec­dotes and a series of episodes. In point of fact this is the view actually taken by Socrates. His utter want of care and consistency appears most clearly in his vacillation as to the relations between ecclesiastical and political history. At one time he brings in politics, at another he excuses himself from doing so. He has not failed to observe that church and state act and react upon each other ; but he has no notion how the relation ought to be conceived. Nevertheless his whole narrative follows the thread of political—that is to say, of imperial—history. This indeed is characteristic of his Byzantine Christian point of view ; church history becomes metamorphosed into a history of the emperors and of the state, because a special church history is at bottom impossible. But even so one hardly hears anything about state or court except great enterprises and anecdotes. Political insight is wholly wanting to Socrates ; all the orthodox emperors blaze forth in a uniform light of dazzling splendour ; even the miserable Arcadius is praised, and Theodosius II. figures as a saint whose exemplary piety turned the capital into a church. If in addition to all this we bear in mind that in his later books the historian’s horizon is confined to the city and patriarchate of Constantinople, that he was exceedingly ill informed on all that related to Rome and the West, that in order to fill out his pages he has introduced narratives of the most unimportant description, that in not a few instances he has evinced his credulity (although when compared with the majority of his contemporaries he is still entitled to be called critical), it becomes sufficiently clear that his *History,* viewed as a whole and as a literary production, can at best take only a secondary place. One great excellence, however, cannot be denied him, his honest and sincere desire to be impartial. He tried also, as far as he could, to distinguish between the certain, the probable, the doubtful, and the untrue. He made no pretence to be a searcher of hearts and frequently declines to analyse motives. He has made frank confession of his nescience, and in certain passages his critical judgment and sober sense and circumspection are quite striking. He writes a plain and unadorned style and shuns super­fluous words. Occasionally even there are touches of good humour and of trenchant satire,—always the sign of an honest writer. In short, the rule to be applied in the criticism of Socrates is that his learning and knowledge can be trusted only a little but his good­will and straightforwardness a great deal. Considering the circum­stances under which he wrote and the miseries of the time, it can only be matter for congratulation that such a man should have become our informant and that his work has been preserved to us.

Finally, it is to be noted that Socrates was either himself origin­ally a Novatianist who had afterwards joined the Catholic Church, or that whether through his ancestors or by education he had stood in most intimate relations with the Novatianist Church. In his *History* he betrays great sympathy with that body, has gone with exactness into its history in Constantinople and Phrygia, and is indebted for much of the material of his work to Novatianist tradi­tion and to his intercourse with prominent members of the sect. Both directly and indirectly he has declared that Novatianists and Catholics are brothers, that as such they ought to seek the closest relations with one another, and that the former ought to enjoy all the privileges of the latter. His efforts, however, had only this result, that he himself afterwards fell under suspicion of Nova- tianism. For bibliography, see Sozomen. (A. HA.)

SODIUM and SODA. Sodium is one of the two prin­cipal alkali metals, regarding the general properties of which the reader is referred to Chemistry (vol. v. p. 524) and the introductory portion of Potassium (vol. xix. p. 588). In combination sodium is a generally diffused and most abundant element. The salt dissolved in sea water consists chiefly of chloride of sodium (NaCl), and according to Dittmar’s calculation (see Sea Water) the oceans of the world contain of sodium calculated as chloride not less than 36,000 × 1012 (*i.e*., 36,000 million million) tons, whilst of potassium calculated as sulphate the amount in sea water is 1141 × 1012 (1141 million million) tons. From sea water have been deposited the enormous beds of rock salt found in many parts of the world (see Salt). Sodium carbonates are also widely dispersed in nature, forming constituents of many mineral waters, and occurring as principal saline components in natron or trona lakes, as efflorescences in Lower Egypt, Persia, and China, and as urao in Mexico, Colombia, and Venezuela. The solid crusts found at the bottom of the salt lakes of the Araxes plain in Armenia contain about 16 per cent. of carbonate and 80 of sulphate of soda. In New Granada there occurs a double salt, Na2CO3 + CaCO3 + 5H2O, known as gay-lussite. In Wyoming, California, and Nevada enormous deposits of

carbonates, mixed in some cases with sulphate and with chloride, occur. About Szegedin in Hungary and all over the vast pusztas (steppes) between the Theiss and the Danube, and from the Theiss up to and beyond Debreczin, the soil contains sodium carbonate, which frequently assumes the form of crude alkaline crusts, called “szekso,” and of small saline ponds. A purified specimen of such Debreczin soda was found to contain as much as 90 per cent. of real carbonate (NaCO3) and 4 of common salt. Natural sulphate occurs in an anhydrous condition as thenardite (Na2SO4) at Tarapaca, Peru, and in the rock- salt deposits at Espartinas near Aranjuez, Spain. Hy­drated sulphates occur at several localities in the pro­vince of Madrid and in other provinces of Spain, and at Mühlingen in Aargau, and copious deposits of glauberite, the double sulphate of sodium and calcium, are met with in the salt-mines of Villarrubia in Spain, at Stassfurt, and in the province of Tarapaca, Peru, &c. A native nitrate of soda is obtained in great abundance in the district of Atacama and the province of Tarapaca, and is imported into Europe in enormous quantities as cubical nitre for the preparation of saltpetre (see Nitrogen, vol. xvii. p. 518). Cryolite, a fluoride of aluminium and sodium, AlF3 + 3NaF, is extensively mined in Greenland for industrial purposes. These form the principal natural sources of sodium com­pounds,—the chloride as rock salt and in sea water being of such predominating importance as quite to outweigh all the others. But it is questionable whether taken al­together the mass of sodium they represent is as much as that disseminated throughout the rocky crust in the form of soda felspar (*i.e*., as silicate of soda) and in other soda- containing rocks. From this source all soils contain small proportions of sodium in soluble forms, hence the ashes of plants, although they preferably imbibe potassium salts, contain traces and sometimes notable quantities of sodium salts. Sodium salts also form essential ingredients in all animal juices.

Considered industrially, by far the most important bodies are the carbonates, the sulphates, and caustic soda (sodium hydrate), the manufacture of which forms the basis of the soda industry. Immense quantities of these bodies are used in the manufacture of soap and glass, and under the name of “ washing soda” or “ soda crystals ” the consumption of the hydrated carbonate for domestic washing is also very great. There are indeed few chemical industries in which soda in one form or another does not play an important part, and the combinations of economic value into which it enters are numberless. It will be convenient to treat of the manufacture as a whole by itself, after speaking of sodium and its salts in their chemical relations.

*Sodium,* in German *Natrium* (symbol, Na; atomic weight, 23·053 ; O = 16), is a univalent metal. It occurs nowhere in nature in an uncombined condition, and was first isolated in 1807 by Sir Humphrey Davy through the medium of voltaic electricity. It is prepared by distillation of an intimate mixture of carbonate of soda with charcoal. The process is quite analogous to that followed in making metallic potassium (Potassium, vol. xix. p. 590), but much easier of execution, and free from certain dangers which attend the preparation of the other. The distillation is con­ducted in cylindrical iron retorts protected against the fire by means of fireclay tubes fitting closely round them. In the charge is included a certain proportion of chalk, which, giving off carbonic acid, aids in driving over the metallic vapour and protects the distillate against oxidation. The metal cast into the form of cakes or ingots is protected from the air by a coating of paraffin and secured in closely fitting soldered-up tinned-iron boxes. Metallic sodium is very similar in properties and appearance to potassium. The principal points of difference are its pure white colour,