of a people. Although this connection is not that 'harmony' from which conclusions have been made from the development in one region upon a similar development in another, it exists, influenced by numerous conditions, — climate, nature of the land, mental development, intercourse with adjacent countries, etc., — and it is necessary to convey the idea of such a connection in a museum, the object of which is to throw light upon the origin of a certain stage of civilization. Groups of objects, severed from their ethnic environment, may be valuable for the study of industry and technology, but an ethnographical museum cannot be arranged in this way, as objects belonging together from an ethnographical point of view are separated, while others of entirely different origin are united in one group. The other system of arranging museums is the ethnographical one. The system according to which all objects belonging to one tribe are placed together, and the single tribes are joined to ethnic groups according to their affinity, is so simple and natural in itself, that it has been generally accepted. It is a long time since ethnologists have ceased to invent more or less valueless systems of mankind which played an important part in the early history of ethnography. The attempt is being made to construct, by the use of strict inductive methods, the science of ethnology on the foundation of careful researches on single tribes and nations; and not until this has been done will problems of the mutual relation of tribes be taken up. In this way the foundation is laid for researches on the history of civilization. There is no lack of theories on the material and intellectual development of man, on the progress and decline of primitive nations; but here, also, the only way to reach satisfactory results is the inductive method; here also, a vast number of researches is necessary, before it is possible to gain that general point of view which is the ultimate aim of ethnology. In consideration of these facts, the ethnological arrangement is the only one fit for a museum. It does not give a solution of great problems, it does not give results of doubtful value, but it gives, what must be asked by the descriptive treatment of ethnography, the material arranged in such a way that it may be as easily accessible to students as possible. It is only in this way that the museum is able to illustrate the different states of civilization which occur in a single tribe, and, as the principal groups of nations are kept together, it shows the peculiar development in each group. All museums of any importance have adopted the ethnographic principle in laying out their plans, but not all have been equally successful in carrying their plans out. There are collections in which incidental arrangements disturb the general plan, and they show that the utmost consistency in adhering to the plan is necessary, else the museum will become a mere store-room." Dr. Bahnson further says, that, in carrying out such a plan in a large museum, the ethnological collections of each tribe must be subdivided according to sociological principles. These statements and views of the author are of great weight, as they are based on the study of a great number of collections and of a vast material. He shows plainly that there is no foundation to the alleged impossibility of arranging ethnological collections on an ethnological plan, and his idea that such a museum is the only one that can serve for the study of the history of civilization is undoubtedly correct.

THE BASQUES. — Chamberlain's view in regard to the connection between the Basques and Americans is in part founded on the alleged similar character of their languages. Many grammatical forms of the Basque consist of a combination of mutilated elements, and it was believed that this process was similar to the synthesis of American languages. Recent researches do not confirm this view. W. J. van Eys, one of the most learned Basque scholars, considers such combinations or contractions as similar to those occurring frequently in the vulgar dialects of Romanic and Teutonic languages. He mentions the Dutch *hy't'm*, which stands for *hebt gy het hem*. Our 'ain't ye' for 'are you not,' and others, belong to the same class. He ascribes the occurrence of such contractions in literary Basque to the late date at which the literature of this people developed. Gerland, who gives a very clear sketch of the Basque language and its relation to the ancient Iberian in 'Gröber's Grundriss der romanischen Philologie,' expresses the same opinion, and thus far-reaching conclusions on the connection between Americans and Basques must fall to the ground.

HEALTH MATTERS.

Cholera and Cold Weather.

IN a recent editorial in the *New York Medical Record* the statement was made that "cholera is always stopped by cold weather, and an epidemic here now would be impossible." In a letter to the editor of that journal, Dr. Reginald H. Sayre of New York takes exception to the statement, and quotes a number of instances to show that cholera is one of those scourges whose march is not stopped by heat or cold, high or low altitude, dryness or dampness, or any other condition of the weather. He says, —

"In 1830 the cholera appeared in Moscow in the month of October, and continued its ravages until the end of December, in spite of the severities of a Russian winter, and caused the death of 8,130 persons out of a population of 250,000, or about 1 in 30. From Moscow it went north to Yarasy, thence to Rybinsk, sixty leagues north of Moscow, where it appeared on March 19, 1831, in spite of the ice and snow which covered the ground.

"In October, 1831, the cholera appeared in Great Britain, and continued there until March, 1832, doing most of its destruction in December. About one-third of the people affected died.

"On the 27th of March, 1832, the disease appeared in Paris, and the mortality was so frightful that 861 people died in ten days.

"In 1848 the emigrant ship 'New York' left Havre on the 9th of November, having no sickness on board, and no cholera being then in Havre. During the voyage the weather became bitterly cold. There were some German emigrants on board, from a town where cholera had prevailed, who had a trunk which had belonged to a man who had died of cholera. They opened the trunk, took out the clothing, and wore it. On Nov. 22 a child died of cholera, and seven persons in all succumbed to it before reaching New York harbor. They were strictly quarantined, and the disease limited to those who died on Staten Island in the quarantine.

"About this same time another vessel from Havre, bound for New Orleans, developed the cholera on the twenty-seventh day out, and, owing to imperfect quarantine regulations, the disease spread rapidly through the town soon after the arrival of the vessel, there being then no other cases in the United States except those in the quarantine on Staten Island. From New Orleans the disease travelled to Memphis, appearing there toward the end of December, and at St. Louis in the first week of January, 1849. Toward March several places in the Upper Mississippi valley were affected, and then gradually the disease moved east through Chicago, which it reached in May, to New York, which became infected then, *and not till then*, although the disease had been imported to the city six months previously, but had not been allowed to land; and the city in this way kept free from infection until the cholera effected a flank movement, by way of New Orleans, and attacked her in the rear, having made its progress in spite of the winter, and having attacked the cities through which it passed in the cold weather.

"These facts in regard to the prevalence of cholera in spite of cold, and the well-known futility of a quarantine on land, make any attempt to lull the medical profession into a false sense of security fraught with great danger to the country, and I have therefore wished to call attention to the fact that cholera is *not* stopped by cold, and that to be quarantined effectively it must be arrested in our ports, which can only be done by having a general quarantine under the direction of the Federal Government."

In answer to this, the editor of the *Record* says that cholera has never prevailed in New York City in the winter-time, and rarely in any northern latitude save under very peculiar and exceptional circumstances. In support of this view, he quotes from Ernst's 'Reference Handbook of the Medical Sciences,' which states that "the progress of an epidemic is invariably arrested by cold, the winter season having always stopped those of which we have any record." He further says that cholera has frequently been imported into warm New Orleans in the winter-time, notably in 1873, when it commenced in February. But it did not winter over that year, or notably any other year. But constant importations into New Orleans almost every month of the year during the California gold-fever times sent much cholera to St. Louis and Chicago, and other Western places, almost every month in the year; so that it seemed to winter over, but, in fact, was kept alive by almost incessant new importations. The effect of cold on the further spread of cholera,

and upon the vitality of its germs, is a matter of deep moment at the present time, and we shall be glad to receive any information from our readers which will throw light upon the subject.

SEWER-GAS. — In an editorial on the subject of the air of sewers, the *New York Medical Journal* refers to the fact that some authorities do not regard sewer-air as of itself usually deleterious, while others attribute to it cases of sickness which have from time to time been reported, and asks how this apparent discrepancy is to be accounted for. Sewer-air is regarded by some sanitarians as dangerous only when it contains the germs of specific diseases; but the many instances in which it has seemed to be the sole cause of persistent sore throats, headaches, and diarrhœal troubles without the development of any well-defined disease would seem to militate against this view. Dr. Playfair reports a case in the *Lancet* in which serious symptoms were developed in a puerperal woman, which were undoubtedly due to exposure to foul air from the house-drains. In the Proceedings of the Royal Society is a paper on this subject by Professor Carnelly and J. S. Haldane, M.B., in which it is shown that the air of large and well-ventilated sewers is comparatively free from noxious gases, and contains proportionately fewer micro-organisms than the outer air of the same locality. These observers also found that most of the micro-organisms found in the sewer-air were drawn in from the outer air, and not developed in the sewer; that micro-organisms tend to settle instead of remaining in the air; and that, when bubbles of sewage burst, a number of micro-organisms are set free into the air. The editor of the *New York Medical Journal* states that it has been noticed that illness traced to defective drainage is more frequent in houses where there are holes in the pipes, open joints, or unused fixtures, than where there is simply an absence of traps under fixtures in constant use. Holes in vertical or branch pipes, and open joints, will often be found covered about the edge with slime deposited from fluids that have spurted through the holes during their passage. The outer border of this deposit is often dry and crumbling, and from that point to the edge of the opening will be found all degrees of moisture. He asks whether it may not be that such deposits around holes and lining dry unused pipes are the real breeding-places of the micro-organisms believed to be productive of so much sickness in houses, every outward current of air passing into the room being loaded with them. He calls attention to what is undoubtedly the fact, that pathogenic micro-organisms may produce their injurious results by being swallowed, as well as inhaled, and that the immunity of sewer-men, scavengers, and plumbers may be due to tobacco-chewing, and the ejection of the buccal fluids instead of their deglutition. The value of bacteriological science was well illustrated recently in the recognition of the cholera microbe, the comma bacillus or cholera spirillum, in cultures obtained from the excreta of cases at the quarantine of New York, which were suspected to be cholera. Such cultures were made by Drs. Biggs, Prudden, Kinyoun, Armstrong, and Weeks, and the microbe was discovered by each one of these investigators, thus determining absolutely the nature of the disease. In a paper on the diagnostic value of the cholera spirillum, read before the Society of Bellevue Hospital Alumni, Dr. Biggs gives a history of his experiments, and states that this is, he believes, the first case in this country where a diagnosis of Asiatic cholera has been based upon biological examinations.

HEALTH OF SCHOOL-CHILDREN. — The following recommendations have been made by the State Board of Health of New York, and will doubtless be brought before the Legislature at its next session: I. That its organic law be so amended as to authorize its executive officer, where an emergency arises and the local board of health of the town or village in which the emergency occurs has not organized and appointed a health-officer, to appoint a physician as acting health-officer at the expense of the town or village concerned, who shall, until such time as a board of health for said place has been organized, as provided for in Chapter 270, Laws of 1885, have and exercise, under the direction of the secretary of the State Board of Health, all the powers and duties of a board of health regularly appointed. II. That the following requirements be embodied in a law as essential to the sanitary welfare of the school-children of the State: (*a*) Building should rest on a good dry foundation, and be constructed to insure the comfort of children during inclement weather; (*b*) Class-rooms should be arranged so as to admit light from left side and back of pupils, and the area of windows should be one-fourth of floor-space; (*c*) Not less than 250 cubic feet of air-space should be allowed per pupil, and provision for changing air should be made, so as to secure each pupil not less than thirty cubic feet of fresh air per minute; (*d*) The temperature of the school-rooms should in winter be maintained at a range not to exceed from 68° F. to 70° F.; (*e*) Closets should be provided for each sex, entirely separate from each other, and having entirely separate means of access; when situated outside the building, they should be about fifty feet distant, and should be connected with it by a covered walk; privy-vaults should be utterly abolished; movable boxes or buckets should be placed under the seats, and earth or ashes provided as a deodorant; buckets should be cleaned out at least once a week; (*f*) In addition to his other powers over schools, the superintendent of public instruction should have authority to oblige school-trustees to make improvements or repairs in school-buildings for sanitary purposes, whenever the local board of health considers such necessary, and their judgment is supported by that of the State Board of Health.

YELLOW-FEVER AT TAMPA. — During the week ending Nov. 2, there were at Tampa, Fla., 74 cases of yellow-fever, with 9 deaths. The total number of cases during the epidemic is approximately 325, of which 48 have proved fatal. On the 3d instant there were three new cases and 2 deaths. The quarantine inspector telegraphs that he thinks the epidemic is rapidly subsiding. Two cases, one of which died, occurred three weeks ago at Many Lakes, Fla., but there has been no spread of the disease. At Manatee, having a population of 300, it is reported that there are 16 cases of yellow-fever, and that there have been 3 deaths from that disease.

OLD OBSERVATIONS ON HYDROPHOBIA. — In a letter to the *Boston Medical and Surgical Journal*, Dr. Goodale of the Botanic Garden of Harvard University says, "In the course of my reading, I have chanced upon the following passage, which may prove of some interest to your readers. It is taken from 'Observations on Hydrophobia,' by James Thacher, M.D., Plymouth, Mass., 1812. It seems as if Dr. Thacher's project was in a fair way of being carried into successful execution, after a lapse of more than seventy years. From p. 300 of the work cited above, the Italics standing as in the original: 'Experiments made upon the canine poison in brutes, might be considered as an arduous and hazardous undertaking, but it is not to be deemed altogether impracticable and I will suggest the following project for the purpose. In the first place, dogs when affected with madness, instead of being killed, should be confined and secured that the disease may run its course, and for the ascertainment of many useful facts connected with its several stages. If experiments on dogs should be deemed too hazardous, let other animals of little value be selected, provided a sufficient number can be procured. Having provided for their security in some proper enclosure, let them be inoculated with the saliva of the mad dog, by the point of the lancet, which would undoubtedly prove as effectual as the dog's teeth. The animals thus infected, are to be the subjects of various experiments and the most attentive observation. With some, the inoculated part might be cut out at different stages, to ascertain the latest period in which it may be done successfully. To others, various counter-poisons and specific remedies might be applied to the wound and administered internally. In fact, it would be difficult to determine, *à priori*, the extent of the advantages of this novel plan, if judiciously conducted. You may smile at my project, but however chimerical and visionary it may appear, I would rejoice to be the *Jenner* of the proposed institution; though I might fail in realizing my thousands, I could pride myself in being the candidate for the honor, and the author of an attempt to mitigate the horrors attending one of the greatest of all human calamities.'" It will be seen from this that Dr. Thacher anticipated Pasteur by many years.

IN *Science* of last week, first column, 4th line from bottom, '1886' should read '1885;' same column, 6th line from bottom, '1885' should read '1886.'