gruity, as when one has heard bad news. If the incongruity is permanent, because of lack of ability to give the ideas an orderly arrangement, their educative value is at least doubtful.

Attention is determined by past and present states of consciousness. In childhood, these states of consciousness are largely racial and social, and continued attention can be secured only by creating educational situations in which the school consciousness loses its identity in the racial and social consciousness.

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THE CHEMISTS' CLUB[1]

I HAD the honor, I believe, of presiding over the first meeting of the New York Section of the American Chemical Society held in the Assembly Hall of what subsequently became the quarters of the Chemists' Club, and I feel honored in being invited to address the last meeting held in those quarters. At that first meeting expression was given to hopes which to some, at that time, seemed extravagant, but which have now been splendidly realized.

It will not be out of place nor without interest, I am sure, to briefly recall some of the facts and influences which led to the ultimate organization of the Chemists' Club—a club which has, for more than a decade, had such a potent influence in centralizing the interests of the chemists of New York and the vicinity, and has furnished a home for these chemists and their several societies and associations.

At the meeting of the American Association for the Advancement of Science, held in Boston in 1898, the question of the disposal of the books and other material constituting the library of the association was discussed. It was decided to consign this material to the University of Cincinnati. In the meeting of the council of the American Chemical Society held at about the same time and in the same place, inquiry was made concerning the location and condition of the books and material constituting the library of the American Chemical Society. After the closing of the old university building on Washington Square, which had housed the library for several years, all of the material had been packed in boxes and placed in fire-proof storage, where it was entirely inaccessible for consultation and use. On my return trip to New York after the close of that meeting I was accompanied by Dr. Charles F. McKenna. Our conversation naturally turned upon the material constituting the library of the society, regarding the disposition of which no decision has been made. This library was known to contain much valuable chemical material not otherwise available in this country, and it was evident that its removal from the city would be a misfortune to the local chemists. In the course of our conversation, Dr. McKenna suggested that, with the retention of the library in this city as an incentive, it should be possible to arouse sufficient interest in the matter of organizing a chemists' club to make such an enterprise an established fact.

In the year or two preceding, Professor A. A. Breneman had endeavored to arouse interest in such a project, but with no special end in view, such as the retention of the library, the effort proved ineffectual. The results were, nevertheless, influential in promoting the ultimate organization of the club as we know it.

Soon after our return from Boston, Dr. McKenna called me by telephone to tell me he believed that the inexpensive but

[1] Address before the New York Section of the American Chemical Society on March 10.

commodious quarters (which we had agreed were essential to the project) were available in the recently vacated rooms of the Mendelssohn Club at 108 West 55th Street. Upon his invitation I joined him in an inspection of the premises. We were so favorably impressed that we concluded it would be eminently advisable to call a meeting of the members of the New York Section of the Chemical Society and of other chemists in the city, for informal discussion of the desirability and practicability of establishing and maintaining such an organization of chemists as should lease and occupy the quarters referred to, the assembly hall of which was even then comfortably filled by the chemists attending the meeting. The expression of opinion was almost unanimous that the project was not only desirable, but practicable as well, and that the quarters were admirably suited to the purposes in question. The reasons were ample—there was a library to be housed and put in shape for practical use, there was need of a place for meetings of the various chemical organizations, and there was a distinct demand for a place to serve as the chemists' headquarters in both a professional and a social way. I was authorized to appoint a committee to report upon ways and means for promptly carrying out this project. I lost no time in appointing as chairman of this committee, Dr. Charles F. Chandler, who, more than any other, held the respect and esteem of the chemists of New York, and about whom these chemists would enthusiastically rally. Dr. Chandler was authorized to complete the committee, the final work of which is well known. And so the project suggested by Dr. McKenna was launched.

That the hopes we all had at that time regarding the enterprise should be so fully realized in such a comparatively short time, and that their realization should have had so important and profitable an influence upon the interests of the chemists and the chemical organizations of New York, few of us dared confidently to expect.

The Chemists' Club was finally organized in November of 1898, the constitution declaring its objects to be "the promotion of good fellowship among its members and the advancement of the science and the applications of chemistry." The quarters already described were leased and furnished and space was assigned for the library. The task of transferring the material, unpacking, classifying and shelving it was begun by Professor A. A. Breneman and finally carried out by Dr. E. G. Love, to whom is really due the credit of bringing the library to its present efficient condition. The labor involved in this work was great and was willingly rendered with no compensation other than that which must come from having so effectively promoted the interests of the chemists and the chemical organizations of both the city and the country.

The first scientific gathering held in the assembly hall of the club was the meeting of the New York Section of the American Chemical Society.

The Chemists' Club is now on the eve of another epoch in its history. While we shall experience some regret in leaving the old quarters which have served us so comfortably for such a long period, it will be with pleasant memories only, and justifiable pride that we remove to the new building of the Chemists' Club, which is a splendid monument to the foresight, judgment and generosity of the club's former president, Dr. Morris Loeb, and the efficiency of the directors of the building company, who have been charged with the financing of the enterprise and the erection of the structure. The club and the affiliated

societies will now have greater facilities than ever before.

Those of us who were associated with the club in its infancy are watching with most intense interest its evolution into maturity. We are expecting great things of the Chemists' Club and I am sure we shall not be disappointed. With its past as a background, with its organization and equipment as a foundation, and with the opportunities before it as inspiration, the auguries for the future are bright indeed.

WM. MCMURTRIE

THE WORK OF THE "MICHAEL SARS" IN THE NORTH ATLANTIC IN 1910[1]

DR. HJORT'S preliminary account of the *Michael Sars* expedition is so important, both to the oceanographer and to the marine biologist, that a résumé is justified, although the final report is yet to come.

The expedition, under the direction of Sir John Murray and Dr. Hjort, left Plymouth in April, ran thence to the west of Ireland, across the Bay of Biscay to Gibraltar, and so to the Canaries. From here the course was a "large section of the Atlantic," visiting the Azores, the Sargasso Sea and eventually Newfoundland, whence a section was undertaken to Ireland. Finally work was carried on south and north of the Wyville Thompson ridge.

Especially instructive are the hydrographic sections of the northwestern Atlantic, the observations on currents in the Straits of Gibraltar and off the Azores, the notes on the smaller plankton, and the data acquired on the bathymetric distribution of the fishes and crustaceans of the intermediate waters.

The sections from the Sargasso Sea to Newfoundland and from Newfoundland to Ireland show that the surface layer of warm water with high salinity (over 35 per m.) is very much thicker on the eastern than on the western side of the Atlantic. Off the Newfoundland bank the uniform "bottom water" with a temperature of about 2.5° C., and salinity of about 34.9 per m., rises close to the surface.

If we compare these observations with data obtained by the *Challenger* and by the *Blake*, with the scattered records made by the *Albatross*, and with the few temperatures I have myself taken in the intermediate waters of the Gulf Stream, we find that they are all in accord on this main point. In the northern portion of the Gulf Stream its warm waters are extremely shallow along its inner edge.

The two sections in question illustrate what to the oceanographer is a most important discovery; viz., an upwelling of the cold bottom water partially dividing the warm surface layer into two bands. Thus on the line Newfoundland-Ireland, the temperature at station 83 at about 275 fathoms is the same as it is at 350 fathoms at stations 81 and 85, east and west of it; *i. e.*, 8° C. (46.4° F.). And the salinity curve shows a similar rise. On the line Sargasso Sea-Newfoundland, the "sunderance" of the warm surface water is much more extreme. Thus at station 66 water of 8° C. (46.4° F.) was found at only about 150 fathoms, and of only 14° C. (57.2° F.) and salinity of 35 per m. within less than 50 fathoms of the surface.

On looking over the *Challenger* temperatures on the line Halifax-Bermuda, taking the actual observations, and not those computed from the "average curve" I was struck by the fact that at station 53, at roughly the same relative position, the temperature at 100 and at 300 fathoms was about the same as it was about 50 fathoms deeper at stations 52 and 54, on either side of it. The variation of only about 1° F. is a very slight one, but taken in conjunction with the observations of the *Michael Sars*, and with the fact that the upward swing of the isotherms lies in the direct continuation of the cold ridge shown by Dr. Hjort in his chart of the conditions at 200 fathoms, it certainly suggests the *possibility* that it was an actual phenomenon in 1873 as it was in 1910, not a faulty observation.

Dr. Hjort suggests that if this remarkable

[1] Johan Hjort, "The 'Michael Sars' North Atlantic Deep-sea Expedition, 1910," *Geographical Journal*, Vol. 37, 1911, pp. 349–377, 500–523.