

(278 ff.). To be sure these terms are usually set off in quotation marks like the pseudonyms of notorious criminals. In many cases it is only fair to interpret them as a shorthand symbol for a physiological condition. But it does not seem legitimate to distinguish between various sorts of reaction on the basis of subjective conceptions (such as joy and sadness, p. 60, anxiety, dissatisfaction, etc., p. 111) unless some clear physiological differentia of these hedonic states have first been determined. This the author often neglects to do. He gives physiological *descriptions* rather than physiological *definitions* of these terms; even when he substitutes the terms *sthenic* and *asthenic* for pleasure and pain his criterion is apparently subjective. It is scarcely fair to repudiate subjective psychology, and at the same time to employ subjective hedonic data to differentiate between various modes of reaction.

The book needs considerable condensation. Too much space is devoted to details of particular laboratory experiments, which could be summed up in a few sentences with proper references. The German translation is satisfactory except in the transliteration of proper names from the Russian alphabet. The names of several well-known writers are inexcusably misspelled; for example, Dadge (for Dodge), Fallerton (Fullerton), Merrillier (Mariller), Burdon (Bourdon) and Hawding (Höffding). In one place the values of the time threshold are given in seconds instead of thousandths (422).

It is clearly too soon to attempt an estimate of such a new departure from beaten paths as this work affords. The contemporary "subjective" psychologist of whatever type is not yet sufficiently grounded in behaviorism to evaluate its merits. But however critical of the objective standpoint the reader may be, he will find Bechterew's book worth a very careful study.

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*The Fisheries of the Province of Quebec.*  
Part 1. Historical Introduction. By E. T.  
D. CHAMBERS. (Published by the Depart-

ment of Colonization, Mines and Fisheries of the Province of Quebec.)

To any one interested in the history of Canada and the historical development of what was its first and long its chief industry (and would be still were it not for the demand of the newspapers on the Canadian forests), Mr. Chambers's work is fascinating. The author has brought together, from whatever source and with infinite pains, abundant excerpts from ancient relations, with ancient illustrations and contemporary portraiture bearing upon the historic pursuit of the cod and its confreres in the Quebec waters. The golden cod on the Boston State House emblazons a fact that is easily and rather wittingly forgotten: that the *Mayflower* colonists and their successors came to that rock-bound coast to worship God in their own way; but "So God have my soul," said the High and Mighty Prince James, when the Leyden agents of the Puritans told him they were to go to "Virginia" for the *fishing*, "'tis an honest trade; 'twas the Apostles' own calling." So they came to fish for cod as well as to worship in their chosen way, while the sturdy Bretons and Normans who had reached the Quebec coast long years before came simply to fish for cod.

There is romance of history in the Quebec fishing, for it is "more than four hundred years since Basque and Breton fishermen gathered the first harvest of the sea from the waters that wash the coasts of Labrador and Gaspé." Cartier, penetrating the straits of Belleisle into the Gulf in 1534, met a Norman fisher; and after his day, as soon as the wealth of the new French waters became known at home, the men of St. Malo, Honfleur and the Biscayan ports flocked to these shores in great numbers. Even after the conquest the Quebec fishing remained French; while the fishing masters came out from the Channel islands and their descendants to-day still control the industry.

In giving the descriptive records of ancient procedures, Mr. Chambers has assembled a really large part of the active industrial history of maritime Quebec during its romantic

period, for history was in the making in these turbulent waters and along these sequestered shores long before the Gloucesterman was conceived. The purpose of this notice is not to direct attention to the scientific analysis of the fishing business, into which it does not purport to enter, but to applaud the worth and fitness of this contribution to the historic development of the oldest known industry on the North American continent and to congratulate the author on the attractive manner in which he has presented his subject. As an official document it bears the cachet of dignity and the assurance of durability.

JOHN M. CLARKE

#### NOTES ON METEOROLOGY AND CLIMATOLOGY

CLIMATOLOGY AT THE ASSOCIATION OF AMERICAN GEOGRAPHERS

At the tenth annual meeting of the Association of American Geographers at Princeton, N. J., January 1 and 2, 1914, six climatological papers were presented:

*The Weather Element in American Climates:*

R. DEC. WARD.

Since American climates are chiefly made of cyclonic weather, this factor is all-important; the actual conditions affect us and not the averages. Winter is a cyclonically-controlled period—at this time of year practically the whole country is covered with cyclonic paths. In summer, solar control is uppermost, the cyclone paths are in the north and the cyclones weak. Thus cyclone paths migrate with the sun. As the distribution of meteorological elements in a cyclone is different in different parts of the country, Professor Ward is preparing regional cyclonic weather types for the United States.

*The Frostless Period in Maryland and Delaware:* OLIVER L. FASSIG.

The number of days (average of 20 years) between the last severe frost or freezing temperature in the spring and the first in the fall ranges from 130 days in the west to over 200 days in the immediate vicinity of Chesapeake Bay. For further study of plant growth as related to climatic conditions, phenological

observations of similar plants in the same soil (transported) are to be undertaken at many points, each group being visited every 10 or 15 days.

*Storm Frequency in the United States and Europe:* C. J. KULLMER.

A geographical study of cyclone frequency of the United States 1874 to 1891 and of Europe 1876 to 1891 shows irregular or perhaps periodic latitude variations of cyclone frequency. An attempt was made to correlate these latitudinal changes with the eleven-year periodical latitude change of sun-spot belts. Such changes of cyclone frequency are probably accompanied by rainfall and temperature variations.

*The Pleionian Variations of Temperature:* HENRY ARCTOWSKI.

Swings of temperature covering a year or more seem to be the result of periodic fluctuations in the solar constant plus variations caused by volcanic dust in the atmosphere. This coincides with the results obtained by Abbot and Fowle and many others.

*Climate and Human Efficiency:* ELLSWORTH HUNTINGTON.

From a study of the piece-work wages of 270 operatives in some Connecticut factories, 1910-1912, it was found that their maximum efficiency came in December with a secondary maximum in May. The minimum of about 85 per cent. of the maximum came in January and another of about 90 per cent. in August. Highest efficiency usually occurred with out-of-door temperatures near 58° (F.), and with wide variations of temperature from one day to the next. Other meteorological elements considered individually in this connection gave no satisfactory results. Further work will be done to compare mental efficiency with weather.

*The Snowfall About the Great Lakes:* CHARLES F. BROOKS.

The snowfall in this region is heavy because of much moisture precipitated at low temperatures by the many winter cyclones. On account of the cooling action of land on the prevailing west winds blowing across the lakes, the east shores get more snow than the