bias, and just as soon as I enter politics I begin to act as a partisan and I lose my place as a judge and an unbiased individual. As soon as a professor enters politics he makes the university an object of political purpose. This is so for the reason that the political activity may be utilized and places gained through political control.

As politics go, you can not escape their consequences, and to develop a theory about academic freedom that you can escape them, and still take part in them, is entirely beside the mark. There is no restriction placed upon the teaching of a professor, or upon his speaking upon social and economic questions, but as soon as he allies himself with a political body which seeks to control the political power of the state, there is danger. The life of the universities in this state and elsewhere depends upon their being able to keep above this kind of politics, the kind that you want to engage in. Professor Ross, of the University of Wisconsin, put it in this way: "We (meaning professors) ought to be willing to give over the forum to the politicians for a period of six weeks, when we have it all the rest of the year."

I do not acquiesce at all in your view that the educational life of the universities and of the state is endangered by this attitude. To my mind, it is good sense and good policy.

With best wishes for your success, I remain,

Yours very truly,

FRANK L. MCVEY,
President

SCIENTIFIC BOOKS

Objektive Psychologie. By W. VON BECHTEREW. Authorized translation. Leipzig and Berlin: Teubner. 1913. Pp. viii + 468. 16 Mks. unbound, 18 Mks. bound.

The study of animal behavior is developing a tendency among certain psychologists to emphasize motor expression as a research method in human psychology. Professor Max Meyer's "Laws of Human Behavior" is typical of this trend, though it shows the influence of traditional psychology in many respects. Other American writers are leaning in the same direction, and Professor J. B. Watson has recently thrown down the gauntlet by proclaiming boldly that behavior is the one fruitful method of psychological investigation, and that the study of consciousness is unscientific and barren.

In his "Objective Psychology" Professor Bechterew attempts a systematic development of psychology according to the behavior method. He does not expressly reject introspective psychology, but proposes to eliminate it from the present work. Starting with the concept of the neuropsychic reflex he aims to describe the whole mental life of man in terms of expression, discarding entirely conscious phenomena, such as sensation, feeling and thought. He calls this science objective psychology or psychoreflexology. A better English equivalent is behaviorism or behavior psychology. Considering the newness of the field, Bechterew's attempt is fairly successful. He has outlined systematically and with remarkable completeness the various aspects of human mental life as they are manifested in every sort of objective expression.

A distinction is made at the outset between purely nervous processes and neuropsychic processes. The former depend solely on present stimuli and inherited nervous mechanisms; the latter are modified by past individual experience (pp. 16, 22, 24). Every impression "leaves in the nerve centers a certain trace which under certain circumstances can be reexperienced and thereupon appears as an associative or psychic reflex" (105). Impressions or stimuli are classed as external (that is, from peripheral sense organs) and internal (organic, etc.); the resulting expressions are either movements, vasomotor activity, or secretion (164). Responses to external stimuli are termed reflexes, those due to internal stimulation are called automatic movements (165), though the distinction is not always sharply marked (166).

Reactions of every type have become organized into complex "acts" by means of special nervous mechanisms aided by the traces of former impressions. Thus an external stimulus may give rise to a complex act such as

walking, through the association of a series of movements whose stimuli have previously accompanied the same stimulus (180). In the formation of such associations inhibition plays an important rôle. Bechterew defines instinct as a complex movement or act which follows *internal* stimulation and results in satisfying some organic need or protecting the organism from harmful or disturbing influences (188). In contrast with instinct, imitation and the circular reflex are based on associations which modify the responses to *external* stimuli.

The complex reflexes which involve association find expression in all three motor modes (movement, vasomotor activity and secretion) and may be investigated in several ways. The author prefers his own method, that of motor association reflexes, to Pawlow's salivary method (262). Considerable space is devoted to an analysis of emotional expression, which he calls mimicry. Bechterew holds that these reflexes have more than a phylogenetic value; they perform an important function in the given reaction itself (327).

The last part of the book examines three specialized forms of complex response, the concentration reflex, symbolic reflex and personal reflex. The concentration reflex is the behavior analogue of attention, and one has no difficulty in identifying the symbolic reflex with language. The discussion of vocal language is thorough, but the treatment of gesture and writing is disappointingly brief. One is surprised that the analysis of sensation and perception, or rather sensory and discriminatory responses, is taken up in connection with symbolic reflexes. It is true that sensation as such can not be brought into the behavior psychology. It can only be investigated by means of responses on the part of an observed organism; and the quantitative measure of sensation in man according to our classic laboratory methods usually involves verbal reactions. Nevertheless this holding back of the discussion of elementary phenomena in a systematic treatise will strike most psychologists as a defect in the objective method itself. It is but fair, however, to point out that the introspective psychology of our fathers relegated elementary *motor* phenomena to the footman's seat in much the same way.

The analysis of personality from an objective standpoint will arouse special interest and is likely to become the focus of criticism. Bechterew holds that "the personal sphere represents the totality of traces from organic associative reflexes, around which a part of the reflexes aroused by external stimuli group themselves by association" (431). These organic traces are experienced in connection with every change of general bodily condition; their sum total forms the "inner kernel of the Neuropsyche" (432).

"Personal reactions are termed *acts* and *deeds*" (435). They are distinguished from other reactions, not by the character of the external stimuli, but by the relation of the present stimuli to the individual's past history. The hunter is aroused to action by the flight of a game bird, which is quite unnoticed by the man with no sporting proclivities. The same stimulus may even affect the same individual differently at different times. Personality in this objective sense guides all our lower activities. Concentration (attention) and the selection of association traces are thus in part determined internally; this is Bechterew's substitute for the free-will experience of subjective psychology. Of interest is his application of muscular work and fatigue to the investigation of personality. Believing that muscular fatigue is due to impairment of both muscle and nerve centers, Bechterew considers that the ergographic curve furnishes a measure of individual efficiency. It is to be regretted that the analysis of personality is not so detailed as the rest of the work.

Bechterew's book is the most consistent attempt at a thorough-going objective psychology so far made. It may be questioned, however, whether he has succeeded in banishing subjective psychology altogether from his pages. In many places affective and emotional terms are used to characterize the basis of reaction. This is especially noticeable in his analysis of hedonic states (107–123), internal reflexes (171–175), and emotional expression

(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 differentiæ 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.

Howard C. Warren
Princeton University

The Fisheries of the Province of Quebec. Part 1. Historical Introduction. By E. T. D. Chambers. (Published by the Department 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