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PROBLEMS, METHODS AND RESULTS IN BEHAVIOR[1]

INTRODUCTION

IN every field of endeavor it is from time to time advantageous to pause long enough in the ordinary pursuits of the day to take our bearing, trace the course traveled and adjust plans for the future. I have attempted to do this in the field of behavior and I shall present in brief the result of this attempt.

What I have to offer is in no sense a finished product. It should be looked upon rather as the opening of a discussion, a brief exposition of certain ideas which I hope will be criticized from various points of view.

HISTORICAL REVIEW

Before the renaissance no practical problems in behavior were recognized. All activities in organisms, plants as well as animals, were held to be under the control of souls, agents not amenable to law and not subject to experimental analysis.

Descartes early in the seventeenth century came to the conclusion, partly from the results obtained in observations, partly on the basis of philosophic speculation, "that the bodies of animals and men act wholly like machines and move in accordance with purely mechanical laws." Under the inspiration of this idea, Borelli and others undertook to reduce certain reactions to purely physical and chemical or mechanical principles. Somewhat later Ray, Dodart, Du Hamel and others attempted to account for the movements in plants on the same basis. Thus the science of behavior had its origin, and, strange as it may seem, the fundamental problem before it in its youngest days was to reduce reactions to mechanical principles.

The investigators interested in this en-

[1] An address delivered at the Marine Biological Laboratory, Woods Hole, Mass., July 15, 1918.