

progress. Additionally, he appears with all the fire and zeal of the Hebrew prophets, in sure and certain hope that his radicalism is well founded, his mission to mankind essential. In this he resembles our own McTaggart, who used to say that the study of philosophy is the most urgent task for every thinking person to tackle, for without it our deepest cravings remain unsatisfied.

In a work so erudite as that now under review, it is agreeable to be allowed occasional glimpses of the personalities of Husserl and of those chosen few to whom was given some measure of his friendship. As a help to the reader's understanding, too, these intimacies are valuable, and are not to be taken merely as light touches. For example, the word-portrait of Brentano, at once sacerdotal and learned, brings vividly before one the deep impression that his lectures must have made upon Husserl, and how he determined to forsake mathematics forthwith (in spite of having worked with Weierstrass) in quest of a truly rigorous philosophy.

Much of the text is of necessity devoted to critical surveys of such monumental works as the "Philosophy of Arithmetic", "Prolegomena to Pure Logic", and "Logical Investigations". Of these it is scarcely profitable to attempt an analysis here; preferable perhaps to select a few outstanding features of Husserl's work as a whole, and to discern his purpose. One such characteristic is his ability to make or discover distinctions. It is a major concern of the phenomenologist. Physically, it is akin to using an optical instrument of increased resolution rather than one of extreme magnification. The master's Freiburg period demonstrated this, when someone at his lectures remarked that to sit under him was to find 'new eyes' in philosophy. As a corollary, a warning hand is laid upon the artificial simplicity, so beloved of the superficial and the slick. Complexity rather than the reverse is to be expected: yet a foundation of experience is seldom lacking.

Again, Husserl seems to hark back to his earlier mathematical substratum in stressing the power of the conception of invariants. This now means much more than a method of dealing with transformations; it connotes the 'necessary general form' of all constructive thinking.

Of all the ways which Husserl follows in order to distil his purest thought, perhaps the most remarkable is the establishment of the *epoché* (*ἐποχή*). He proposes this in place of the universal doubt of Descartes. Thus the world is eliminated (*ausgeschaltet*); which done, transcendental consciousness remains as the phenomenological residuum. The act of so-called 'bracketing' is probably not exactly what the English mind is intended to understand by it. Rather we might think of such judgments as 'waived', since by this term is suggested the possibility of switching in again when the particular need for the process is over. Husserl would probably never have gone so far as to suggest that his eliminated quantities were entirely beyond recovery.

Time and again we find the philosopher in the evening of life returning to the fray, clarifying and deepening his message, yet never doubting that his system contained within itself the essentials of a pre-suppositionless structure, unrelenting in radicalism and veneration for rigour.

Husserl was not to escape some of the barbarities of the Third Reich. Declared and ignored, he was nevertheless able to write "I prove *sub specie aeterni* my right to live".

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## COMPARISON OF ENZYME AND IMMUNE REACTIONS

### Immuno-Catalysis

By Prof. M. G. Sevag. Pp. xv+272. (Springfield, Ill., and Baltimore, Md.: Charles C. Thomas; London: Baillière, Tindall and Cox, 1945.) 4.50 dollars.

NEAR the end of the nineteenth century, Ehrlich first directed attention to the similarity between enzyme and immune reactions on the basis of their highly specific character. "Immuno-Catalysis" examines this similarity in the light of modern work, and, further, puts forward a detailed case to support the view that the formation of a specific antibody in response to the introduction of a given antigen fulfils all the criteria of enzyme-catalysed systems, suggesting that antigen (catalyst) merely directs the formation from serum globulin (substrate) of antibody (product), which in the immune reaction acts as a specific enzyme inhibitor.

The work is divided into five parts entitled: Part 1, antigens as biocatalysts; part 2, antibody as a specific enzyme inhibitor; part 3, anti-enzyme immunity; part 4, immunity against bacterial enzymes; part 5, the problem of antibody formation against respiratory enzymes. Part 1, in attempting to decide upon the mechanism of antibody formation, necessarily deals with the chemical and physical properties of antibodies and their relation to the serum globulins, with the different theories of antibody formation, and makes some mention of the problem of serological specificity. It is shown that the available evidence favours the idea of the enzymatic action of antigen in stimulating antibody formation.

Part II is concerned, in detail, with the factor of specificity in immune and enzyme reactions, discussing the well-known work of Landsteiner, Avery and others using modified antigens, and with the analogy between enzyme inhibition and antigen-antibody association. Although Parts 1 and 2 contain a strong case for the antigen-catalysed formation of antibody and for the inhibitory action of antibody in the immune reaction, I feel that the case could in parts have been improved by the omission of some of the elementary material, for example, Section B of Part 1 dealing with simple types of chemical reaction, and by a more expanded treatment of the lesser known aspects of immunity, such as anti-antibodies.

Part 3 deals in detail with the question of anti-enzyme immunity, discussing the objections to the existence of anti-enzymes and the importance of non-specific adsorption of proteins, as well as the effect of pH change on enzyme-anti-enzyme combinations. The remainder of this part, and also Parts 4 and 5, form a collection of experimental data on the formation of antibodies and immunity against different enzyme systems. Although the critical analysis and presentation of all relevant experimental data is essential in establishing the nature of antibody formation and reactions, it is felt that this part of the work might well have been separated as an appendix from the main arguments which occur in the first half of the book.

The book is well supplied with references, has a good index (index and references occupying more than forty pages), and is well produced. It should be useful to specialists and non-specialists alike.

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