

Of Oxygen, Fuels and Living Matter, Part 2

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One of the fortunate consequences of the relatively recent explosive growth in biochemical knowledge has been that many scientists responsible for fundamental discoveries are still alive to tell us how they were made. In Part 2, as in Part 1 which I reviewed previously for *FEBS Letters*, a number of eminent scientists have written about their life history, early work and how their discoveries were made and exploited. In Part 2 there are chapters by Martius, Horecker, H.G. Wood, Braunstein, Fruton, E.C. Smith and Karlson. Each chapter is followed by reprints of two or three of the author's papers, considered by him to be the most significant. Reading the papers by Martius requires a knowledge of German but fortunately those of Braunstein have been translated from the original Russian.

As I did with Part 1, I found Part 2 fascinating and many of the comments made are highly relevant today. A general theme is that 'commonly held views' of how things happen often rest more upon the shoulders of authority than upon a detailed analysis of experimental evidence. Until someone with the ability to ask and answer questions about such 'fundamentals' comes along, no

substantial progress can be made. The comment of Martius concerning the domination of biomedical research by clinicians ('Success in research and teaching means less than a paper qualification that enables one to . . . diagnose flat feet') still holds true in England today. The great majority of fundamental scientific discoveries relevant to medicine have been made by non-clinicians, and yet in England we still maintain a salary differential between clinically-qualified and 'non-qualified' staff in medical schools. I found Horecker's discussion of the pentose phosphate pathway and its relation to the Calvin cycle particularly interesting. Karlson points to the unpopularity of insects as subjects for biochemical study, despite their economic importance. H.G. Wood amusingly describes how early reports of CO₂ fixation by bacteria were dismissed as errors since according to 'general opinion' such reactions were not possible.

Despite my enjoyment of Part 2 I still wonder, as I did with Part 1, who is going to buy this volume in these times of financial stringency.

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