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CONTENTS

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LISTER AS PHYSIOLOGIST[1]

IN his article on Baron Lister in the eleventh edition of the Encyclopaedia Britannica, Sir Clifford Allbutt says that Lister, appraising his own work, once stated that he had done no more than seize upon the discoveries of the great French scientist, Louis Pasteur, and apply these discoveries to surgery. The writer of the article then goes on to say, "But though Lister saw the vast importance of the discoveries of Pasteur, he saw it because he was watching on the heights; and he was watching there alone." How are we to account for the unique preparedness of Lister to lay hold of the revolutionary work of Pasteur and to apply it with such momentous effect to the treatment of surgical wounds? How had he reached those heights on which he stood watching alone?

The various biographical accounts of Lister all contain references to the early physiological work that he carried out. They make plain that he approached his surgical problems with the peculiar experimental outlook that is acquired through physiological training. In his Huxley lecture delivered in 1900 before the Medical School of Charing Cross Hospital he gives a charming review of these introductory researches, and thus outlines the influences that were brought to bear upon him at the commencement of his career:

As a student at University College I was greatly attracted by Dr. Sharpey's lectures, which inspired me with a love of physiology that has never left me. My father, whose labours had raised the compound microscope from little better than a scientific toy to the powerful engine for investigation which it then was, had equipped me with a first-rate instrument of that kind, and I employed it with keen interest in verifying the details of histology brought before us by our great master. When I afterwards became house surgeon under Mr. Erichsen, I applied the same means of observation to pathological objects.

In other words, through physiology and physiological investigation Lister became what we should now call an experimental pathologist.

Let me digress for a moment to speak of some of his teachers. He makes mention of his father's improvements on the microscope. The father, a London wine merchant, a skilled mathematician and a world-renowned expert on optics, was a fellow of the Royal Society and known to a large circle of scientific people, biologists and astronomers. He had once col-

[1] Lister Centenary address delivered in the Moyse Hall, McGill University, Montreal, April 5, 1927.