

## PROFESSIONAL REVIEW.

## PASTEUR AND AFTER PASTEUR.\*

"Pasteur and After Pasteur," by Mr. Stephen Paget, F.R.C.S., with a modest little preface by the author, put in a timely appearance on September 28th, the anniversary of the death of this master-scientist, a day which Mr. Paget points out "all physicians and surgeons—and not they alone—ought to mark in their calendars; and it falls this year with special significance for us, now that his country and ours are fighting side by side to bring back the world's peace."

The story of Pasteur's life is narrated with all the charm of which the author is capable, and that is a great deal, intensified by his unbounded admiration for his hero. "It is not," he says, "possible to measure or put into words the value of Pasteur's work and the range of his influence. All attempts to estimate or explain him are mere foolishness. Genius made his work what it was; and genius is no more the result of circumstances than a play by Shakespeare is the result of a theatre and an audience."

Of poor, but good descent, Louis Pasteur, like most geniuses who have achieved much, had a passion for hard work. As a youth he wrote to his little sisters, "Work, love one another. Once you have got into the way of working you cannot live without it. Besides, everything in this world depends on it. . . . If your resolve be strong, your task, whatever it may be, is already begun; you have only to go on, it will accomplish itself. If by chance you stumble on your way, a hand would be there to sustain you; and if that hand should fail you, He who took it from you would uphold you to the end."

"His parents did not look beyond the hope that he might obtain a professorship at Artois College. Heaven had other designs on him. First, it gave him a thorough grounding in mathematics and physics. Then, for many years, it kept him under the discipline of chemistry. Then for twenty years more he was occupied over ferments, the diseases of wines, and the diseases of silkworms. He was fifty years old when he advanced to the protective treatment of sheep, cattle, poultry and swine, against disease; he was sixty-three when he first used on man his protective treatment against rabies. To change the whole outlook of medicine and surgery, Heaven took and trained a 'pure scientist' who had never done an operation nor written a prescription; a man who had to screw up his courage even to look at some of the ordinary sights of a hospital; took this non-medical man of science and set him to be head of all the heads of the medical profession, to have them all obedient to his teaching and proud of the very sound of his beloved name. The whole world is well aware that he has availed more than the physicians and surgeons of his

time for their health and happiness. He was set apart from them, that he might be the leader of them; and he led them into that kingdom which they longed for but could not found for themselves."

Fate was kind to Pasteur in the wife of his choice. We read: "She was everything to him; without her his work would never have been accomplished; he would have died long before he did under the strain of it. To write of him, is to be writing of her; the two lives are one from 1849 to the day he died." He was happy also in his work. To a friend he wrote: "Why aren't you a professor of chemistry or physics? We should be working together, and in ten years we would have revolutionised chemistry. There are marvels hidden in crystallisation, and one day it will reveal the intimate structure of substances. If you come to Strasbourg you'll be a chemist in spite of yourself. I shall talk to you of nothing but crystals."

Of the "germ theory" at which Pasteur worked so hard, the author writes: "It is not a philosophical theory of life, but a most practical doctrine, that fermentation, decomposition, putrefaction, are the act of the living dust of the air; that these bacteria are not begotten by the fermenting liquid, but come into it from outside; that a liquid, really sterile, exposed to air really sterile, will remain sterile for ever." At a famous lecture at the Sorbonne on April 7th, 1864, Pasteur, after showing to an immense audience experiments in proof of this fact, proclaimed the germ theory thus: "*La vie c'est le germe, et le germe c'est la vie.*"

In the little chapel connected with the Pasteur Institute at Paris, Pasteur lies, as a writer in the *Spectator* has well said, "From the work of the place, done in the spirit of the Master and to his honour, you go straight to him. Where he worked, there he rests."

"Walls, pavement, and low vaulted roof, this little chapel, every inch of it, is beautiful; to see its equal you must visit Rome or Ravenna. On its walls of rare marbles are the names of his great discoveries—*Dyssymétrie Moléculaire, Fermentations, Générations dites Spontanées, Etudes sur le Vin, Maladies des Vers à Soie, Etudes sur la Bière, Maladies Virulentes, Virus Vaccins, Prophylaxie de la Rage.* In the mosaics, of gold and of all colours, you read them again; in the wreathed patterns of hops, vines, and mulberry leaves, and in the figures of cattle, sheep, dogs, and poultry. In the vault over his grave are four great white angels, Faith, Hope, Charity, and Science."

When the time came for his work to pass into other hands, it had passed already. "It was become part of the doctors' daily practice, part of the routine of every hospital, part of the method of the medical sciences, part of all nursing, part of all housekeeping, part of all farming, part of all brewing. There is no country on earth which is not the richer and the happier because of him."

What better epitaph could man desire?

\* Adam & Charles Black, 4, 5, & 6, Soho Square, London. 3s. 6d. net.

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