A SHELF OF RECENT BOOKS

LA VIE SPIRITUELLE

By Kenneth M. Gould

SINCE the public retirement of our war president, the institution of the "single track mind" has fallen into an undeserved opprobrium. For, as one commentator has pointed out, it matters considerably what is on the track of the single track mind. And what partizan labels can thus cry down might in happier days, attached to another personality, be glorified as "single mindedness". A good case might be made out, indeed, for the thesis that no enduring achievement has been built in the sciences (for that matter, in any field of life) without some sacrificial degree of concentration. The modern world has known no clearer pattern of monotonous fidelity to purpose than the lives of Pierre Curie and his great helpmate, Marie Sklodowska Curie. Science was indeed the breath of their nostrils. Ramsay Traquair incurred the indignation of many good feminists with his theory that women are constitutionally incapable of sustained creative effort in art and science, but even he had to make exception of Madame Curie, a woman who conspicuously subordinates the conventional feminine functions to a career of abstract mentality. The narrative of her husband's life work, which she has fortunately been persuaded to publish, is even more interesting an illumination of her character than of Pierre Curie's. "Autobiographical Notes" of Madame Curie take up two fifths of the book and duplicate much of the previous narrative. There is an introduction by Mrs. William Brown Meloney, editor of "The Delineator", who conceived and personally conducted the American tour of Madame Curie in 1921 and proposed the gift of a gram of radium, the cost of which, $100,000, was raised by women of America.

"In science we should be interested in things, not persons", says Marie Curie. This index of her modesty is a true token of the impersonality of all great scientists. But the layman, restive under such discipline, searches for the human background. The presentment of Pierre Curie that shines through his wife's pages is a singularly engaging one. Son of an Alsatian physician whose father before him was a medical man, Pierre came honestly by his scientific interests. The family circumstances were moderate but the home atmosphere was affectionate, liberal, and scholarly. Pierre never went to the elementary school or the lycée. He was a dreamer, a nature lover, an anticlerical, a son of the barricades. At eighteen he received his licentiate in physical sciences from the Sorbonne.

As with Pasteur, his first independent researches were in crystallography, which led him, in collaboration with his brother Jacques, to the discovery of piezoelectricity, a kind of polarization attendant upon the symmetry of crystals, and the invention of an electrometer based on these properties of quartz — an instrument which later played an important part in the measurement of radioactivity. From 1883 until 1900 he was director of lab-

oratory work in the School of Industrial Physics and Chemistry, a relatively minor post. Then, only after the "burden of celebrity" was upon him, at last came the chair in physics at the Sorbonne, which he held until the tragic motor truck accident in 1906 that cut him down in the full tide of a career that could ill be spared.

Marie Sklodowska sprang from a middle class intellectual soil not dissimilar to that of the Curies — a family of Polish Catholic teachers. She early conceived her goal of scientific research, and we find her at twenty three studying in the laboratory of Lippmann at the University of Paris. Curie met her at the home of a colleague. The acquaintance, purely intellectual at first, gradually ripened into a deep and quiet affection, culminating in their marriage in 1895. With a wedding gift of money they characteristically bought bicycles and embarked on a honeymoon by foot power. She secured a teaching post, and all their spare time was spent in the laboratory together. Two daughters were born to them, but except for the primary necessities of child care the research magnificent went steadily on. In 1896 Marie, seeking a problem for her doctor's dissertation, became interested in the pioneer work of Henri Becquerel on the radiations of uranium salts. It was not long after Roentgen's great discovery of the X-rays. With the delicate electrometric methods originated by her husband, she examined all the known elements to see if they possessed the radioactive properties of uranium. Only thorium did. Certain compounds seemed abnormally active, however, and she posited the hypothesis that a new and much more strongly radioactive element must be present in them. Pierre Curie soon became so interested in his wife's work that he abandoned his crystals and joined her. Using the uranium ore pitchblende, they shortly were able to recognize traces of two new radio elements, polonium (named for Madame Curie's native land), and radium, the existence of which they announced in July and December, 1898. To convince the scientific world of the reality of these elements, they had yet to isolate them; it was not until 1902 that Madame Curie succeeded in preparing a decigram of radium chloride, which gave the spectrum of the new element and accurately determined its high atomic weight. The Nobel physics prize of 1903 was awarded jointly to Becquerel and the two Curies. The chemistry prize of 1911 was bestowed on Marie Curie alone. The years between had testified to her own inalienable authority. It is not a reflected light that glows about her name. For in 1910 she isolated the white metal of pure radium itself, and has gone on from glory to glory in the working out of the therapeutic applications of her discoveries.

It is impossible to convey in brief compass the reality of the wall of hardship and discouragement that confronted these pilgrims; the mental preoccupation almost trancelike in its control; the fret of finances; the administrative ineptitude; the shameful inadequacy of laboratories and equipment, even till after Pierre Curie's death; the deadly teaching routine sapping the potentialities for creative research; the ordeal of publicity to sensitive natures; the rigid avoidance of public honors; the refusal to compromise an instant with vast commercial rewards — in a word, the absolutism of their dedication to the service of pure knowledge and of humanity. Dr. and Mrs. Kellogg have preserved most happily the sense of

two characters utterly devoid of pose or guile. In the Platonic Republic the Curies would be rulers over many.

Pierre Curie. By Marie Curie. Including also Autobiographical Notes. Translated by Charlotte and Vernon Kellogg. The Macmillan Co.