

MISCELLANEOUS.

MADAME CLÉMENTE ROYER.

The appearance of a new voluminous work on cosmogony, the *Constitution du monde: Dynamique des atomes: Nouveaux principes de philosophie naturelle*,¹ by Madame Clémence Royer, marks the crowning and definitive event of a life of single and unceasing devotion to science.



MADAME CLÉMENTE ROYER IN 1865.

It is a monumental production in whatever way one may look at it. It shows vast learning, a profound acquaintance with the mathematical and physical sciences, and a powerful command of philosophical literature. It is unofficial and unoracular in its utterances, unaffiliated with any school or set of doctrines; it is at direct variance with many of our most cherished intellectual and scientific prejudices; it may be said to contain, from the point of view of received and accredited scientific opinion, many vagaries and untenable theories. It has the fantastic and hypothetical coloring of all speculative cosmogonies, the unailing drawbacks of a luxuriant scientific imagination, metaphysically applied. Yet it stands as a unique performance even in a country which has produced a Sophie Germain, and merits attention from the mere character, courage, and altitude of its effort, if not from its positive and enduring contents.

Madame Clémence Royer, biologist, anthropologist, sociologist, political economist, physical scientist, and philosopher, came of ancient Breton stock, the source

¹ Paris: Schleicher Frères, 15 Rue des Saints-Pères. 1900. Pages, xxii, 799. Price, 15 francs.

of some of the sturdiest intellects of France, and was born at Nantes, April 21, 1830. The years of her early womanhood were spent in Switzerland, where she devoted herself assiduously to scientific study and research. She lectured professionally at Lausanne, Neuchatël, Chaux-de-Fonds, and Geneva. She wrote there also, at the instance of the government, an economic treatise, which shared the prize with the celebrated socialist, Proudhon. Lamarck and the theory of evolution were early subjects of her studies, and she was the first to translate the *Origin of Species* into French: she was the god-mother of Darwinism in France. These labors were supplemented by numerous memoirs in the encyclopedias, dictionaries, and technical reviews on evolutionary topics, and subsequently by a large number of independent works on the origin of society, and on a great variety of geological, archæological, astronomical, physical, politico-economical, and philosophical subjects.

But great as Madame Royer's activity was, it was not productive and it was officially not recognised. Little came from her pen,—for science is a profession of love, not a profession of bread. From her earliest days she had been compelled to make her livelihood chiefly by lecturing; and the declining years of her life, intellectually strong but physically blighted, have been spent in Neuilly amid the protecting walls of the *maison de retraite* founded by the celebrated Galignani brothers as an asylum of refuge for authors, printers, and booksellers. The one bright spot in this sombre sojourn was the brilliant fête tendered her in 1897 in the halls of the Grand Hotel by the intellectual élite of Paris and of France,—a tardy justice, splendidly satisfactory from a spiritual point of view, but partaking, materially, somewhat of the nature of a post-humous consolation.



MADAME CLÉMENCE ROYER IN 1899.

With regard to Madame Royer's new volume, published through the generosity of a friend, Madame Valentine Barrier, we may be brief. It is a work of erudition, concerned with such questions as the historical evolution of the idea of matter, the mathematical, logical, and metaphysical laws of being, phenomena of vibration (heat, light, sound, etc.), the physical and chemical constitution of solid, liquid, and gaseous bodies, the nature of life, gravitation, the theory of the tides and the evolution of worlds. It is filled with numerous finely executed diagrams and brilliantly colored plates, illustrative of the text, and its pages bristle with formulæ. To study the work critically, considerable knowledge of the exact sciences is requisite, but the introductory parts and the chapters on the evolution of the

worlds, which form the most interesting matter of the volume, are within the reach of any reader of philosophical and scientific taste, who will be repaid by the review of the facts here presented, whether they engage his assent or incur his condemnation. Personally, our sympathies are not enlisted by atomistic speculations; but Madame Royer's atomism is not the orthodox atomism of Epicurus, attacked by Stallo and Mach, to the former of whom she frequently refers in her animadversions; it is Madame Royer's own theory of a fluid atom, expansive and repulsive, dispensing with empty space, and held capable of effecting by its vibrations all the sensible phenomena of light, heat, and sound. It forms the basis of an hypothesis which binds together all the known laws of physics, chemistry, and biology, and enables us to reach deductively the theory of their specific phenomena; embraces even, in its mechanistic net, the phenomena of biology, by sketching the probable mode of constitution of the cell and the probable course of the transformation of matter and ether into living substance; and supplants finally the impossible mechanism of gravitational attraction, referring the movements of the stars to thermal causes.

It will be seen that Madame Royer's book is a *Natur philosophie* of the purest water. It is nevertheless aglow with faith in science and a firm belief in the solubility of its problems; it is the pronounced antagonist of scientific agnosticism in any form; and as such it must command our unqualified admiration, be our critical opinion of its tenets what it will.

T. J. McC.

INVOCATION.

Eternal Good! Or if by other name
 We know Thee best,—source of power and light,—
 We reach in quest of that beyond our sight;—
 Perfection's gift from other never came.

We do not ask for any selfish thing;
 To change great Nature's plans if we should try,
 Our works and wishes all would quickly die;—
 We would not dictate to so wise a King!

Within our hearts we only crave the best
 Which will arouse a great and good desire
 For high, eternal truth, eⁿ writ in fire;—
 We humbly take whate'er is Thy behest!

EDWARD WILLIAM DUTCHER.

STILLWATER, MINN.

THE SCHOOL AND SOCIETY.

A more ideal and fascinating scheme of elementary education than that projected by Prof. John Dewey, of the University of Chicago, in his *School and Society*, a little book of which the second edition was issued last year by the Chicago University Press, can scarcely be imagined. It embodies the ideas of the acutest modern educational critics, it is the incorporation of what has suggested itself as