

## WILHELM OSTWALD, PRESIDENT OF THE GERMAN MONISTIC LEAGUE.<sup>1</sup>

BY ERNST HAECKEL.

(With portrait of Professor Ostwald.)

AMONG the most gratifying phenomena in the stirring intellectual life of the present day belongs the constantly increasing significance and extension of our naturalistic monism, that is to say, of that unitary and natural world-conception and conduct of life which is based solely upon knowledge of pure science. The greatest credit for its promotion and extension is at present due to Wilhelm Ostwald, the eminent naturalist who celebrated his sixtieth birthday on September 3 of last year (1913). In here devoting to him a few personal words of sincere thanks I feel myself impelled not only as honorary president of the German Monistic League but also as a friend of twenty years' standing who have seen my own efforts for the advancement of monism, which I have pursued untiringly for half a century, continued and perfected by Ostwald's indefatigable labor in a manner most worthy of sincere recognition.

Since the close of 1910 when Wilhelm Ostwald undertook the presidency of the German Monistic League in response to my earnest request, and especially since he created the *Monistische Jahrhundert*, as an organ (now a weekly) for our league, the interest in and comprehension of our monistic movement has penetrated to the remotest educated circles. The vigorous impulses which the movement has received from him are so various and have been so generally diffused through his "Monistic Sunday Sermons," that I may limit myself here to pointing out only the most important of his great services.

First in importance in my opinion is the consistent aim to have science regarded solely and alone as the source of any rational world-

<sup>1</sup> Translated from the German by Lydia G. Robinson.



conception at the exclusion of all so-called revelation, of all ideas and dogmas which attempt to explain the world of phenomena in a supernatural way. Hence all transcendentalism, all belief in the miraculous, is excluded—without detracting from the great value which these products of creative imagination can possess for our emotional life as forms of poetry, and in a wider sense of art. They must not cloud the clear light of knowledge which pure reason, on the basis of experience and experiment, disseminates over the profuse variety of phenomena.

This is particularly true in the entire realm of intellectual life for those highest and most surprising natural phenomena which the earlier dualistic world-conception—now happily vanquished—was accustomed to look upon as the product of a “higher supernatural power.” In fact, however, nature as a unified coherent “cosmos” comprises the entire realm of our human knowledge, and consequently all so-called “mental science” is in the last analysis “natural science.”

Now it is the task of philosophy to collect, and by a critical synthesis to unite into one composite whole, all the most important universal results which all the special sciences by conscientious research and analysis have achieved in their special realms of observation. Accordingly, if all true science having for its aim the knowledge of reality is in truth natural science, then it follows that all its most universal results fall under the concept of “nature-philosophy”; for not the so-called philosophy of the official schools is the genuine wisdom of the world (*Weltweisheit*), but our modern monistic natural philosophy which is founded upon the positive experiences of observed facts.

As early as towards the end of the eighteenth and in the beginning of the nineteenth century the great progress of the empirical study of nature had impelled great minds to found a new nature-philosophy, and our great German genius Goethe has in this sense laid the foundation of a “morphology” in the most recondite and most difficult realm, that of comparative anatomy. But the rash and all too hasty generalizations of a “philosophy of identity” and the imaginative products of its untenable metaphysics has thereafter brought “nature-philosophy” into such ill repute that in the first half of the nineteenth century the majority of naturalists cared nothing at all for philosophy but considered their task to lie solely in exact observation and faithful description of individual facts.

When Charles Darwin had solved the great problem of the natural origin of organic forms in 1859 and revived the forgotten

theory of descent, established fifty years earlier by Jean Lamarck, I myself made the attempt in 1866 in my *Generelle Morphologie* to construct this comprehensive theory of evolution as the basis of a true "monistic nature-philosophy." In the meantime the mechanistic character of this monism, which was decried as materialistic, continued to arouse suspicion in wide circles and did not receive the appreciation it deserved until after Wilhelm Ostwald in 1898 had effectively emphasized its "energetic" side.

Ostwald opened up a wider realm for these investigations in 1902 by starting his *Annalen der Naturphilosophie*, after he had already established in 1887 a new valuable organ for the advancement of universal chemistry, his particular department of research, by issuing his *Zeitschrift für physikalische Chemie*. But the great text-book of this special science, followed later by a brief sketch of universal chemistry (*Grundriss der allgemeinen Chemie*), forms only a part of the extraordinarily many-sided and productive activity which this indefatigable investigator and thinker has displayed in the most varied branches of human intellectual life and which has raised him to the rank of a leading philosopher of nature in the best sense.

Ostwald deserves particular credit for spreading our monistic convictions most extensively by issuing since 1911 his popular "Monistic Sunday Sermons." They are intended for the edification of all those "who among the pretensions and confusions of to-day have preserved an inner need for clearness in the great and universal questions of human life." Many of these thoughtful and stimulating sermons perform this high educational task in a remarkable degree; others again call forth opposition rather than applause, but this is equally true of all similar publications which appear at short intervals (weekly or semi-monthly) and which throw light upon the most diverse universal questions from new points of view.

In Germany such creditable efforts in behalf of civilization often meet with distrust and ill-will chiefly because of the narrow-minded bureaucratic spirit of regulation which still places upon the instruction of our schools the fetters of medieval scholasticism. During these last fifty years I myself have had many experiences of this kind while trying to make the most important results of our modern nature-philosophy accessible to wider circles through popular essays. But the harsh criticism which I thereby drew upon me from narrow-minded specialists is far outweighed by the grateful recognition of many intelligent laymen who were thirsting for knowledge.

In 1853, the year in which Ostwald was born, began that sig-



nificant controversy over materialism in which Jacob Moleschott, Karl Vogt and Ludwig Büchner succeeded in justifying the claims of natural science as against the dogmas of the dominant philosophy of the schools. At that time I was studying anatomy, physiology and the history of evolution in Würzburg. Through the excellent lectures of my teacher Rudolf Virchow, who at that time was entirely permeated by monistic convictions, I was even then, at the age of twenty, filled with those views which later constituted the firm foundation of my monistic nature-philosophy.

In 1853 I first became acquainted with the remarkably stimulating writings of Jacob Moleschott, the eminent physiologist and naturalist in whom I soon gained a lovable and faithful friend. When a *Privatdozent* in Heidelberg in 1853 he had founded a physiological laboratory, and in opposition to the dominant dogmatic conception of vital force endeavored to refer all vital phenomena of man, like those of other animals, to physical and chemical processes. On account of his views, branded as "the lifeless materialistic conception of all vital activity," he was compelled by the pious Baden government to give up his academical activity and so removed in 1856 to Zürich as professor of physiology, and in 1878 to Rome. His writings at this time belonged to the most important works which blazed the path of a strictly physico-chemical explanation of vital processes. This monistic physiology was spread among the widest educational circles, especially by Ludwig Büchner in *Kraft und Stoff* (1855). The unitary world-conception connected with this physiology also was insisted upon at that time by the physiological chemist Moleschott, just as it was forty years later by the physical chemist Ostwald. Both chemists contended with equal energy against vitalism, the dogma of a supernatural organic power.

The remarkable progress of biology and especially of the theory of evolution in the last three decades of the nineteenth century seemed to have finally disposed of the ancient vitalism. Nevertheless it has again received new life in the beginning of the twentieth century and as neo-vitalism plays a significant part not only in the dualistic philosophy of the present, especially in psychology, but also in certain circles of a confused spiritualistic physiology. This surprising step backwards may be accounted for on the one hand by the primeval inclination of human imagination towards mysticism and miracles, and on the other hand by the short-sighted repugnance of many careful naturalists to any universal philosophical consideration of nature.

Finally we must emphasize as a particular merit of Ostwald's

monistic nature-philosophy that he constantly endeavors to promulgate in all directions not only its theoretical part, the rational world-conception, but also its practical manifestation, a wholesome conduct of life. The far-reaching reform of modern ethics which continues to advance in a gratifying degree in sociology and politics, in pedagogy and the management of schools, owes its inspiration in many directions to his rich and fertile imagination. It is our hope and desire that Wilhelm Ostwald will continue with equal energy and with increasing success in the seventh decade of his industrious life, upon which he is now entering, to bring about the enlightenment of mankind by means of pure science, and their true happiness by rational conduct of life.