

# The Open Court

A MONTHLY MAGAZINE

Devoted to the Science of Religion, the Religion of Science, and the  
Extension of the Religious Parliament Idea

Founded by EDWARD C. HEGELER

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VOLUME XLI (No. 12)

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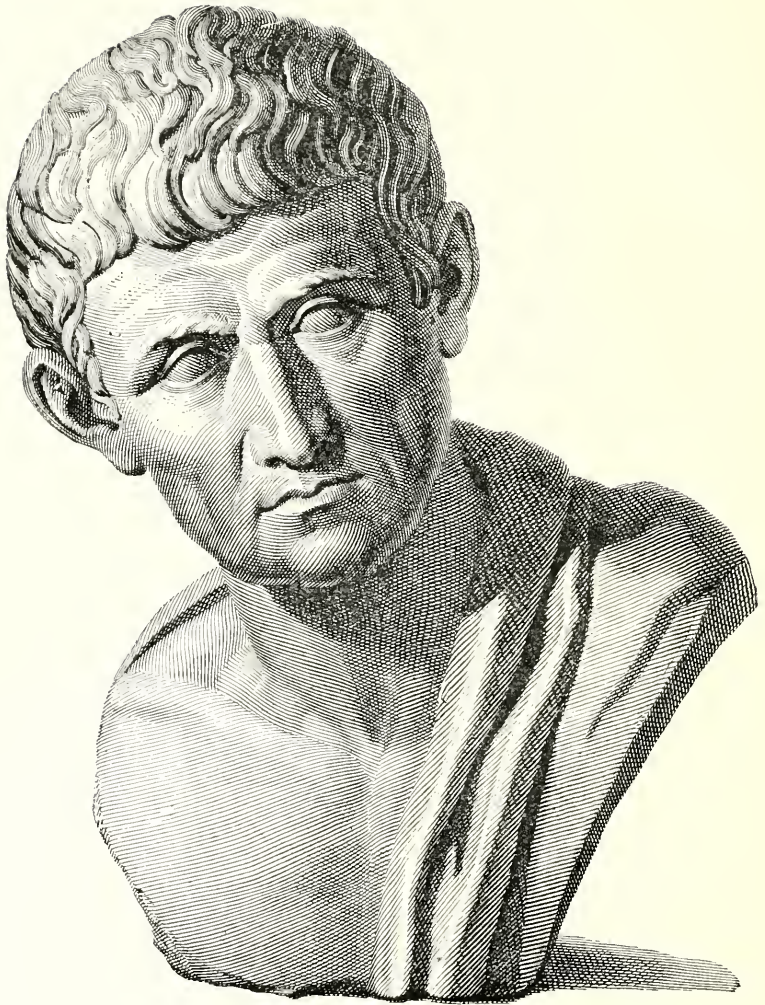
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ARISTOTLE

*Frontispiece to The Open Court.*

# The Open Court

A MONTHLY MAGAZINE

VOLUME XLI

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1927



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## THE RELIGIOUS FACTORS OF SCIENCE

BY JONATHAN WRIGHT

IN writing of what Dante said of the Divine Light in the pages of this journal<sup>1</sup> and in pursuing it back to Pythagoras and in intimating my conjectures as to how this became a familiar conception flowing from the first modern man who is credited with beginning the emergence from the Middle Ages into the Renaissance, I came to realize that there was no clue in my mind as to just where Light began to be a paraphrase for religious symbolism. Plainly it went back to Pythagoras to men more primitive in the exercise of world thought, to the sun worshippers, the fire worshippers in many parts and many ages of the primitive world. Though I had had no inconsiderable acquaintance with the ethnological literature of primitive man I could get no intimation that he had ever, except in-so-far as all things are divine to him, conceived of Light as Divine.

When, however, we came to the problem of the connection between the body and the soul, that starts from every page of the ethnology of primitive man.<sup>2</sup> It was long after men had ceased to be primitive that they began to speculate as to just how soul and body blend with one another, how one actually affects the other. There is a great deal of idle talk of each motivating the other, but it has been left to the philosophers to wrestle with the question of just how it occurs. At first it is regularly referred to the usually unnoticed blending of the conscious with the unconscious self,—to dreams and other much rarer phenomena of the normal and abnormal mind, but we scarcely gather any glimmer of information thereby, which appeals to a rational mind. It only informs us how

<sup>1</sup>*The Open Court*, May, 1927.

<sup>2</sup>*Medical Life*, July, 1927.

in all probability man got his first dawn of the belief he has a soul at all. This became at the same time the origin of much which we now call religion and of some mental phenomena not always included under that heading and both are embraced in the wider field studied by modern psychology, but what is of especial interest to us here is to discuss some of the data upon which man has rested his thought of the soul's unison with the body. It is hardly necessary to say that the soul, the mind, consciousness, are now used in approximately the same sense. With Plato it was always the soul and Plato regarded the soul as immortal, but it is a little stretch of modern usage to speak so of the mind. The thoughts of men are written in a moving flux of language, a constant slipping of words which tends to make one age unintelligible to another age, one generation even a little misunderstood by the next. For us the mind or the soul is the most intangible, immaterial, unreal of concepts but for Plato it was the only reality, this soul of living things and men. Everything else was perishable and unreal, the mere shadow of realities. In the body of man was a Receptacle as in that of all other living things, where there was a thorough mixture of the corporeal and the incorporeal, a conception which Aristotle declared was practically inconceivable in a rational manner. It was drawn, as Professor McDougal<sup>3</sup> agrees from Orphic theologians. McMillan. I desire to make my acknowledgment to this source for furnishing me with much of my cue in following the thread of this essay. It lies at the very root of the thought of ages and we thus find it firmly implanted in the pre-history of the Greeks.

How is it the Mind moves the body? We find it emerging in the study of the thoughts of primitive men, buried in much grossness and superstition even in the early Greek origins, but indubitably and unmistakably present. Plato of course purged the problem of much of the primitive dross and dualistic materialism with which no doubt it was obscured by the ancient hierophants. Recent analyses of the life Aristotle lived with Plato, by Jaeger and Ross,<sup>4</sup> offer no support to the view that Aristotle approached the problem of psychology from a biological point of view. Later it is true that there is textual authority that Aristotle entertained the belief, that though the soul was a vital principle it perished with the body, but as to the validity of the text of the *de Anima*, at least as to this, there has

<sup>3</sup>McDougal, Professor William: *Body and Mind*, 6th ed. 1923, London,

<sup>4</sup>Aristoteles, *Grundlegung einer Geschichte seiner Entwicklung*, von *H'erner Jaeger*. Berlin, Weidmann, 1923. *Aristotle*, by W. D. Ross, M. A., New York. Charles Scribner's Sons, 1924.

always been much dispute and it still rages among classical scholars. If the works usually attributed to him are genuine and the passages not mutilated, they are self contradictory, but an extreme critic says his *Politica* is the only work we have which is surely his. Others say when he acknowledges the soul is immortal it is a relic of his platonism and when he says it dies with the body it is his own later opinion formed after Plato's death. There are those who accentuate the differences between the metaphysical thought of Plato and Aristotle and the ancients after them started the story of their antagonism, but Aristotle repeatedly, in works written after the death of Plato, calls himself a Platonist. Jaeger emphasizes the fascination and love which Aristotle had for Plato when alive and his reverence for his memory after death.

Nevertheless when Aristotle invented an *entelechy* to take the place of a soul and furnish an agent of contact between the divine and the mundane in living things, it is plain by this seemingly substitution of one mysticism by another he had constantly in view this problem of how corporeal can be moved by the incorporeal. It is in one of his biological works he plainly intimates that the soul is immortal and in the *de Anima* that it perishes, but it is a little incomprehensible to many why he made an entelechy, a purely incorporeal conception, to do what he declares the soul, as Plato conceived it, can not do,—that is, act as liason officer between the body and the divine. Let not the modern reader think the discovery of nerve and nerve cells and neurons and all the anatomical minutiae of the structure of nervous matter has banished this problem for a single moment. Neither material discoveries nor inventions of hypotheses, neither parallelisms nor epiphenomenalisms nor all the terminologies of modern philosophers, the absurdities of a jargon by which they now befog any question they touch, have brought us any closer to a solution than Aristotle's entelechies. Driesch has even adopted Aristotle's term. The human mind can not grasp it. As for Aristotle there is no space here for us to seek to know which was his earlier opinion. The significant thing for us is the evidence of the wavering of it,—at the beginning we are apt to think of for the history of our philosophical thought. It was apparently some time after Plato's death he became better acquainted with the works of Democritus, whom Plato never mentions, and the Nature Philosophers, whom he quotes but seldom, though he apparently knew their work well. Though Aristotle held



aloof, at least at the end, from a frank animism he earlier made use of it in his entelechies, which are scarcely anything else. Epicurus<sup>5</sup> considered that the soul is a body of fine particles distributed throughout the whole structure and most resembling wind with a certain admixture of heat and I am not familiar with any earlier precise definition of the make up of the soul. Fire, air, we know, and perhaps other materialistic notions must have existed before him, but they are vague and not explicit.

It is not profitable, or it has not yet been proved so, to follow out the materialistic traces of the soul in its relation to the body before the Prae-Renaissance ushered in the discussion of just what Aristotle meant even or before the Renaissance, when Platonism was taken up anew where the Neo-Platonists left it. That was when new men went back to the older and better Platonism. The animosities of the conflicts of the Averrhoists, who followed one opinion of Aristotle and of the Thomists who followed another had had time to die down, more than 200 years before Pomponazzi's treatise on the immortality of the soul (1516) aroused what interest the Renaissance had in the subject, which it, must be admitted, was not much from a purely doctrinal point of view. Kepler's view is said to have been at first largely pantheistic. He followed the primitive thought in the view that all things, especially planets, possessed souls, but he ended by extruding souls entirely from his scheme of nature (McDougal) and supplanted the executive powers of the soul by those of "forces". We can accept this as symbolical. The star souls and the angels who took their places had perhaps become or had always been "forces" in the minds of ancient men, but the substitution of "forces" becomes significant in a nature philosopher nearer our times than Aristotle. It is significant at least of the avowed switching of thought from theological to scientific ways of thinking. In some form or other the "forces" of nature have always stood for the religion of the man of science. Materialist as he now often thinks himself it is Energy he has to treat as his god and frequently it is his God.

The conflict of the relationship of Mind to Body, the story of which McDougal has made into a classic in our time, is no more than an account of a later stage of the confusion into which the thought of Aristotle was thrown more than twenty centuries ago. He too, we may conjecture, as a Platonist was at first pantheistic.

<sup>5</sup>Epicurus, I.63.—Bailey. Oxford-Clarendon Press, 1926.



If he wrote the *de Mundo* or others of the astronomical books he like Plato put soul rather than "forces" in charge of the heavenly bodies, but like Kepler he was deeply plunged in difficulties in his physics and found mathematics thus applied impossible. Galileo profited by the turn Kepler's thought took to "forces" to which he could apply quantitative as well as qualitative faculties. Without this no definite conception of motion in space could be formed. The modern scientist then so far as he has deistic leanings must merge them with his conceptions of energy and energy he now learns is another form of matter. Plato's mixture of soul and body in the Receptacle of the living being is what the scientist under the name of energy and matter has approached again after so many centuries. This is perhaps a loose jointed way and perhaps some would say an unwarranted way of pursuing in epitome the history of thought. It may well be forcing an analogy with the thought of Plato when no such analogy exists in modern thought, but it is excusable, even if these charges lie against it unrefuted, in view of the fact that no one has ever got anywhere by pursuing it in a hypercritical fashion.

Countless pages have been written and are still written to accentuate or to reconcile the differences between materialism and vitalism and the contest is especially vivacious today, but it is not forcing an analogy at all to say it is this old difficulty furnishes the rallying point for both parties to it. Men's minds are still confused in the presence of this problem as to how mind affects matter, how matter has an influence on mind. Matter has been fused into energy, but how can mind and body fuse? How can they mix in the Receptacle and separate when the vessel is broken? That the one can be fused into the other has never been so impressively forced on the attention of metaphysicians as by the physicists of this generation. Shall we say body and soul are thus fused and separated? If any can show the analogy is a forced one it nevertheless has had a tremendous influence on modern metaphysical thought, but if it is acknowledged as legitimate, that is as having factors in common it must be confessed the conception does not yield to very satisfactory analysis as yet. Minds are confused and thought is in suspense. That the oak board of this table on which I write can be turned into a lightning bolt which will split the brother oak growing in the forest is a statement we cannot follow through all the physical steps, but that is what a scientist believes and if Energy is truly his God

his God moves by His own free will. He directs Himself. Energy directs Itself. The lightning bolts in the hands of Zeus were a part of himself. Aristotle's god was close to this conception or it was just the reverse, depending on the way we are going to be compelled to regard motion. Aristotle's god was the Unmoved Mover. What is it sets motion moving for the modern scientist? The physicist has confronted us with that which has set us in confusion and we turn to him for an answer with a question as old as antiquity itself.

It has been possible for the modern followers of Galileo, who was thought and who thought himself in revolt against the ancient astronomy and an assailant of the religious thought of his day, to make us see in their science there is still inherent belief in a subliminal spirit like unto the ancient souls and mediaeval angles trundling celestial orbs across the sky. The scientist calls it Energy, it is his God. This modern kind of animism, while accepting a pronounced form of mechanism has necessarily retained a modicum of teleology, which, thought it would not have satisfied Galen, can be put in the same class with that of Aristotle. There have been many, however, in the generation just passed who believed that animism in their time had been driven definitely from the field. As a matter of fact there were even then many fine minds, not only among pure philosophers but among distinguished workers in the field of science, who as long as twenty years ago had registered their belief, free from dogmatism, in much we must call animism. There are few modern animists, none that I know of, who cling to the original doctrine of Descartes. He looked upon all animals and plants as mere mechanical automotoms. Man alone was endowed with the attribute of consciousness and had a soul and it seems to have been a very materialistic kind of a soul. The animal spirits do not seem spiritual at all. They were really the fine granules of Epicurus' soul circulating throughout the body and passing through pores still finer and thus were intimately mixed with flesh and blood. Spinoza brought the union no closer but in vaguer terms declared "the mind and body are one, the same thing, conceived at one time under the attribute of thought and at another under that of extension". We gain nothing by dropping thus into metaphysical concepts. We want to know how a molecule of soul is grafted on a molecule of matter and how it tears itself loose. How the former directs the complex molecule as it seems best. If we must have

mechanism, we wish the mechanists to keep on talking in the language of mechanics. That is what the modern physicist seems to do. Impossible as it is for the mind to conceive it, he shows us cause to believe energy and matter are only two forms of the same thing, each affecting our bodies and our minds through the organs of sense in a way evolution has trained them for survival values.

Hobbes believed matter was all there was to it, soul or spirit was but a work of the imagination. The eighteenth century philosophy was full of dispute about it. In the nineteenth mechanism was at one time so far in the lead that the conflict all but died down. In our own century we see it again assuming activities in the wake of the marvelous revelations, which, so far as philosophy is concerned, has given the death blow to the old physics on which so much in philosophy has been based. In the early third part of the last century animism in biology may be said to have had a standing but by the latter third part of it, although some physiologists clung to the interpretation of a soul, for the majority that interpretation was regarded as the exposition of an exploded superstition. Yet teleology in all things and vitalism in biology began to arise anew in Germany before the nineteenth century was out. At the beginning of it when much of the old vitalism was still alive the young Cabanis in France, though said not to have been a materialist, spoke certainly with the tongue of one and made a public show of atheism.<sup>6</sup> "Observation, experience and reasoning are sufficient for our purpose,—we require nothing more". To him we owe that most materialistic of maxims familiar to all students of medicine in the last century, even though some of them refused to acquiesce in it,—the brain excretes thought as the liver excretes bile. However he held the doctrine which still animates those whose turn of mind enables them to ignore its own more profound endeavors. "For studying the phenomena, which living bodies exhibit to our view, and for tracing their history with accuracy it is not necessary that we know the nature of the principle which animates them."

With the rise of psychology as a science it became at the latter end of the century impossible for mechanists to continue this attitude and vitalism has arisen to the surface as a consequence. We may not know yet, but the seeking to know became then a necessity. Before that however, in the mid-century it may fairly be said that

<sup>6</sup>*Sketch of the Revolutions of Medical Science*, by P. J. G. Cabanis, translated from the French by A. Henderson, 1806, London.

Comte and his followers in France, the positivists,—guided materialistic philosophy. She had a bad reputation for atheism and infidelity for a hundred years after the Revolution among certain classes in the countries which had had no revolution. But a change began to come over France and over French philosophy when Bergson came upon the scene, and when Spencer died materialism had already begun to wane in England. When Bergson forged to the front of the mystics animism had been everywhere at low ebb, but in France it had hardly shown strength since the strange philosophical conception of Descartes, who made a compromise between the ecclesiasticism of his day and the materialism of the rising intellectual schools of thought to whom the iatro-physicists and iatro-chemists belonged. He granted a soul only to man, who knew he was one because he thought. Frederick the Great got his materialism from Descartes, who played a great rôle in science outside his philosophy which had really no use at all for a soul. All the rest of the animal and vegetable kingdom got along without a soul as mere mechanical automatons. There is still a trend in psychology and perhaps there always has been one in physiology to regard man as essentially an automaton. In a reflex sort of way he reacts just thus and so to the same stimuli. This gets mixed up with predestination and freedom of will. God created a machine to do just so in a given environment; there is no escape from it.

If Descartes had consistently developed his philosophy the church in his day had sufficient power and the will to crucify him. Cartesian philosophy thus extended besides abasing man to the level of beasts would have left ecclesiasticism nothing to do and the ecclesiastics were quite sure God had not so constructed a world, in which for so long they had played so large a part. But the Church was crumbling and no compromise of Descartes with animism in one hand for man and mechanism in the other for beasts could long save it. By the time France was ready for revolt Voltaire and de la Mettrie and Holbach had long flouted it with impunity. They ridiculed the arguments of the parsons and they denied the existence of a soul in man and were neither crucified nor burned. They sharpened the edge of the guillotine for the parsons. These men and their ideas however were the sinister excrescences of the philosophical conflicts of previous centuries as to the relation of the mind to the body. These flaneurs of thought to whom the politicians flock in every age for their principles, or rather their bases of action,

came to the flippant conclusion that because so many sages had disagreed as to how the soul moved the body, how the incorporeal influenced the corporeal, there was no soul. Hobbes was a writer on politics as well as philosophy and he had the art of securing the protection of politicians for his alleged and essential atheism. He and Descartes found protection beneath the long tailed coats of courtiers and the skirts of pedantic queens, but they and their like prepared the way for that materialism which has marvelously endowed the nineteenth century with materialistic blessings and made mighty with material progress, and too, "the rapid progress of the physical sciences in the early decades of the nineteenth century seemed to bring much nearer the realization of the possibility of complete physical and chemical explanation of the processes of living bodies".

This however has never been realized. Materialists have never been able to shake themselves clear of animistic assistance in physiology or, what amounts to the same thing, the confession that the knowledge which at the moment is at their disposal, is not sufficient entirely to explain the processes of living beings. There was always in science some one among those who knew, like Johannes Müller in physiology or even Claude Bernard and Cabanis, to confess that there was something behind it all, which eluded them. Though his followers rapidly guided their students into the mechanistic paths of the middle of the last century, while Müller was alive animistic philosophy was not entirely devoid of physiological support. His influence furnished a bond, however fragile, between spiritually minded men and men of science. That had been true of Wallace, of Crookes, of Lodge. While for the parallelist there was a neurosis with every psychosis, as Huxley expressed it, the universality of the application has never been established. It is perhaps not too much to say, for psychoses at least, it has never been established in the majority of cases. Huxley with the instincts of an orator often made sweeping assertions more suited to the lecture dias than to the laboratory or the dissecting table. It has been said that materialism has never had cosmic affairs so much favor its rule as at the opening of the nineteenth century. That was the time, it was said, that philosophers and men of science came closer together than they ever were before Comte or have been since Spencer. Perhaps they were never so wide apart as at its close. Nearly every philosopher



was a mechanist. In the first quarter of the new century there has been a great change.

No religion has long endured or profoundly affected the minds and actions of men, in which there was not inherent something inexplicable, something mysterious, something mystical, something which thought can not grasp, something which emotion must reveal. It is out of such stuff as this that the divine is fashioned in the understandings and emotions of men. Physicists long ago found in many manifestations of energy that which still seems inexplicable. Gravitation, many electrical phenomena, the nature of electricity itself, lastly the mystery of the conversion of matter into energy and the movements of its forms in space and space and time themselves,—there are no deeper nor more enduring mysteries than these. The Eleusynian and the Orphic Mysteries were not so deep, the tenets of the faith of Christ and of Buddha have not been so enduring nor less incomprehensible. Energy has every right to be the God of science, except it lacks the attributes of humanity. It is not anthropomorphic. No religion can go far or penetrate deep into the hearts of men, which in addition to the mysterious offers nothing at all of this. It can do nothing or but little psychical to help the social and political organizations of men. In the past every civilization has arisen by availing itself of the restraints imposed on man by some appeal to his love or fear or reverence for something divine, something he does not understand, doubtless, but something he hopes will help him in this life or something he fears will harm him in another. Those who, like Sir Oliver Lodge, think they can endow Energy with that on which other civilizations have founded their organization entertain sentiments not vouchsafed to all men of science.