

## **An essay on the life in nature / by Louis Mackall.**

### **Contributors**

Mackall, Louis, 1801-1876.  
National Library of Medicine (U.S.)

### **Publication/Creation**

Washington : H. Polkinhorn, 1855.

### **Persistent URL**

<https://wellcomecollection.org/works/dyathp3t>

### **License and attribution**

This material has been provided by This material has been provided by the National Library of Medicine (U.S.), through the Medical Heritage Library. The original may be consulted at the National Library of Medicine (U.S.) where the originals may be consulted.

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection  
183 Euston Road  
London NW1 2BE UK  
T +44 (0)20 7611 8722  
E [library@wellcomecollection.org](mailto:library@wellcomecollection.org)  
<https://wellcomecollection.org>

MACKALL (Louis)

AN ESSAY

Box.

ON

THE LIFE IN NATURE,

BY

LOUIS MACKALL, M. D.,

AUTHOR OF "NOTES ON CARPENTER'S HUMAN PHYSIOLOGY," "AN  
ACCOUNT OF THE REASONING PROCESS," &c.

WASHINGTON :

HENRY POLKINHORN, PRINTER.

1855.

4

M

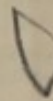


# AN ESSAY

ON

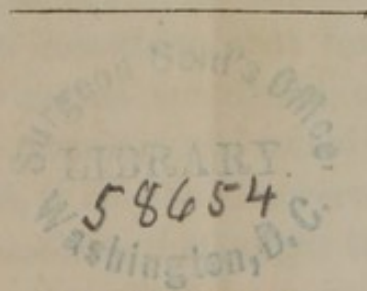
## THE LIFE IN NATURE,

BY



LOUIS MACKALL, M. D.,

AUTHOR OF "NOTES ON CARPENTER'S HUMAN PHYSIOLOGY," "AN  
ACCOUNT OF THE REASONING PROCESS," &c.



WASHINGTON :  
HENRY POLKINHORN, PRINTER.  
1855.

---

Entered according to Act of Congress, in the year 1855, by

LOUIS MACKALL,

In the Clerk's Office of the District Court of the District of Columbia.

---



## THE LIFE IN NATURE.

---

(1.) It is very remarkable that the word Life, in English, (and the same may be said of its corresponding term in other languages,) has never had attached to it any single, definite meaning; but on the contrary has always been used with a double meaning, or rather with two separate and distinct meanings, that have been confounded together and used indiscriminately. In every attempt at reasoning, wherein this term is employed, the attention has been allowed to slip or shift, inadvertently, from one of these two meanings to the other. Hence the confusion of thought, and the sophisms or false consequences that may be detected in every such attempt. I will briefly refer to the senses in which this word is commonly used.

(2.) It is not unusually said of a living animal that it is at one time full of *life*, and at another time is almost *lifeless*, or almost devoid of *life*—that its *life* is exhausted or reduced in quantity by the excessive exercise or action of its muscles, by inanition, and by depletion or loss of blood, or the excessive discharge of the secretions, &c., and that its *life*, when thus exhausted, is replenished or restored by rest or inaction of its muscles, by nourishment, and by the recovering of its due supply of blood and the secretions, &c.

(3.) It is clear that the word life, used in the above expressions, must refer to *something* that could be effected in the manner and by the means mentioned, otherwise such expressions could have no meaning, and would be purely nonsensical; and, on investigation, it may be discovered that there is in every living animal, a *something* that might be so affected, namely, the subtle fluid, usually called the nervous fluid, but which we shall designate as the Nerve-fluid.



(4.) The Nerve-fluid in a living animal is abundant at one time and deficient at another ; it is exhausted or reduced in quantity by excessive exercise of the muscles, by inanition, by loss of blood, and by an excessive discharge of the secretions, &c., and when thus exhausted, the Nerve-fluid is replenished by rest, by nourishment, and by the recovery of a due supply of blood and of the secretions. The meaning, then, attached to the term *life*, in the foregoing expressions, is *the subtle fluid* now spoken of.

(5.) The life of an animal, this Nerve-fluid, is the sole agent or medium by means of, or through which the soul or mind is placed in communication with the body it animates. The soul possesses the power, entrusted to it by its Creator, of determining this fluid, as it wills, to any part of the body with which it is in connexion, and here all the power, it can directly exert over the material world, ceases. In all other instances, the soul can bring about effects or results in the material world, only indirectly, that is, by means of power located elsewhere, and not in itself—as I shall endeavor to show on another occasion.

(6.) By the determination of the life of an animal in the manner we have just noticed, to its muscles, the latter are brought into action ; by the combination of this fluid (mixed with the secretions called the saliva and gastric liquor) with the food taken into the mouth, and passing thence into the stomach, chyme is produced ; by its combination (mixed with other secretions) with the chyme, chyle is formed ; with the latter, blood is the result, and by its combination with the blood the solid materials or tissues of the body and the secretions are formed. From the secretions, a portion of life or nerve fluid is derived, for the supply of the body ; and the balance is thrown out of the system as effete in the form of the excretions, which, in some form or other, are constantly passing off from every animal as long as it is alive.

(7.) As the materials of the living animal body, the tissues and circulating fluids are compound, being produced by the combinations and re-combinations, as we have seen, of the peculiar



Life of the animal—so *this peculiar Life* is itself a compound ; being produced, I conceive, by the combinations and re-combinations of a yet more simple fluid, that may still be denominated Life, which we have now traced to its most simple state or condition. In this condition I propose to regard Life as the basis, the origin, or elementary beginning of matter.

(8.) Assuming that life, as a subtle fluid, is the basis or element of matter, and having seen how the materials of the body of a living animal are formed by the combinations and re-combinations of the life of such animal ; it may be readily understood how the materials or substance of all inanimate bodies or forms of inorganized matter might be formed by the various combinations and re-combinations of this simplest form of life, to which I have just adverted. And as we have seen that from every living animal body there is a portion of what may be called its free life, constantly passing off from it as long as it is alive, so we may conceive that there is a portion of free life incessantly passing off from all inanimate bodies, whether organized or inorganized.

(9.) Having now shown the connection between life, in the sense presented, and matter, it becomes evident that *matter is possessed of life*.

(10.) But the word Life has another meaning that is constantly confounded with the one I have now pointed out. It is commonly said of the body of an animal that has recently died, that it has lost its *Life*—that its *Life* is gone, or has departed from it, &c. It is evident that, in these expressions, the word *Life* refers to something that had previously animated the body—to something, through the instrumentality of which, the body had formerly been enabled to perform the various movements or acts it had been observed to exhibit whilst alive, but which had been separated from it at death.

(11.) This something could not be the subtle fluid which I have shown is the meaning, and, indeed, the true meaning of the term—because this subtle fluid, the nerve-fluid, still remains in the body of an animal that has recently died, and can be moved



about in it by artificial means, as by galvanism, &c. That which is lost, or departs from the animal body at death, can be nothing else than the immaterial or spiritual Existence, the Soul or Mind, by means of which the animal body is animated or enabled to perform its various acts whilst alive.

(12.) The correctness of this latter conclusion is confirmed by a reference to the common acceptation of the meaning of the two words, *dead* and *alive*. To say of any thing or of any body that it is *alive*, means that it is in connection with the immaterial Existence, the soul or mind, the vital Principle or Principle of life—all of which expressions have an identical signification or mean precisely the same thing. To say of anything that it is *dead*, means that it has lost its connection with the vital Principle or Principle of life, &c. Thus it is said of an animal or vegetable, that it is alive when it is in connection with its vital Principle, or is dead when deprived of this Principle—but neither of these terms is applied or is applicable to anything that has not been in connection with the vital Principle. It is not said of a chair or table, or of any other inorganized body, that it is either dead or alive, because such objects or bodies have never been, in their present form, in connection with the vital Principle.

(13.) The word life, then, is sometimes used to signify *the immaterial Existence of living Beings*.

(14.) From what I have written, it will be seen that the term Life refers, at different times, to two things which, although necessarily co-existing in every living Being, are yet very distinct the one from the other. Life as a subtle fluid, the Nerve-fluid or peculiar life of an animal, of which we now speak, refers to that which is senseless, powerless, inert, and altogether passive or totally devoid of any active properties. Life, as the soul or Mind, (I use these two latter terms as synonymous or convertible, as no distinction has ever been or can be made between them,) refers to that which has the power, as before stated, of moving the Nerve-fluid, or life in the former sense, from one part of the body to another; which has affections, as love, hate,



&c.; which has faculties as Observation, Imagination, Judgment, and the Faculty by means of which we are enabled to adopt means to the attainment of ends, and other Faculties that I need not enumerate here. The soul can, by the exercise of three of its faculties, Observation, Imagination, and Judgment, perform the function of the mind called Reasoning, and thus arrive at general truths.\* By means of the Imagination and the faculty by which we adapt means to ends, the soul can perform another function called Invention. That part of the soul by virtue of which, these two functions Reasoning and Invention are performed is called the Intellect; and the capability of exercising the Intellect is what should be understood by the term Intelligence—at least, in the sense with which we are here concerned. It may now be seen that Intelligence is an attribute or property of the mind or soul, and of this only, and therefore can only belong to life when this latter term means the Mind or Soul.

(15.) The confounding together the two meanings, I have now pointed out, of the word Life, and the using them indiscriminately and without a consciousness of their difference, must have led, as I have before suggested, to false conclusions and into the gravest errors.

(16.) The celebrated Greek philosopher, Epicurus, not being aware of, or at least not recognizing the fact that, the term Life (*bios* or *zoe* in Greek) had the double meaning I have pointed out, attached to it the latter of the two meanings shown, namely, that of the Mind or Soul, and contended that Life, in this sense, belonged to matter—or, what is the same meaning, he attributed intelligence and certain affections and powers possessed only by Mind, to matter; and not only to matter in the gross or in the form of bodies, but to every, even the smallest, particle of matter—and not only did he attribute to these particles of matter, as inherent in them, intelligence equal to that of the human mind, the nature of which I have before adverted to, but intelligence equal to that ascribed to God—that is to say,

---

\* See a small pamphlet entitled "An Account of the Reasoning Process."



the intelligence by virtue of which the World has been formed and the laws appointed, which we see govern all the motions and changes in the Universe. Not content with referring to matter, the affections and intelligence spoken of—he referred to it also, the ability to impart the power to the laws just adverted to, necessary to enable them to execute themselves, (as we see is the case with all the laws of the Universe,) and thus he accomplished the main object he had in view in advancing this absurd theory, namely, that of leaving no occasion for supposing the existence of a God. Other Greek philosophers had proved conclusively the existence of a God by the plainest and most direct proof—that arising from instances of design in Nature—but Epicurus, from a spirit of opposition or from an affectation of notoriety, attempted, by bringing forward this ridiculous theory, to invalidate or destroy this proof. Atheism is one of the main features or the most striking characteristic of the doctrine of Epicureanism.

(17.) The arguments by which converts were formerly made to this doctrine, and the same arguments are even now made for the same purpose, may be plainly stated thus :

Matter is possessed of Life.

Whatever is possessed of Life is alive.

Whatever is alive has Mind.

Whatever has Mind has Intelligence.

Whatever has Intelligence has Intelligence equal to that ascribed to God.

Therefore Matter has Intelligence equal to that ascribed to God.

(18.) The only other argument by which this doctrine is attempted to be supported, is the same with the former, with the addition that whatever has the intelligence of God possesses also his power, thus :

Matter is possessed of Life.

Whatever is possessed of Life is alive.

Whatever is alive has Mind.

Whatever has Mind has Intelligence.

What has Intelligence has Intelligence equal to that ascribed to God.

Whatever has Intelligence equal to that ascribed to God, has also power equal to that ascribed to God.

Therefore Matter has power equal to that ascribed to God.



(19.) Now these arguments, it may be noticed, consist of a series of imperfect syllogisms, so arranged that a just conclusion may be arrived at that could not be drawn from any one syllogism. But the rules of logic require, in order to make this a valid argument, that every one of these imperfect syllogisms should be strictly true; for if any one, in such a series, can be shown to be false, the argument is destroyed and the conclusion must necessarily be false. Let us apply this test to the above arguments. In the first argument, the first imperfect syllogism, or enthymeme, as it is called, namely: that whatever has life is alive, is false, because a chair, a table, or a stove, &c., has *Life* in one of the senses of this term, but none of these bodies or forms of matter are *alive*. Again, the fourth enthymeme in the series, namely: that whatever has intelligence has it to the degree or extent commonly ascribed to God, is false, because other Beings have intelligence, but it would be absurd to ascribe to any other Being than God intelligence equal to that commonly ascribed to Him. In the second argument not only are there the two false enthymemes pointed out in the first argument, namely, the 1st and 4th, but the 5th is also false, because it would not necessarily follow that the same being that is possessed of the *intelligence must be necessarily* possessed of the *power* of God. The conclusions, then, resulting from the above arguments, must be entirely false, and the whole doctrine of Epicureanism, which is founded on these conclusions, is thus shown to be without any foundation. I have been thus particular in endeavoring to show the fallacy of Epicureanism, because this is the cloud that has been for so many ages interposed between the human mind and its God, for in this cloud atheism has all along veiled its hideous and distorted features. If this obstacle could be removed, Atheism would be banished from the world, and the human mind would be restored to its natural and firm belief in the existence of Him "who has created all things, and for whose pleasure they are and were created."

(20.) It is very strange that Epicureanism, embracing as it



does so many false conclusions, should ever have been received as truth. But it is passing strange that such a tissue of fallacies and absurdities as this, should have been so interwoven and incorporated into all the Physical Sciences, that it has been unhesitatingly accepted as a necessary part of each of these Sciences, and thus been handed down as truth even to the present time. There is but one mode in which I can account for this strange vagary. It has been remarked with much shrewdness, by Victor Cousin that there is no error that has ever been seriously entertained by the human mind, that has not mixed up with it, some concealed truth, which alone has given it currency. The truth here mixed up I conceive to be that which I have endeavored to establish, namely: *that matter is possessed of life*. It is this truth, probably, so necessary to any clear insight into the economy of Nature, that has borne along with it even the follies of Epicureanism.

(21.) Founded on this doctrine of Epicurus, a new philosophy has recently been started in Europe called Materialism, which is emphatically the Philosophy of modern Europe, and is at this time rapidly spreading among all men of science. In noticing the growth or formation of new parts in animals and vegetables, with the help of the microscope, it has been observed that certain small sacks or cells were first formed. To these cells our modern Epicureans attribute *Life*, and with it the power and intelligence necessary to form all the organs, and, consequently, the bodies of such beings. To account for the phenomena of the Mind, they refer all these to certain actions or movements of the Brain. This being one of the organs formed by the cells, of course, all the phenomena connected with living beings are referable to these cells, and consequently it is openly asserted by these philosophers *that there is no occasion for supposing a separate, immaterial Existence as belonging to a living being, as a whole!*\* *Materialists, however unwilling they may be to acknowledge the fact to others, or even to themselves, yet practically and in reality, deny the existence of the soul!*

---

\* See "Notes on Carpenter's Human Physiology"—p. 33, § 257.



using this latter word in its common acceptation; or in the sense in which it is used in the Bible,

(22.) The doctrines of Epicureanism and Materialism, which I have shown to be founded in error, I need not here trace out minutely to their further consequences—such as German Transcendentalism, Communism, Rowdyism, &c., all of which consequences naturally result from an unbelief in the existence of a God, and from an unbelief in the existence of the soul. It is sufficient, I conceive, to have given a plain statement of the grounds on which they have been built up, to have exposed the sophisms on which they are founded, and to have alluded to the dreadful consequences naturally resulting from them, in order to excite towards these Doctrines, feelings of aversion and disgust, in every well-ordered mind.

(23.) But to return to the consideration of Life as a *subtle fluid*—this being the true meaning of the word when used in connection with matter. We have already drawn attention to the truth that from every material substance, from the largest to the most minute, life, in this sense, is constantly passing off. It is equally true that every such object, and every such substance is as constantly receiving life from surrounding objects or substances. Thus there is *a constant interchange of Life throughout all Nature*. This interchange of life is accomplished by virtue of a Law of Nature—what do I say? no, not by a Law of Nature, a phrase that is appropriated by Materialists, and made to signify “*a mode of action of Matter*”—an idea I do not wish to convey—but this interchange of life is accomplished by virtue of a law or commandment of God, who alone is the maker of all the laws by which the whole Universe, and every particular part of it, is governed. This subject, the interchange of life, I propose to illustrate more fully on another occasion. It is alluded to at present, in order to call attention to the facility and readiness with which it enables us to solve one of the most difficult problems in mental Philosophy, I mean that relating to the explanation of the phenomena of Perception. But two theories, I believe, have been proposed



in order to explain these phenomena: 1st. That there are certain little images, shadows, phantasms, &c., that pass from external objects, and make their impressions on the nerves of sensation, thus causing the perception of such objects by the mind. 2d. That the mind, on every occasion of the perception of external objects, proceeds to these objects, and by actual contact, becomes acquainted with their properties. Does not our idea, of *the constant passage of life* from external objects to the nerves of sensation, and through these to the mind, furnish a more satisfactory explanation of the phenomena?

(24.) In conclusion, let me refer to one other view of this subject. The life of living beings is the nerve-fluid, or its analogue, which we have already considered. The life of the earth!—is it not electricity? which, by its combinations, contributes to the formation of the atmosphere, the heat of the atmosphere, the clouds, thunder, lightning, rain &c.—and is not this life interchanged with the other Planets of our solar system, and with the Sun? The life of the Sun!—is it not Light, and is not this life interchanged with the Planets, and with other Suns? The revolutions of the heavenly bodies, in their orbits, and on their axes!—do not these appear to have been designed with a view to this *interchange of life*?

GEORGETOWN, *February* 22, 1855.

