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HORACE SEAVER, EDITOR.
JOSIAH P. MENDUM, PROPRIETOR.

[For terms, see seventh page.]

Original Communications.

For the Boston Investigator.

On the Development of Life.

EPIGENESIS OR EVOLUTION?

No. 2.

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We have seen that some of the ancient Grecian philosophers maintained that organized beings were, primarily, spontaneously generated out of one, or other, of what they considered primary elements of matter, which beings were reproduced by ordinary generation. Anaxagoras (whom Bayle calls the author of Panspermism, or the theory that all things proceed from an infinite variety of elementary seeds,) rejected the doctrine of one primary element being the origin of all things. He believed that only "like can act upon like." To explain *how*, and *why*, matter became fashioned into worlds and beings, he suggested the existence of Homœomeriæ, (similarities.) These are exceedingly minute animate and inanimate particles, infinite in number and eternal in duration. He supposed that all things were fashioned out of these by a NOUS, or Intelligence; not a moral Intelligence — a power, not personal — a force, acting on matter but in no way mixed up with the matter acted on.

The following is a statement of Anaxagoras's doctrine, by the Roman poet Lucretius:—

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But seeing that blood and bone can be produced from corn and other food, Lucretius replied:—

"But this is false; or through the mighty Mill,
From broken corn would bloody drops distill;
Or some such parts as in our bodies grow;
From herbs and flowers a milky juice would flow;
In broken clods each searching eye might see
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This doctrine, which maintains that flesh is made of molecules of elementary flesh, and bones of elementary bones, &c., may be absurd; but we must remember that the above statement of the doctrine by Lucretius is that of an opponent, and that no part of the doctrine has come down to us in the words of Anaxagoras. Anaxagoras affirmed that the senses are incapable of distinguishing the real elements of which things are composed; and, as he must have noticed that the simplest food, such as grass and corn, contains all that forms the bones, nails, horns, blood, flesh, nerves, skin, hairs, &c., of animals, the idea that all the above parts of animals may have existed in the grass as invisible molecules of bone, or blood, or nerve, is not more absurd than is the idea of some modern physiologists that infinitessimal drops of fluid and microscopic eggs out of which all the diversities of organized forms are developed, contain all the diverse parts which exist in the mature animal.

The Homœomeriæ or atomic doctrine of Anaxagoras was modified by Democritus. Accepting Anaxagoras's axiom that only "like can act upon like," Democritus supposed that all things, instead of being made up of many kinds of atoms with positive qualities, were made up of one kind of atoms possessing no quality but force; and that all the diversities of organized existence arose from diversities in the triple arrangement of the atoms as regards *configuration*, *combination*, and *position*, from which the phenomena of life, including those of mental force, arose.

This Hylozoic doctrine, that all matter lives, is essentially Atheistic; for Democritus said that mind and visible matter were formed of eternal, indivisible atoms. He included mind in matter, for he said there is naught but matter and empty space; and that atoms are eternal, and have spiritual and animal natures. Bayle says that Epicurus spoiled his system by not retaining Democritus's idea that all atoms are animated and spiritual. The hypothesis of such atoms would answer the objection as to how matter could think. Bayle says there is as good ground to suppose animated atoms as to suppose uncreated atoms having the virtue of motion.—Aristotle ascribed a self-moving power to atoms, which is quite as difficult to conceive as to conceive that they possess mental force.

Plato and Aristotle supposed that all things were made out of confused and unformed matter by certain existences which pre-existed the things formed. Plato called these existences "ideas" or "moulds;" Aristotle called them "substantial forms;" they determined the development of the new being in accordance with the particular "mould" or "form." The great number of "forms" and "qualities," distinct from matter, which were supposed by Aristotle and his followers to be essential causes in determining material forms, were rejected by the Natural philosophers in the 17th century. These philosophers adopted the ancient Epigenetic doctrine, which Aristotle had rejected, that all the alterations which happen in Nature are only new dispositions of the particles of matter by forces inherent in it.

A new turn was given to the discussion of the development of life by the Dutch anatomists, who, by means of improved magnifying glasses, discovered spermatozoa in the seminal fluid which they erroneously supposed to be animalcules, as they seemed to have a round head and

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Yours, &c., EBORACUM.

New Harmony, (Ind.,) Jan. 31, 1870.

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