**What is Life? History and Philosophy**

Read the following texts by Empedocles and Aristotle. While reading, keep in mind the following questions:

1. How do these definitions support, extend, or challenge your definition?
2. After looking at these definitions, would you make changes to your own?

**Empedocles (430 BCE)**

*Some of the earliest theories of life were materialist, holding that all that exists is matter, and that all life is merely a complex form or arrangement of matter. Empedocles, a Greek philosopher, argued that ever thing in the universe is made up of a combination of four eternal "elements" or "roots of all": earth, water, air, and fire. All change is explained by the arrangement and rearrangement of these four elements. The various forms of life are caused by an appropriate mixture of elements. For example, growth in plants is explained by the natural downward movement of earth and the natural upward movement of fire.*

**Fragments of Empedocles:**

“Now grows the One from Many into being, now
Even from the One disparting come the Many,--
Fire, Water, Earth, and awful heights of Air…
…And more than these there is no birth nor end;
For were they wasted ever and evermore…
And how, besides, might they to ruin come,
Since nothing lives that empty is of them?—
No, these are all, and, as they course along
Through one another, now this, now that is born—
And so forever down Eternity.”

**Source:**Empedocles., Leonard, W. Ellery. (1908). *The fragments of Empedocles*. Chicago: The Open Court Publishing Company.

**Aristotle (322 BC)**

*Aristotle was one of the first ancient writers to approach the subject of life in a scientific way. Biology was one of his main interests, and there is extensive biological material in his writings. According to him, all things in the material universe have both matter and form. The form of a living thing is its soul (Greek psyche, Latin anima). There are three kinds of souls: the "vegetative soul" of a plant, which causes them to grow and decay and nourish themselves, but does not cause motion and sensation; the "animal soul" which causes animals to move and feel; and the rational soul which is the source of consciousness and reasoning which (Aristotle believed) is found only in man. Each higher soul has all the attributes of the lower one. Aristotle believed that while matter can exist without form, form cannot exist without matter, and therefore the soul cannot exist without the body.*

**Aristotle on the Soul:**

“The nutritive soul then must be possessed by everything that is alive, and every such thing is endowed with soul from its birth to its death. For what has been born must grow, reach maturity, and decay-all of which are impossible without nutrition. Therefore the nutritive faculty must be found in everything that grows and decays.”

**Source:**Aristotle. (1935). *On the soul: Parva naturalia; On breath*. Cambridge, Mass.: Harvard university press.

How does David Christian’s definition support, extend, or challenge your own definition and those of Empedocles and Aristotle?  What parts of each definition are alike and which parts are different?