

## Development of Ancient Greek Process Thought

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### Abstract

In recent years, the ecological crisis makes people begin to be keen on Whitehead's process philosophy and Marx's process philosophy. The gradual rise of process philosophy is the need of the times. However, process philosophy has not been concerned by just one philosopher, but been demonstrated by philosophers since the ancient Greeks to modern times. This article focuses on analyzing the development of process thought in the ancient Greek period.

**Key words:** Process; Ancient Greece; Movement process

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### INTRODUCTION

In the face of modern crisis especially ecological crisis, people have increasingly concerned Whitehead and Marx' process philosophy. Therefore, what role does process philosophy play to the world and human development? Is it a boost to promote development of the times, or a barrier to hinder human development?

In the history of Western philosophy, philosophers in different periods and different historical backgrounds kept discussing that whether the world is a product of mind and substance, or is the world of the mind or substance? If the world is divided into mind and substance, then what is

the mind, what is the substance? What is the relationship between the mind and substance? Are they independent or affiliated to each other? Does the universe have a unity or purpose? Where do people come from? What are the relationships between people and nature, people and the world? Concerning these questions, Western philosophers at different periods have answered the series of questions from different angles. Since process philosophy answers the above questions from the movement process, I will analyze the issues with ancient Greek process thought.

The process thought of this period is mainly divided into three stages, among which Thales, Anaximander and Empedocles are the dominating figures of the first (early) stage; Heraclitus and Democritus are the dominating figures of the second (mid) stage and Plato and Aristotle are the dominating figures of the third (late) stage.

### 1. ANCIENT GREEK PROCESS THOUGHT IN EARLY STAGE

There was monism philosopher and pluralism philosopher in the early stage. Some philosophers thought that the world originated from the concrete objects, while some argued that the world derived from the abstract objects. Like monism philosophers Thales, Anaximander and Anaximenes thought that all things on earth originated from the concrete "water", the abstract "indefiniteness" and the concrete "air". Pluralism philosophers Empedocles argued that all things on earth derived from the composition or the decomposition of the four elements, water, fire, air and earth, under the action of love and struggle.

The process thought sprouted on the three main representatives of the Melisian School, Thales, Anaximander and Anaximenes, all of whom unscrambled the generation and the extinction of everything on earth with the process thought. Among them, Thales thought that "water" was the source of all things on earth, and

the process of the change of the world lied in the water, which makes all things and all things finally returns to water. That is to say, the changing process that water makes all things on earth. Anaximander believed that all things on earth didn't originate from the water, or any other known element but the "indefiniteness". The process that all things on earth born in and finally returned to the indefiniteness was an eternal movement. All things generated when the "indefiniteness" was differentiated into all things, which died out during the process of returning to the "indefiniteness", and the movement process of the generation and the extinction formed all things on earth. Anaximenes thought that all things on earth originated from the constantly changing "air". Russell discussed Anaximenes' views in his *History of Western Philosophy* that, "the soul is in the air; the fire is the rarefaction of the air; the air firstly becomes the water when condensed, and then the earth and finally the stone when re-condensed." (Russell, 2007, p.54) That is to say, the source of all things, the "air" is a continuously changing process that creates all things on earth in continuous changes of condensation and rarefaction. Empedocles was the first philosopher to propose the theory that the world was composed of multiple matters. He believed that the foundation of all things on earth was from four elements (fire, earth, air and water) and each of the elements was eternal. All things were created by the combination of the four elements, which and separated and lost because of these four elements as well. These four elements themselves hadn't the ability of combination and separation, and only love and struggle with ability of combination and separation could make it, among which love enabled these four elements to compose into all kinds of complexities in different proportions and struggle broke down all kinds of complexities. The eternal movement of love and struggle kept all things on earth changing constantly. That is to say, all things on earth grew out of the process of the eternal movement of love and struggle.

Therefore, both for the concrete monism, abstract monism philosophers and the pluralism philosophers, the theory of the origin of life cannot do without the movement when demonstrating the origin of all things on earth. All things on earth originate from and end at the movement process of the matters.

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## 2. ANCIENT GREEK PROCESS THOUGHT IN MID STAGE

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The main representatives of the mid stage were Herakleitos and Demokritos. Both of them thought that all things on earth generated in the movement process of matters, and all things generated and vanished in the eternal movement.

Heraclitus' thought process: All things on earth originated from the "fire", the world was a permanently

changing world, in which all things generated and perished in the flowing deformation.

The world equally treats all existences, which was not created by any god or anyone; no matter in the past, at present and in the future, it has been a mass of eternal fire, burning and being extinguished in a certain sense of propriety. (Ibid., p.72)

Zhao Dunhua has explained Heraclitus' thought process in his *A Brief History of Western Philosophy* accurately,

Attention should be paid to the two layers of meanings of the "origin", one is the active state (open fire), namely the fire burning and extinguishment; the other is the world order, which is the unchangeable principle, determining the proper limits for the activity of the fire, and keep its identity in all things. Such an origin is more complex than that of Bimilidou thought. It doesn't simply boil down the origin of the world to a state of change, but grasping the origin in the relationship between single and multiple and between eternity and change. (Zhao, 2001, p.12)

That is to say, the origin of the world can be grasped only during the movement process of the matters, and the movement process without matters is difficult to cognize the origin of all things on earth.

The meaning of Heraclitus' thought seems to be that: The original state of the world is the fire, which converts into all things and then all things turn into the fire. Therefore, the home to the world is the fire. The cycle and transformation of the fire and all things is said to be the movement of the fire; and the fire conversion into all things is the consumption and the extinguishment of the fire, all things conversion into the fire is the abundance and the burning of the wire. (Ibid.)

How does the "fire" control the movement of all things on earth? Zhao explained,

There are two aspects in Herakleitos' fire origin theory: the external origin is the form of the fire, which is the beginning and home of the world; the internal origin accords with the principles of the nature of fire, which determines the movement direction of the world (generation or involution), controlling the movement rhythm, and dominating the circulating conversion between the fire and all things. The external origin can be generated, destroyed and changeable; the internal origin is the same principle, playing a role in matters of various forms (including the form not for the fire). (Ibid.)

My interpretation towards this sentence is that, the origin of all things on earth is the "fire" and the "fire" itself has two properties: one, the fire has the plasticity and can be ever-changing. Two, there is an essence (just like the regulating bodily functions) in the fire, characterized by the perpetual movement, neither dying nor being born, and always existing in the fire. These two properties mutually exist and are indispensable, in other words, in the perpetual movement of the essence of the fire, it converts into a variety of complex materials in different time and different directions. In such a movement, the process that all things keep generating, perishing and re-generating has constituted the changeable world.

Demokritos' process thought is reflected in: He thought that all things on earth were composed of atoms that cannot be divided and move eternally. All things

on earth originated from the process of the disorderly eternal movement of countless atoms in the infinite void in different shapes and sizes. The number and variety of atoms infinitely existed in the universe according to the different shapes and sizes. The gap between the atoms was void, countless atoms had infinite void, and there was no different position of countless atoms in the infinite void (gap). It was precisely because there was a gap between the atoms that countless atoms could move in the infinite void.

How do atoms move in the void?

The atomic theory believed that countless atoms were firstly in the middle of a whirlpool, the heavy atoms rotated in the middle and combined into the earth, the light atoms were stranded on the outer sphere. The atoms crashed one another in the whirlpool, and atoms of different shapes combined together by hooking or entangling, or separated because of staggering or falling off. All things on earth generated due to the combination of the atoms and vanished because of the separation of the atoms. (Ibid., p.24)

Demokritos called the whirlpool movement of atoms as the inevitability, and he said that, “all things generate according to the inevitability”, “nothing generates randomly”. If he interpreted the “inevitability” as the opposing “reason” of the “randomicity”, these words expressed the reason of the generation of all things was the meaning of the movement of atoms. (Ibid., p.25)

This shows that, all things on earth generate in the eternal movement of countless atoms. Without the movement of atoms, generation of all things on earth is impossible.

Herakleitos and Demokritos’ origin theories originated from the movement process of matters, and all things on earth generated and perished in the movement process of matters. These thoughts had been absorbed and applied by the philosophers in the late stage.

### 3. ANCIENT GREEK PROCESS THOUGHT IN LATE STAGE

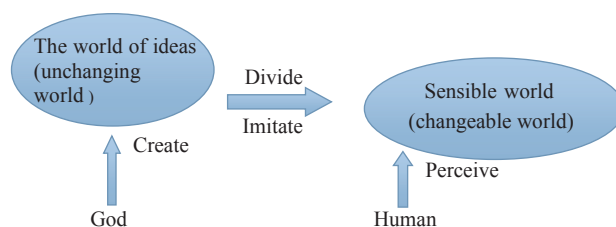
The main representative figures of the Ancient Greek Process Thought in the late stage were Plato and Aristotle.

Plato creatively integrated the thoughts of the elder philosophers, thus becoming the first philosopher in the Greek Period creating a complete theoretical system of philosophy. His basic idea is that: There was a world of idea (the thing that the eye of the mind can see) independent of the sensible world imitating and dividing the world of ideas. Goodness was the highest in the world of ideas, good at the arrangement and provision of the order of the sensible world and good at controlling the existence and the nature of all things were the sources of truth. That is to say, Plato thought that the world was divided into the world of ideas and the sensible world, in which the world of ideas controlled the sensible world. He explained the differences between these two worlds

with knowledge and opinions, in which the knowledge belongs to the world of ideas and the opinion belongs to the sensible world, the knowledge is the memory of the world of ideas, while the opinion is the reflection of the sensible world. Plato illustrated the relationship between the knowledge and the opinion with “division” and “imitation”.

Plato believed that the knowledge was the memory of the ideal world, because the world of ideas eternally exists and keeps unchanged, the knowledge was reliable and the truth; the opinion was the reflection of the sensible world which relied on people to perceive things to judge the existence of matters, the matters that could be sensed were regarded as things existing, and the matters that couldn’t be sensed were judged as things not existing, so the sensible world was changeable and then the opinion wasn’t reliable. The knowledge belongs to the world of ideas and the world of eternal existence; the opinion belongs to the sensible world and the changeable world.

Then how does Plato’s process thought reflect? Let me explain it with the following Figure 1:



**Figure 1**  
**Plato’s Process Thought**

Plato believed that the world was monobasic and created by the God, the God created the world of ideas (existence world). The world of ideas eternally objectively existed, and was the world that human senses couldn’t feel. Then how do people know all things on earth? Plato thought that there was a sensible world dividing and imitating the world of ideas. Therefore, the human senses could and couldn’t feel the existence of some things, so the changeable, sensible world (inexistence world) is unreliable, which divided or imitated the world of ideas and attached to the world of ideas.

As expressed by Plat’s process thought: Human senses perceive the changing complicated objects in the sensible world, these complicated objects come from the complicated objects dividing or imitating the world of ideas. The world of ideas was good at controlling the movement rules and orders of complicated things in the changing world. Without the he process of this kind of movement, people couldn’t perceive the matters in the visual world, thus failing to know the matters divided and imitated from the world of ideas.

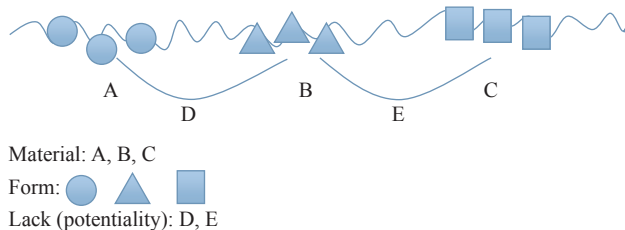
All unchanging things are cognized by the reason and sensibility, and all changing things are perceived by the opinion. Since the world is changeable, it couldn’t be eternal and must be created by God. In addition, Good is kind-hearted, so he created the

world according to the eternal model; he is not jealous, so he was willing to make things like himself as far as possible. "God desired to make things as good as possible, but not bad". "The whole visible world isn't static, but moving irregularly and disorderly, so God created the orders in disorderliness"... There is only a world... The world is a model created and was designed to meet the eternal origin understood by God as much as possible... It is rotating, because the movement of a circle is the most perfect; since the rotation is its only movement, it doesn't need to have a hand or foot. (Russell, 2007, pp.189-190)

The difference between Aristotle and Plato is that Plato took the ideas as the origin of the existence of all things, while Aristotle regarded the organism of the form and the material as the origin of the existence of all things. He believed that, "the whole universe as well as all things on universe continually develop towards the matters more beautiful than that in the past." (Ibid., p.218)

How do things move? What is the origin of the movement of things? Aristotle said,

The form, the lack and the material are the three origins of the movement. Material is the carrier of movement, which remains unchanged in movement. The form determines the state of things in movement. The lack determines the state of the movement; the lack is also a form, i.e. the form that things would have. Once a thing has a lacking form, it completes the change from one form to another, namely finishing a movement process. In general, the movement of a thing is to change from one state to another on the basis of the same carrier. (Zhao, 2001, p.60)



**Figure 2**  
**Aristotle's Movement of Matters**

As shown in Figure 2, A (circular), B (triangle), C (square) have the same material, and ABC that we see by the naked eyes is just the same material with different forms (the material remains unchanged in movement). Why does the material change from form A to form B and then from form B to form C? This is because the material A is a material that a thing would have under the action of the lack (the lack is a form that a thin should have but hasn't had yet. In other words, the lack is a material form with the driving force that we cannot see by the naked eyes, which we can call the potential object. ) Drive the material A to change into the material B and then to the material C. D, E is the process of material A changing into material B and then to material C, which is the form of the potential object that we cannot see by the naked eyes, the potential object has the driving force, i.e. the ability to drive the change of material form.

Aristotle used the relation of reality and potentiality to explain the movement process of matters more clearly,

The potentiality is potentiality the "lack", the form that a think should have but hasn't had yet, while the reality is the form that a thing has already had. The conversion from the reality to the potentiality is the conversion from the lacking form to the actual form. (Ibid., p.60)

Aristotle summed up the movement process of matters as the following four aspects:

(a) The lack not only determines the direction of movement, but also the proficiency to move in this direction. The guts of things are to realize their own aims.

(b) The potential realization is temporary, when a potential form is realized; another potential form appears, thus constituting the continuity of movement.

(c) The potential realization is relative and the movement in each stage cannot fully realize the potential factors.

(d) The potentiality is also equivalent to the same material; the carrier is the potentiality that cannot be realized, thus it remains unchanged in the whole movement process (Ibid., p.61).

In terms of the movement process of things from the potentiality to the reality, Aristotle inserted the role of God herein, that is, the first force to promote the conversion from the potentiality to the reality was the God. Herein Aristotle made a note of the infinite regress. Starting from the first driving force of the movement, the God, Aristotle explained the relation between the spirit (God) and the soul, in which reflected the Aristotle's thought of an organic whole.

Aristotle believed that the spirit was more advanced than the soul, as the spirit was bound by the body while the soul wasn't. The spirit didn't consider the reality, thus not the reason for the movement of all things. The spirit wasn't related to the body or the feeling, and with a higher thinking ability, it was eternal. The soul combined with the reality, thus it was the reason of the movement of all things. Soul was the "form" of the body, an object only can become an object as long as the soul attaches on it, and objects without soul haven't got a form. In other words, the organic unity of the soul and the object can be called the object, which has the purposiveness. What should be emphasized herein is that the organic whole is reflected in that an object endowed with the soul can be called the object and the soul gives the object a form.

The organic whole of soul and object can also interpret Aristotle's process thought: the existence of all things on earth is that various complex materials are endowed with the soul (I personally think, the soul that Aristotle referred to is a form of the potential object that cannot be seen with the naked eyes and is the continuously moving object in movement process), due to the movement of the soul, an object turns from the potentiality to the reality and has the form, without the soul, various complex matters cannot turn from the potentiality to the reality. The never-ending movement of the soul creates all complex matters

on earth. So, all things on earth originated from the organic whole of soul and object. As said by Russell, “the most essential feature of the soul is that the soul becomes the ‘form’ of the body for this reason, and it enables the body to become an organic whole, and has its purpose as a unified body.” (Russell, 2007, p.223)

Obviously, Plato and Aristotle’s process thoughts are inseparable from the movement, or people can neither perceive anything in Plato’s visible world nor sees the real thing in Aristotle’s world.

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## CONCLUSION

In summary, whether the constitution of all things on earth is monobasic or polybasic, whether the constituted things on earth are concrete or abstract, they are the all things generating in the movement process. The process

without the movement cannot produce all things on earth.

The process thought in ancient Greek period has laid the foundation for the coming linear process thought of middle Ages, the process thought of modern epistemology, the process thought of modern life and the process thought of post-modern pluralism. In the face of new problems in the new era, the ancient Greek process thought is an extremely powerful argument for solving the problems in different times.

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