

Special Issue on 'Ideas of Plato in the Philosophy of the 21st Century': An Introduction

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Plato is one of the top philosophers of all times and all nations. Ideas of Plato and his teachings have influenced the development of the Western philosophy during all its history. In addition, Plato has had an essential impact on many scientists and mathematicians. For instance, some outstanding thinkers of the 20th century, such as the philosopher Karl Raimund Popper (1902-1993), mathematicians Charles Hermite (1822-1901), Rene Thom (1923-2002) and Kurt Gödel (1906-1978), logician Gottlob Frege (1848-1925) and physicist Roger Penrose (1931-), believed that the World of Ideas advocated by Plato existed. They and other researchers gave various interpretations of this world but suggested no ways for their experimental validation and scientific identification.¹

Moreover, Platonic philosophy belongs to the very foundation of the Western civilization directly or indirectly effecting human culture as a whole. Having its proponents, adherents and opponents, Platonic philosophy served as a motivating engine for the development of intellectual sphere of society in general and philosophy in particular.

Some of Plato ideas were so ahead of his time that only recent times, i.e., millennia after their introduction, they got scientific explanation and grounding. For instance, one of the main achievements of Plato was his fundamental teaching, in which he asserted that the world as a whole consisted of two realms: the *physical world*, which people could comprehend with their five senses, and the *World of Ideas* or *Forms*, which people could comprehend only with their intellect, or in other words, by thinking.² This teaching on Ideas or Forms is at the heart of Plato's philosophy shaping his views on knowledge, epistemology, ethics, esthetics, psychology, sociology and political teachings.

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1. Rafael Capuro, and Birger Hjørland, "The Concept of Information," *Annual Review of Information Science and Technology* 37, no. 8 (2003); Karl Popper, *Objective knowledge: An evolutionary approach* (New York: Oxford University Press, 1979); Popper, "Replies to my critics," in *The Philosophy of Karl Popper*, ed. Karl Popper (La Salle, IL: Open Court, 1974); Popper, *The Logic of Scientific Discovery* (New York: Routledge, 1965); Roger Penrose, *Shadows of the Mind* (Oxford: Oxford University Press, 1994); Peter Skagestad, "Thinking with machines: Intelligence augmentation, evolutionary epistemology, and semiotics," *Journal of Social and Evolutionary Systems* 16 (1993).

2. Plato, *The Collected Dialogues of Plato*, ed. Edith Hamilton, Huntington Cairns, and trans. Lane Cooper (Princeton: Princeton University Press, 1961).

Creativity of Plato was so great that he was able to synthesize opposite doctrines and beliefs. In particular, he integrated the doctrine of Parmenides of Elea (ca. 515-ca. 450 B.C.E.) about the static unchanging reality, the canon of Heraclitus of Ephesus (535-475 B.C.E.) that life is an everlasting change and transformation, and the teaching of Democritus of Abdera (460-370 B.C.E.) about atoms, which Democritus also called forms. Indeed, the ontology of Plato included the eternal unchanging World of Ideas, the dynamically changing world of material things and structural atoms of the world in the form of triangles.

In spite of the great interest in the philosophy of Plato in general and in the world of Ideas in particular, for a long time, neither philosophers nor other researchers were able to explain clearly and consistently what Plato Ideas are. The enigma of this world constituted one of the longest standing philosophical and scientific problems in the history of humankind.

Only recently, that is more than two millennia after Plato, it was discovered that the concept *structure* provided the scientific representation of Platonic Ideas, while the existence of the World of Structures, which could be naturally equated to the World of Ideas, was postulated and proved.¹ It is interesting that although Plato postulated existence of only two worlds – the World of Ideas and the world of material things, his structure of the world as a whole is triadic containing the world of thoughts, or in the contemporary terminology, the Mental World, which allows people to make contact with the World of Ideas.

The depth and breadth of Plato's works make them important for our time. The best thinkers continue to find inspiration and ideas in these works relating them to reality of the contemporary civilization.

In this special issue, the *Athens Journal of Humanities and Arts* presents contemporary philosophical research demonstrating how the philosophy of Plato is allied to many important issues in modern society, such as education, ecology, and cognition. All papers are published in the alphabetical order of authors' names.

As we mentioned before, the key element of the philosophy of Plato was his fundamental teaching about the *World of Ideas*. In spite of the great importance of this World, neither Plato nor consequent philosophers and other researchers were able to explain clearly and consistently what Plato Ideas are and only recently this problem got a scientific solution.²

In his paper "An Interpretation of Plato's Idea and Plato's Criticism of Parmenides according to Peano's Ideography," Giuseppe Boscarino suggests another interpretation of Plato's ideas using symbolism of mathematical logic,

1. Mark Burgin, *Theory of Named Sets* (New York: Nova Science Publishers, 2011); Burgin, "Ideas of Plato in the context of contemporary science and mathematics," *Athens Journal of Humanities and Arts* 4, no. 3 (July 2017).

2. Ibid.

which is utilized in works of the well-known mathematician and logician Giuseppe Peano (1858-1932).

Besides, Boscarino analyzes essential differences between philosophical teachings of Plato and the Pythagoras. His approach is based on the opinion of Aristotle, who wrote:

*"... the Pythagoreans say that things exist by "imitation" of numbers, and Plato says they exist by participation, changing the name. But what the participation or the imitation of the Forms could be they left an open question. Further, besides sensible things and Forms he says there are the objects of mathematics, which occupy an intermediate position, differing from sensible things in being eternal and unchangeable, from Forms in that there are many alike, while the Form itself is in each case unique. ... so is his view (Plato, ours) that the Numbers exist apart from sensible things, while they (Pythagoreans, ours) say that the things themselves are Numbers, and do not place the objects of mathematics between Forms and sensible things. His divergence from the Pythagoreans in making the One and the Numbers separate from things, and his introduction of the Forms, were due to his inquiries in the region of definitions."*¹

In addition, Boscarino analyzes the content of Plato's dialogue Parmenides using Peano's form of the logical symbolism. It is possible to find additional material on these issues in other publications of Boscarino.⁶

For millennia, the best thinkers of the world have tried to solve the problem "What is the world made of?" At first, philosophers tried to solve this problem. Then physicists started their search. Plato made an important advancement in this direction synthesizing ideas and approaches of Presocratic philosophers and introducing new ideas and conceptions. According to Plato, the structure of the world is hierarchical and most basic level in it is formed by two kinds of triangles. However, in the light of modern physics, which studies the most fundamental regularities of the universe, this scheme looks ungrounded and ridiculous.

In his paper "Platonic Triangles and Fundamental Triads as the Basic Elements of the World," Mark Burgin suggests a new scientific interpretation of Platonic triangles associating them with fundamental triads of two types – basic fundamental triads and bidirectional fundamental triads, for which it is proved that according to contemporary physics, everything in the physical world is built of fundamental triads.²

1. Aristotle, *The Complete Works of Aristotle*, ed. Jonathan Barnes (Princeton: Princeton University Press, 1984).

2. Giuseppe Boscarino, *The mystery of Archimedes. The tradition of Italic thought of science* (Roma: Aracne, 2017).

7. Burgin, *Theory of Named Sets*.

The concept of Platonism has acquired various interpretations throughout history but, generally, it has been associated with those thinkers who have accepted, with different variations, the World of Ideas advocating existence of immaterial, universal and transcendent entities called Ideas or Forms. At the same time, several philosophical directions, such as nominalism, existentialism or postmodernism, have opposed this type of thinking in ways that they might be considered to be anti-Platonic.

In his paper "Platonism as a Philosophical Method," Ignacio García Peña suggests a new vision of Platonism demonstrating that it is not a specific conception but a way of understanding philosophy itself. Plato presented his philosophical ideas in a variety of dialogues and their main feature is the constant need for discussion and criticism which further develops the Socratic method.¹ That is why, some philosophers, such as Karl Popper, stressed the importance of conceiving philosophy as a process of a constant search for knowledge based on a sceptical and critical attitude. This serves the base for the innovation of Peña with respect to the concept of Platonism making it very useful in the contemporary areas of education, ethics and politics. Rethinking the philosophy of Plato may allow improving understanding, teaching and practicing philosophy more fruitfully.

Analyzing philosophy of Plato and his followers, we can call the traditional approach to Platonism by the name *Ontological Platonism*, while the approach contended by Peña is reasonable to call *Epistemological Platonism*. It is also possible to explicate *Ethical Platonism* based on the works of Plato although during his long life, Plato discussed different ethical beliefs and values.

In her paper "The *Symposium* and the Role of Literature for Epistemic Development," Susanna Saracco shows how to use the dialogue *Symposium* as an instrument for the epistemic development of the reader. It is possible to achieve this goal because Plato's texts require completion by its reader through collaboration between the reader and the text. She argues that the Plato's works are constructed by Plato in such a way that to facilitate intellectual growth and intuitive insight. Plato's texts display a higher-order pedagogy being not didactic, two-dimensional texts, in which the ideas of their author and the words that he uses to express his thoughts form a two-dimensional semantic space. In addition, Plato requires the intellectual activity of his readers, which forms the third dimension adding interactive features to Plato's work.

In his paper "A Problem in Plato's Hagiography of Socrates," Nicholas Smith analyzes Plato's description of Socrates as an ideal person. Smith attracts attention of the reader to the ostensible contradiction in this description, which can be expressed by the following trilemma:

1. By Plato, Socrates is an exemplar of virtue.

8. Plato, *The Collected Dialogues of Plato*.

2. By Socrates, virtue is a kind of knowledge.
3. Socrates lacks knowledge by his own declaration in Plato's dialogues.

Smith shows how it is possible to eliminate contradiction by understanding that knowledge has different gradation and is relative. Based on this assumption, Socrates qualifies as the wisest and the most virtuous of human beings because in comparison with others, he works the hardest (and is at least to some degree reliably effective in his efforts) to improve and extend his knowledge.

In his paper "Plato, Environmental Sustainability, and Social Justice," Mark Stone analyzes the way Plato connects environmental sustainability to social justice and political stability in the first two books of the *Republic*. He addresses elements that are central to environmental sustainability that are tightly integrated to social justice and political stability. I will examine the way in which Plato develops this view and defend it against several criticisms. We will see that his view amounts to the strong claim that any just society will be environmentally sustainable. This is true whether the conception of justice like Plato's based on justice as a virtue of a person or on justice as a property of a political institution. Stone concludes that environmental sustainability alone is not enough to ensure that solutions to environmental problems are just.

In their paper "Turning the Soul: An Investigation of Georgios Gemistos Plethon's Teaching Methods and Educational Philosophy," Theodore G. Zervas and Isaias Rivera explore Georgios Gemistos Plethon's teaching methods and educational philosophy, whose ideas later influenced other scholars in both the Latin West and Greek East and who was interested in teaching Plato's philosophy in its purest form, even if it challenged the Church's beliefs.

The authors start their exposition with a brief biography of Gemistos (ca. 1355–1452) demonstrating that he encouraged teaching of classical Greek philosophy in general and Plato in particular and advocated revival of the ancient Greek world. Later Gemistos changed his name to Plethon, in honor of the ancient Greek philosopher Plato, whom he admired. He was well versed in the writings of Homer, Zoroaster, Strabo, Aristotle, and Plato, and was even appointed by the Byzantine Emperor John VIII Palaiologos (1392-1448) to serve on the Greek delegation at the Council of Union in Ferrara and Florence in 1438/39.

After this, Zervas and Rivera describe the general structure of Byzantine education, which was divided into Outer and Inner Learnings, explaining 14th and 15th century Christian perceptions of ancient Greek learning. In addition, the authors investigate Gemistos's teaching methods and how Plato's notion of "turning the soul" may have influenced Gemistos understanding of how students learned best. The authors also explore Gemistos's educational philosophy, his views on Plato and Aristotle as well as his religious beliefs and how all this may have impacted his teaching. This paper concludes with a discussion of Gemistos's lasting impact on education and learning.

All works from this issue persuasively demonstrate importance of ideas of Plato for the philosophy of the 21st century.

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