

What might have motivated Plato to write the *Timaeus*

Chiye IZUMI

The cosmological claims in the *Timaeus* rely heavily on the achievements of stereometry in the fifth century, including the theory of the two mean proportions (*Timaeus* 32a1-c4), the method of constructing the five regular solids (*Timaeus* 53c4-55c6), and the mathematical characteristics of the regular solids (*Timaeus* 55d8-56e7). These ingredients form a crucial part of the metaphysical foundation of the *Timaeus*. One of the cosmological claims demonstrated by stereometrical ideas is the *de facto* indestructibility of the universe. The stereometrical ideas relating to this claim are those of the theory of the two mean proportionals, and the method of constructing the regular solids. The theory of the two mean proportionals introduces an original idea concerning the nature of the bond that unites the primary bodies. While in Empedocles the cosmic bond is 'love', what we have in the *Timaeus* is 'geometrical proportion', which is described as the fairest of bonds (*Timaeus* 31c2). This secures the *de facto* indestructibility of the universe at one level. But then there is also a second level at which the mathematisation of the account helps Plato's claims. If we consider the smallest grades of the triangles, they cannot be reduced to any more ultimate units. They are the basic building blocks from which other triangles are constructed. The triangles, in general, are the mathematical entities. They are not subject to destruction, even though recombination is possible. But when smallest units of all are concerned, we are dealing with ultimate elements.

In addition to the above points, we should not fail to remark that stereometry in the *Timaeus* might have a significant relation with the mathematisation of a number of Plato's privileged concepts. We must be aware that the 'goodness' and 'beauty' are linked with mathematical concepts, symmetry and proportion. This link seems to be endorsed already by the creation of the body of the universe where the Demiurge gives it beauty in terms of mathematical proportion and symmetry, using the theory of the two mean proportionals (*Timaeus* 32a ff.). The mathematical foundation of goodness and beauty is also to be observed in the *Philebus*, and in this respect the *Timaeus* can be compared to the *Philebus*. The *Timaeus* can be construed as an exhibition of those mathematical achievements unknown to the Athenians including Socrates.

Based on the method of *metapherein*, Plato seems to have translated the Socratic motif 'Care for the soul' from the Homeric realm of *Hades* to the mathematical *Cosmos*. Connecting the ideal citizens to the Athenian ancestors originated from the newly born human being depicted as a heavenly plant (*Timaeus* 90a5-7), Plato might have dedicated the cosmological myth to Socrates who deplored the Athens and said 'it would be pleasant to spend my time testing and examining people there in the *Hades*' (*Apology* 41b).