

LEONARDO'S PLATONIC POLYHEDRONS

This group of geometric shapes are those rendered by Leonardo in his only illustrated book. The set of related forms represents the "Four Elements" (Fire, Air, Earth, Water) and the non-material "Ether" from which all matter is said to condense. Seen next to this set of brass polyhedrons is a rare edition of Dante's Divine Comedy that was illustrated by Botticelli, Leonardo's older contemporary and the only artist mentioned in Leonardo's manuscripts. Botticelli worked on these illustrations for many years in the late 15th century, just as Leonardo was illustrating his book. Botticelli's lyrical approach to The Transcendent was figurative. His images picture the journey of a soul in the form of a man (Dante himself) who is guided through stages towards the starry heaven by a loving spirit (Beatrice).

Leonardo also used human figures as metaphors for how consciousness can attain a heavenly state of eternal bliss by linkage with The Transcendent. For example, his "St. Jerome" moves toward heaven by meditating in the desert. His agony is the pain of overcoming the selfishness of ego. His ecstasy is the bliss that follows the victory of the soul. In Leonardo's picture of the "Annunciation" Mary's soul is already open to receiving the impregnating Light of God because of the purity of Her spirit. She has become all-loving. Mythologically speaking, Her virginity is a "virginity" (or purity) of the soul which qualifies Her to "marry" the Heavenly Father. At another level, Catholic nuns also are said to "marry" Jesus.

Leonardo also had a special feeling for geometric symbols of The Transcendent. The cosmic symbolism of these five polyhedrons derives from Plato who probably continued it from Pythagoras. These five regular polyhedrons, the only polyhedrons that have equal sides, represent the so-called "Four Elements" (Fire, Air, Earth, & Water) and Ether. It is from infinite, luminous, non-material Ether that the material world is said to descend. In traditional metaphysics, Air, Earth, Fire, and Water are not "elements" in the modern chemical sense. Rather they are the four "conditions" of matter: liquid, solid, etc.

Among philosophers, this special group of five geometric forms is called the "Platonic Solids," and Leonardo illustrated them as solids. However, Leonardo also illustrated them as voids contained only by edges. This is the first time such illustrations are known to have been made. They enable one to "see" all sides of each form at the same time. Pacioli used models, much like those you are looking at, to teach geometry and metaphysics. The city of Milan found these models. and what they represent, to be so important that they displayed a set of these polyhedrons in the city hall.

There is more to these visualizations of how the material world is constructed than mathematical beauty. Leonardo's highly developed metaphysical system includes what he called "nothingness" at the core of every "thing" that is. These so-called skeletal drawings appear to reflect this insight. That there is a non-material dimension called "no-thing" at the center of "everything" is a very uncommon way of perceiving the universe in the Western World but is very common in the Eastern World of Taoism, Hinduism, and Buddhism.