



The Concept of the Artistic Canon in Ancient Art as an Example of the Implied Logic in the Aesthetic Experience Unfolding

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Abstract. *The aim of the article* is to develop the cognitive stand claiming that the ontological concept of *logos*, while viewed as a funding and constitutive number, does lie indeed at the very core of all creative processes. The phenomenon can be immediately recognised in logical relational thinking which, paraphrasing Eli Siegel (n.d.), reveals where things have to do with each other, what are their points of sameness and difference and accordingly, relation in art is the revelation of how the objects have to do with each other. Thus, first and foremost, the mathematical ratio is called in this frame of reasoning a *canon*. Its visual evidence being discussed in the ongoing research is the shape of the ancient Greek vase and its mathematical construction. **Results.** In the act of the aesthetic perception, together with a producer of the piece of art, yet in a diachronous, say historical way, the onlookers are entering, if intentionally, a stream of a creative process. At that very moment they are diachronically experiencing the same powerful mathematical laws that were set in motion by the artist that was once determined to render the working of this material world. Such a phenomenon points to the fact that great pieces of art have a significant impact on the human mind with their ability to both restore and maintain an order in the human psyche, every so often disturbed by multifarious, both internal and external, factors. **Scientific novelty.** Although this article is embedded in the so far existing research work on the dynamic symmetry of the Greek vase, carried out by J. Hambidge in the 20th century, nevertheless, it brings an independent academic outcome that results from the author's previous research into overlapping lines of the aesthetic experience and the feeling of the sacred. Moreover, the study in question approaches a subject matter being researched from the strict neuroaesthetic perspective. The nature of mind and a monistic concept of the human being are discussed while it is offered to follow phenomenologically a development of the aesthetic experience that had been structured in its consequential course by Roman Ingarden (1966). **Conclusions.** Logic is an exercise of thinking even if its theorems and workings are not so explicit in the body of the piece of art, but are hidden under the surface of the masterworks created by a gifted and skillful personality. Logic aims at purifying the human mind, atuning it with the universal ontic laws. Practicing logic in whatever way, through contemplation of art in the first place, it proves the human's mental endeavour to restore the unity of the world that *logos* entrenches and safeguards.

Keywords: *logos; dynamic symmetry versus static symmetry; canon; nature of the aesthetic experience; human's transformation through art*

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Mottos

Logic can be seen as the getting to truth through seeing the differences and samenesses in reality and in one's mind. Art, likewise, is an arrangement of differences and samenesses. Relation in logic shows where things have to do with each other; what they have in common; relation in art is the showing of how objects have to do with each other.

Eli Siegel (n.d.)

There is no essential difference between the plan of the Greek vase and the plan of a Greek temple or theatre, either in general aspect or in detail.

Jay Hambidge (1920)

Introduction

A cogent rapport between logic and aesthetics is of cognitive character. Such a correspondence manifests itself through notions of mathematics if we mean an abstract or theoretical correlation of material elements within a given artistic structure, be it a sculpture, a canvas or dance, singing and a musical performance. Although the latter belong to arts perceived as invisible and elusive, their phenomenal reality can be nevertheless measured with choreological and musicological tools. The ones that were invented for estimating mathematical ratio ("Ratio", 2024)¹ in a rhythmical performance that is subjected to the flow of time, be it dancing, chanting or singing and producing music. Assuming that the modern theory of art has been dealing with a variety of philosophical approaches that investigate the same ontic root of logic and aesthetics (Goodman, 1976)², my approach is to prove that the epistemological stand I champion here has got more ancient pedigree. The congeneric standing point of mine which I share with early thinkers of Antiquity is assumed for the purpose of this research and it has been discussed at length in the author's post-doctoral research work (Mond-Kozłowska, 2011). It does aim at studying the mathematical way of perceiving reality, and it provides many substantial arguments for congruence of the two, that is logic and aesthetics. It is worth adding that our approach finds itself in the stream of thought that seeks to balance working of mind and intuition or heart in the frame of the thinking body (Todd, 2008)³. The latter term indicates the human being as he or she has been perceived in field of neurophysiology from one side and dance scientists, from the other. Undeniably, the things created and their Demiurge are bound to each other through the very act of creation. Such a metaphysical bond, being unseen by its nature, does exist indeed and, probably, it might be traceable in the realm of the aesthetic experience. In other words, in the act of perception founded by some cognitive relation between the subject perceiving, 'I', and the object being perceived, 'it', in the unfolding and dynamic rapport between them. Being lived fortamente with masterworks of anonymous artists in the first place, when the artistic message is almost

impeccable as untainted by the creator's ego being advertised, and without being disturbed by facts from the artist's biography. As we recall Roman Ingarden, 1893–1970, had been approaching the sentient 'I' that responds actively to aesthetic stimuli from the phenomenological stand. His contribution to aesthetics has been invaluable as for defining some necessary conditions that are able to trigger the whole responsive cycle in the human organism. Although his research data came essentially from literature, music and architecture, nevertheless, he succeeded in rendering the universal character of developing interrelated stages of the human's aesthetic experience, ensuing successively one from another (Ingarden, 1966). The introspective character of Ingarden's (1966) explorative endeavour has been endorsed and extended recently by the findings of contemporary aesthetics and its new branch which is neuroaesthetics. The latter being a scientific study investigating the neural consequences of contemplating an impressive work of art, especially the evolvment through the process of aesthetic experience of the prefrontal cortex (responsible for thinking) and limbic system (being in charge of emotions). To be precise, the neuroscience data being gathered, they explain what happens in the brain (extended notionally by a monistic concept of the thinking body), while one produces a piece of art or contemplates it in whatever shape or form. Needless to say, the naturescapes and natural phenomena can be a powerful and transforming source of a sweeping aesthetic experience too. It is no wonder that cognitive gains in the field of humanities as represented by the theoretical stand of the Polish phenomenologist have been informing modern exact science data these days, when they go in service of the society. Indeed, the import and beauty of neuroaesthetics lies in evidencing that art is capable of instructing, entertaining, healing and transforming a human. The ensuing question arises inevitably in here and now, *how can this happen*, if we mean probative and unassailable data and rational methodologies that are followed by watertight inferences.

Pottery as such. It is a companion to the mankind from the earliest twilight of the human civilisation, when our remote ancestors succeeded in mastering four elements (earth, fire, water and earth), and

¹ Let us recall that in mathematics a ratio shows how many times one number contains another. The numbers in ratio may be quantities of any kind, such as counts of people or objects, or such as measurements of lengths, weights and time. In most contexts, both numbers are restricted to be positive. A ratio may be specified either by giving both constituting numbers, written as 'a to b' or 'a:b', or by giving the value of their quotient in the form of the fraction. Equal quotients correspond to equal ratios. A statement expressing the equity of two ratios is called a proportion. Consequently, a ratio may be considered as an ordered pair of numbers, a fraction with the first number in the numerator and the second in the denominator, or as a value denoted by this fraction. Ratios of counts given by (nonzero) natural numbers, are rational numbers and maybe sometimes be natural numbers ("Ratio", 2024).

² A classic of analytical aesthetics or aesthetic cognitivism, points to symbolic nature of art and its referential relations that are grounded in the denotation and exemplification modes of reasoning (Goodman, 1976).

³ The notion was introduced by Mabel Elseworth Todd (2008) in her *The Thinking Body*. It is the classic in the study of human physiology and the reciprocal effects of psychological and mental processes on human movement, and vice versa.

eventually they were capable of setting up a bonfire, then invented a primitive furnace, a prototype of a later *kiln*⁴. The so far oldest shreds of the prehistoric clay containers have been found in China and Japan, dating from a period between 12.000 and perhaps as long as 18.000 years ago. As of 2024, the earliest pottery vessels found anywhere in the world, dating to 20.000–19.000 years before the present. They were found at Xianren Cave in the Jiangxi province of China. On the outset, it would be helpful to distinguish two main usages of clay vessels, namely the household wares from the ritual pottery. The former, such as oil, wine and beer mugs and water jugs, but also bread moulds, fire pits, lamps, and stands for holding round containers they were used for the storage, preparation, transport, and consumption of food, drink, and raw materials. The latter, occurring massively in the an-

cient graves, had been placed in tombs as grave goods to accompany the deceased into the afterlife. This practice is religious by its nature. It refers to universal beliefs in the afterlife that required a provision for the dead. A tomb pottery included as well clay items the deceased would need in the afterlife. Its variant form is a votive pottery offered to a god or a goddess at sacred places in fulfillment of man's vow. It was offered in gratitude or devotion and, more often than not, made to gain favour from gods, displaced or deposited without the intention of their recovery or use. Predominantly, they are self-forgetful offerings marking sheer adoration and love in the interchange between a human being and his/her Creator. Both kinds of the ceramics being discussed can be invariably and widely found in necropolia (Fig. 1).

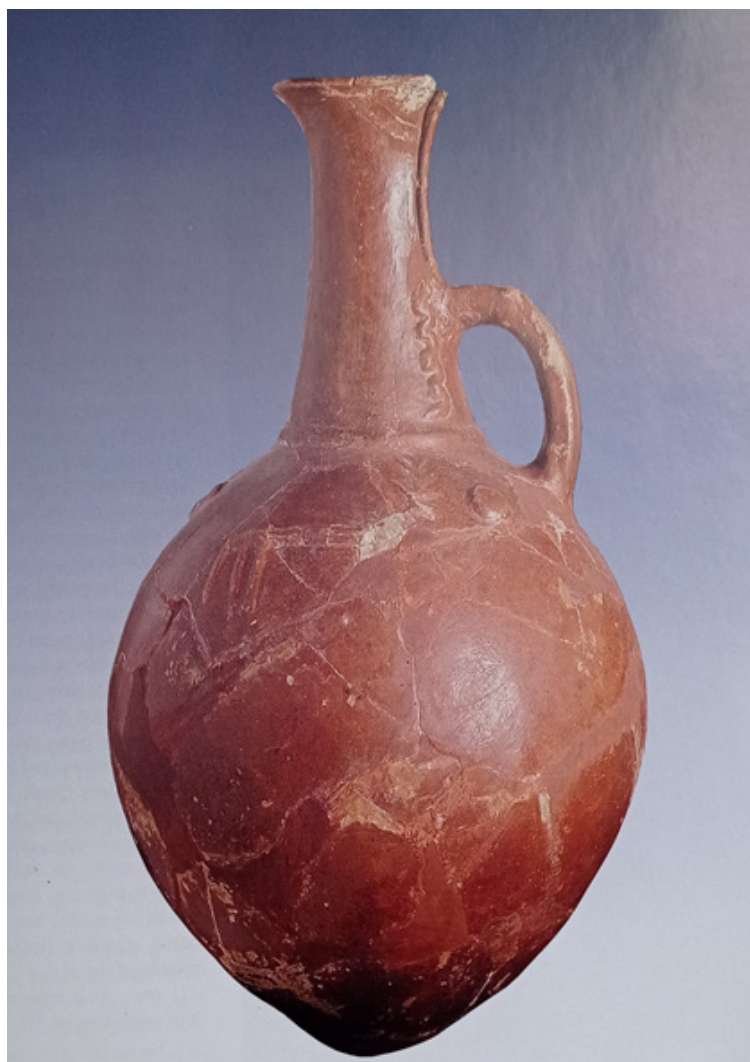


Fig. 1. A Red Polished III ware natural height 57 cm, the diameter preserved is 33 cm, a globular body, narrow flat base, Early-Middle Bronze Age period, 1900 BC, the provenance unknown, donated to the Department of Antiquities in 1985. The Inventory Number 1985/H-9/1, Cyprus Museum in Lefkosia /Nicosia, Republic of Cyprus
Source: photo by Wiesna Mond-Kozłowska, Cyprus Museum in Lefkosia/Nicosia, Cyprus

⁴ A kiln, from Latin *culina*, kitchen, cooking stove, is a thermally insulated chamber or a special kind of furnace or oven for firing things like pottery or bricks. There a controlled temperature management is produced.

Some visible decorations on the shoulder include the two relief deer/stags (identified as a species *Dama mesopotamica*), then a relief ring at the base of the jug's neck and a serpent-like decoration on the either side of the handle symbolise in the Old Cypriot tradition chthonic deities. Near the stag's head there is a protuberance in the shape of the sun or full moon. The body of the jug shows an ideal ratio of 1:1, suggesting a vibrant dynamic circle, inscribed in a constant square. The conical bottom required a stand so the vessel could contain water, wine or olive oil. Its breath-taking shape results from perfectly balanced proportions of the jug's elements (body, neck, handle, opening). The latter resembles the human mouth or a bird's beak. A brilliant masterpiece, the product of profound mathematical knowledge, skilfully internalised and backed by an expert pottery technique.

The Cypriot jug's proportions are the miniature version of the proportions of the human body as examined by Władysław Tatarkiewicz on the example of the marble sculpture of Pythian Apollo or Apollo Belvedere. The second century Roman copy (held in the Vatican City Museum) of an original bronze statue, created between 330–320 BC by the Greek sculptor Leochares from Athens (Fig. 2).

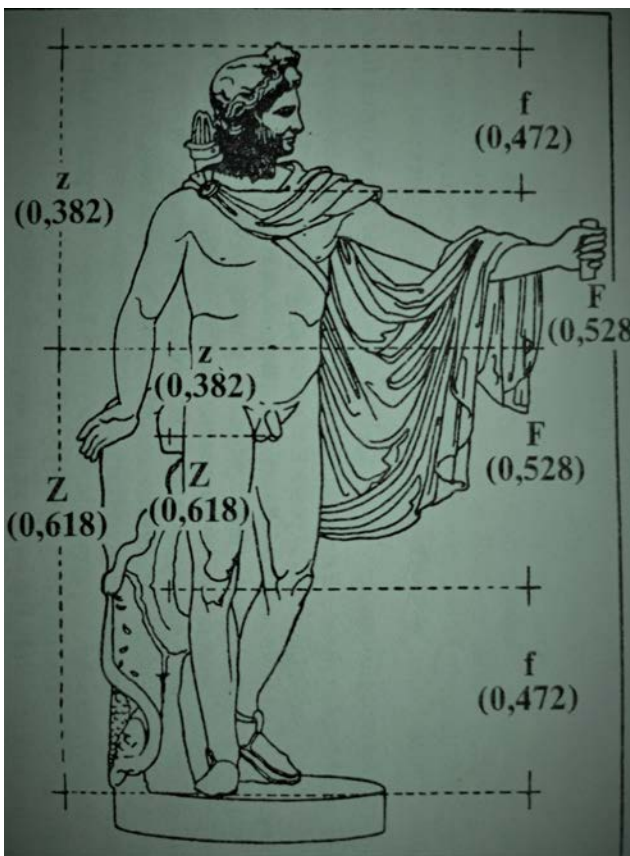


Fig. 2. Proportions of the human body rendered by the golden section ratio.

Source: From W. Tatarkiewicz, *Studies in Aesthetics*, Vol. 1 (Tatarkiewicz, 1970)

The ancient masters derived the fundamental ideas of the measures from the limbs of the human body, as we can observe below in the anthropocentric system of measurement used in Ancient Greece (Fig. 3).



Fig. 3. An Ancient Greek relief of a man with arms outstretched, cut with hammer and chisel on a triangular, marble slab between 460–430 BC. Found in 1625–1626 in Turkey or Greek islands. On display at Ashmolean Museum, Oxford. Source: ("Metrological Relief", 2024)

Another metrological relief from Salamis presents the anthropocentric measurement system in a more detailed way. It can be seen in the Archeological Museum in Piraeus, Greece. It is a limestone slab with carvings of various measurement units of antiquity displays; an arm-span, a cubit, a hand-span, a rule between the arm span and the cubit, and a foot. It was detached from the chapel on the island of Salamis (Fig. 4).

It is worth mentioning that the pottery of ancient Cyprus dates to the Neolithic period. Throughout the ages, Cypriot ceramics demonstrated many connections with civilisations from around the Mediterranean, with cultural traces left by Egypt, Assyria, Mycenae, Phoenicia and Attica. During the Early and Middle Bronze Age, it stands out due to its imaginative invention in shape and decoration. There are also many early terracotta figurines that were produced depicting female figures. Indisputably, there were great multi-cultural predecessors in the field of the pottery that set free the Greek genius and they contributed with their technologies and design to the birth of unparalleled aesthetic marvels found in the pottery of Attica. A vital aspect of investigation into ancient pottery is the material they were made of. To give an example related to Ancient Egypt, now one type of potter's resources was the Nile clay, the result of eroded material in the Ethiopian mountains, which was transported into Egypt by the Nile. This clay has been deposited on the banks of the Nile in Egypt since the Late Pleistocene by the flooding of the Nile and used by the local craftsmen. Coming back to Greece, just recalling that *From Egypt arts their progress made to Greece/Wrapt in the fable of the Golden Fleece*, a recent study by Irene Nikolakopoulou (2022) shed

more light on local raw materials which were used to produce pottery on the Island Telos, Dodecanese. The emphasis has been placed on chemical and mineralogical composition and ceramic properties of the recovered artefacts. There, the Charkadio cave pottery findings indicate the early Neolithic period (8000 to 7000 BC). They point to a strong link of the potters with their natural environment.

As narratively observed in the recent First Biennale of Contemporary Ceramics 2024, held in

ceives an object, takes the measurements, calculates, thinks carefully about it, considers — in a pursuit of the external form that would express the maker's inner vision — the idea of the thing that is to be emerging through man's creative process. However, our endeavour has been circulating around the very core of the measuring principle, the very rule that things are constituted with, from the rock substance to the working of the human mind. The constitutional logos of Being as such and its individual materi-

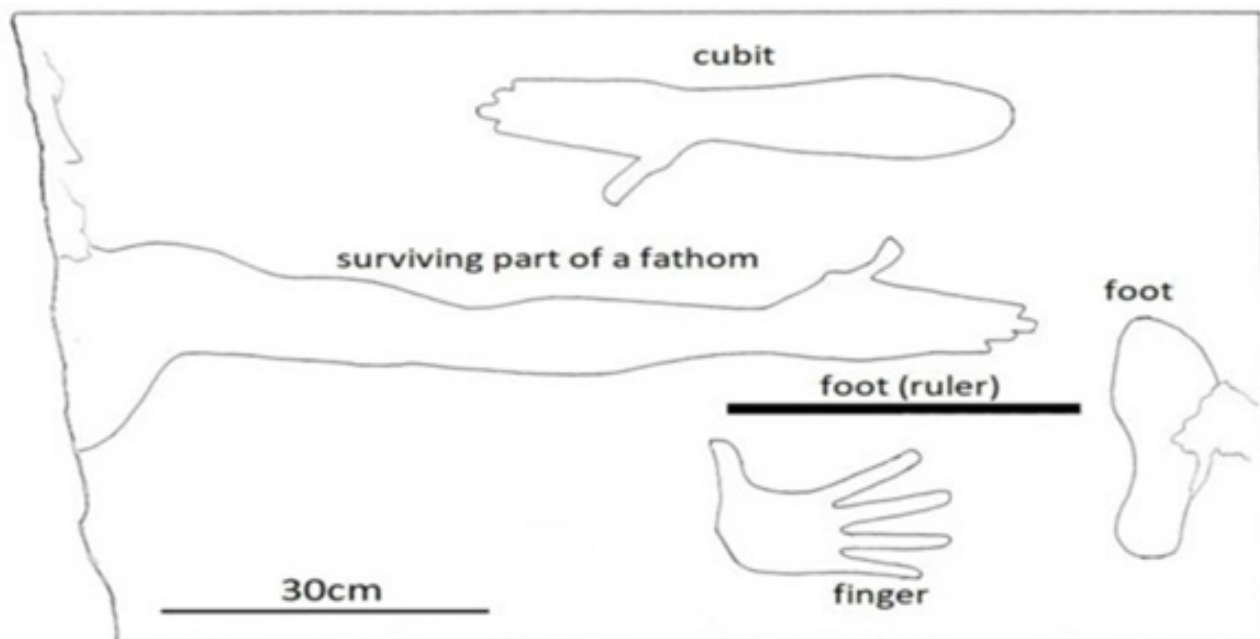


Fig. 4. Schematic representation of the “Salamis metrological relief”, showing metrological units, Metric units, are represented in a real marble slab in intaglio: half an *orgyia*, the length of the outstretched arms, the *pechys* (the forearm equivalent to 0.487 m), the *spithame* (a span between the thumb and the little finger equivalent to 0.242 m) and the *pous*, (the foot — 0.301). Archeological Museum of Piraeus, no. 5352. Source: (Stiros, 2022)

Museum of Prehistoric Thera Santorini/Thira island in Greece (Museum of Prehistoric Thera, Santorini, Greece, 1st Biennale of Contemporary Ceramics 2024, held from 07/06-26/10 2024)⁵.

Every ceramic piece tells a story — of its creator, its materials, its origins. A story of human hands mingling with humble clay, guiding it through careful, precise movements into unexpected forms. A story of a gaze that measures, judges, and caresses the material. A story of an artist who tenderly leans over forming soil, engaging in monologues, pausing to reflect, appreciate, admire, and listen — an artist who crafts a new narrative along with her his material, together. (Liatsou, 2024)

The aim of the article. The scope of our research points exactly to *the human gaze* that per-

alisation or actualisation in the shape of the human body or a jug. One of its manifestations is the golden cut principle, the other a phenomenon of dynamic symmetry. Boldly enough, we would fuse the term of logos with that of a canon. For an authentic and original canon is the logos put in practice in architecture or at in any art. And the *real value* of the canon as examined and searched for by a recent publication edited by Silver and Terraciano (2019), the one that underlies an external surface of the piece of art is, as it seems, of cognitive character. Or, indeed, if put differently, it is a cognitive insight into ontological truth which, when perceived and internalised, may bring us into reconciliation with the Universe. The overall process may be fully lived through the aesthetic experience. In that very light we find other definitions of canon as merely adjunctive and subsidiary in character, a local culture related, ancillary

⁵ Museum of Prehistoric Thera, Santorini, Greece, 1st Biennale of Contemporary Ceramics 2024, held from July to October 2024.

to culture producing them, be it Ancient Egypt, China, Japan or pre-Columbian civilisations.

The scope of our research points exactly to *the human gaze* that perceives an object, takes the measurements, calculates, thinks carefully about it, considers the idea of the thing that is to be emerging through man's creative process (in a pursuit of the external form that would express the maker's inner vision).

The Greek vase is the object of a supreme aesthetic delight and a research subject matter of numerous branches of Academy, to mention only in a single breath history of art with its typochronology, aesthetics, history, cultural anthropology, geology, pottery and clay pottery in particular, thermal metallurgy and many others. It has recently been enjoying some particular interest from the side of mathematicians and logicians as well. Invariably, the first association here is directly highlighted with the most developed form of the Greek vase, called the Attic pottery of the classical period. It is the fine painted pottery of Athens with its potters' quarter called Kerameikos⁶, located to the northwest of the Acropolis and of Attica deme, as evidenced by the red- and black figure pottery produced in Ancient Greece from the 6th to the 4th centuries BC. It arrived at the acme of man's cognition and production technique who was capable then to transform a clump of clay into a magnificent and breath-taking piece of art. The mathematical knowledge underlying the process proves craftsmen's deep insight into natural phenomena backed by their ability to translate the abstracted and refined vision into the supreme art and craft.

At the turn of the 19th and the 20th century the group of American scientists with J. Hambidge (1926/2022) and L. Caskey (1922/2022), had uncovered the ancient old design technique of master potters, called the dynamic symmetry. It is about the canon in the meaning we introduced a while ago, namely, a primordial rule things come to being through. They were called to exist by the power of man's imagination guided by the logos-canon's working or the cosmic drive of all creational acts. J. Hambidge (1926/2022), by stating that 'the actual

process of studying and understanding the working of a natural design law, opens a world of new ideas and frees the mind for real creation' was very closed to some corresponding and affined epistemological vantage point of the Indian aesthetician Ananda Coomaraswamy (1994). In his comparative study *The Transformation of Nature in Art* he explained the theory of creative act that bore the Medieval European and Asian art in the human's response to the physical world. Serendipitously, the author of *The Elements of Dynamic Symmetry* explains his aesthetic concept and the definition has been borrowed from the Thirteen Books of Euclid's *Elements*. Uncovered in volume III, p. 11 (Heath's translation), e.g. the Greek term '*dunamei summetros*' meaning 'commensurable in square'. According to J. Hambidge (1926/2022), it describes best the proportioning principle which he had found in the root rectangles⁷. He believes that the knowledge of the dynamic symmetry was brought by the Greek from Egypt around the 6th century BC. In a quite amazing way, his seminal discovery revealed that dynamic symmetry is in the matter of fact, the symmetry of growth in man.

Dynamic symmetry in nature is the type of orderly arrangement of members of an organism such as we find in a shell or the adjustment of leaves on a plant. There is a great difference between this and the static type. The dynamic symmetry is suggestive of life and movement. Its great value to design lies in its power of transition or movement from one form to another in the system. It produces the only perfect modulating processing in any of the arts. (...) It is the symmetry of man and of plants (...) the essential idea connected with the form rhythms observable in plant architecture. (Hambidge, 1926/2022)

Still, before we continue to elucidate special features of the phenomenon being discussed, let us juxtapose and contrast the two main states of matter, pause or movement, or putting it in the terms of mechanics, the two basic physical states of things which are statics and dynamics. We agree that statics

⁶ Kerameikos, Κεραμεικός in Greek, is an area of Athens, Greece, located to the northwest of the Acropolis, by the banks of the Eridanos River, presently almost dried out. It was the site of an important cemetery, votive and interment ceramics abundant, and numerous funerary sculptures were erected along the Sacred Way, a road from Athens to Eleusis, Ελευσίνα, romanised *Elefsina* from Ancient Greek Ἐλευσίς. The route linked the site of the Eleusinian Mysteries, to be exact, the Mysteries of Demeter and Kore, (non accidentally the birthplace of Aeschylus, 525-455 BC) with the Temple of Goddess Athena on Acropolis Hill. The history of Eleusis is part of the history of Athens. Once a year the great Eleusinian procession travelled from Athens to Eleusis, along the Sacred Way and vice versa from Eleusis, up to the Acropolis Hill, to venerate the Goddess Athena once an initiation process was completed.

⁷ The root rectangle or a dynamic rectangle is a rectangle in which the ratio of the longer side divided by the shorter side is always equal to the square root of any integer. It grows from the diagonal of a square. If in series, they are harmoniously linked to each other, imposing a powerful effect on viewers. After Michael Schneider (n.d.), *Constructing the Universe: Dynamic Rectangles. Explore Harmony in Mathematics and Art*. Edwin Blake (1921) in his critical essay faulted Hambidge (1920). For obscured terminology and involved terminology in his aesthetic writing. Eventually, a more descriptive term dynamic rectangle was introduced by Michael Schneider (n.d.).

is a body at rest, the system whose momentum does not change. However, we do notice that they are vibrating with internal forces immobilised within their relative structures, in a kind of isolated and petrified condition of the object doomed to represent eternity. For J. Hambidge, the static symmetry is a symmetry *which has a sort of fixed entity or state*. (...) It is the orderly arrangement of units of form about a center or plane as in the crystal. A snow crystal furnishes a perfect example. It is apparent in cross sections of certain fruits. Diatoms and radiolaria supply other examples. It is a spontaneous type; i.e., an artist or craftsman may use it unconsciously. (...) The static symmetry used by the Greeks, before they obtained knowledge of dynamic symmetry, depended

upon an area divided into even multiple parts, such as a square and a half. Three quarters, one-quarter, one-third, two-thirds, etc. (Hambidge, 1926/2022, p. 13)

Dynamics deals with the moves and changes of things in relations to each other. The name of dynamic symmetry is given to principles of design that are found in the architecture of man and plants. The progress of dynamic symmetry starts with a division of a square and it is a diagonal of a square from where the evolution of the root rectangles derives, as it can be seen below (Fig. 5).

A simple method for constructing all the root rectangles is showing a perfect modulating process of growth (Fig. 6).

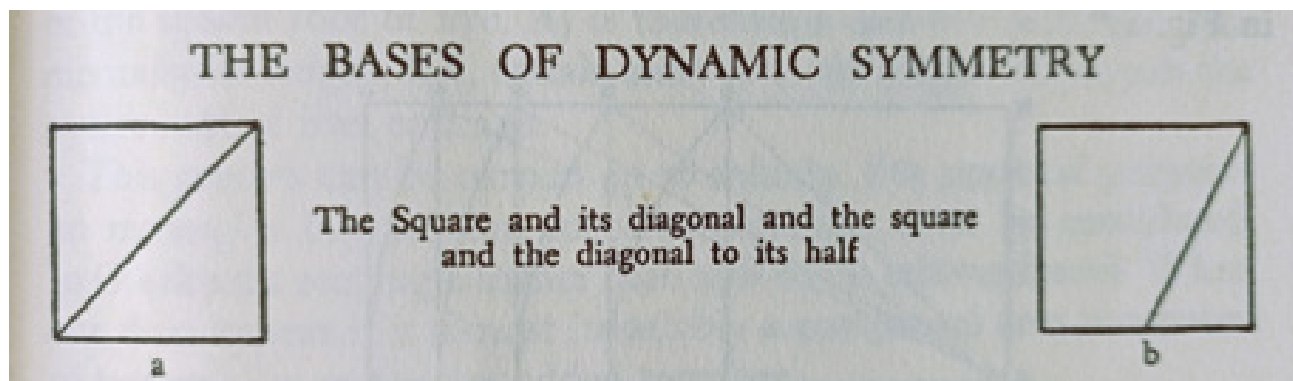


Fig. 5. The Elements of Dynamic Symmetry. The square and its diagonal furnish the series of root rectangles. The square and the diagonal to its half furnish the series of remarkable shapes which constitute the architectural plan of the plant and the human figure. Source: (Hambidge, 1926/2022, p. 17).

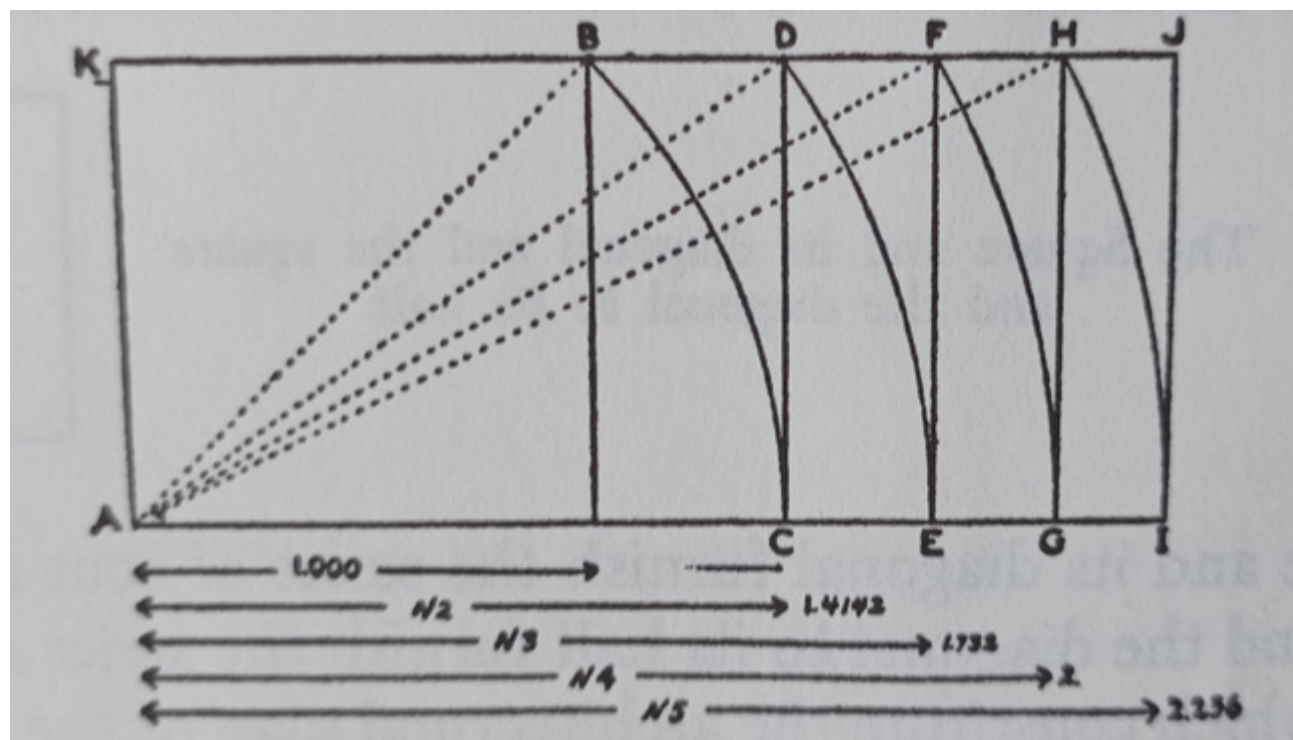


Fig. 6. The Elements of Dynamic Symmetry. Source: (Hambidge, 1926/2022, p. 18).

Results

It is obvious that the concept of the implied logic is a consequence of parallel reasoning alongside the thinking that deduces the principles of aesthetics from the work of art and traces effective ways of producing things which have been implicit in the masterpieces, here as exemplified by the Ancient Greek art. Let us recall that those gems appeared in the civilisation which had not passed any treatise on theory of art on to us. It is not to say they had not been neither conceived nor written, rather to state they did not survive or have been waiting to be uncovered. The idea of the implied aesthetics was introduced by the Polish philosopher W. Tatarkiewicz (1886–1980), in the 60ies of the 20th century. The first volume of his *History of Aesthetics* covers Ancient art, including the artistic heritage of Greek Antiquity (Tatarkiewicz, 1970). The phenomenon of the implied aesthetics should be explained with a set of notions related to the way man perceives the world. We see, feel, experience and appreciate. Afterwards, we try to understand what we have experienced by measuring mentally and enunciating verbatim phenomena being perceived and lived. The very first instruments to survey the physical works in the remote past were human limbs; fingers, feet, hands or ells, the latter term being derived from a word for the elbow. Here, as it seems, lie the very origins of Protagoras of Abdera's polysemantic statement that man is the measure of all things, as he proclaimed it in the 5th century BC:

Of all things the measure is Man, of the things that are, that they are, and of the things that are not (Mansfeld, 1981).

In the Roman era, Vitruvius or Vitruvio, Marcus Polio of Verona, 80–15 BC, wrote in his treatise *De Architectura* (Book 3), that the Greeks acquired their fundamental ideas of measure from the members of the body. He discussed a Grecian concept of symmetry following his reading of then available resources and his empirical involvement into Hellenic thought and praxes. In his statements, the author fuses his own views with what he most probably admires as the tour of force created in the Greek world:

The design of the temple depends on symmetry, the principles of which must be most carefully observed by an architect. They are due to proportion, in Greek 'ἀναλογία'. Proportion is a correspondence among the measures of the members of an entire work, and the whole to a certain part selected as standard. From this result the principles of symmetry. Without symmetry and proportion there can be no principles in the design of any temple; that is, if there is no precise relation between its members

as in the case of those of a well shaped man. (Vitruvius, 1999)

Chapter 2 opens with the famous remark, namely *For the human body is designed by nature...* (Vitruvius, 1999, p. 72), where he examines tectonic proportions of man's frame.

J. Hambidge (2022) in the outcome of his studies on the geometry of the Greek vases calls in question Vitruvius's view as restricted to merely linear perception of the proportion. The author blames him for narrowing the human understanding of the Greek contribution to a strict mathematical conceptualisation that lies behind any artistic work to a merely flat and static surface. The notion of the dynamic symmetry has to do with the historical view that the Romans obscured and deflated the intellectual heritage of Ancient Greece, and more specifically, the broader legacy of Ancient Egypt and the Middle East related to mathematics, and more importantly, to sacred mathematics. Since there up to now it has not been known any original treatise on the Greek art and architecture, so the Vitruvius's work both bridges and occludes the true picture of the ancient Greece wisdom in the field of aesthetics and theory of art.

Still, his elucidation that points to a single human being as the ultimate source of value may be taken indeed as the more elaborate stage of much earlier, original, virtually bodily, and sheerly anthropomorphic vantage point of ancient philosophers. Prior to his thinking, ancient sages provided their lived, ontological and verifiable experience in the field. One may argue that some time later, on the very same empirical and cognitive path, a concept of microcosm-macrocosm had emerged. It proclaimed the material similarity between the human body and the Universe.

Ultimately it is impossible to deny that at the root of aesthetics there lie mathematical laws and values. Each form of art, and especially in the realm of fine arts, be it sculpture or painting, is perceived as a form or a structure built up by geometric or spatial relationships of its constituents. Some researchers believe that a notion of 'ratio' has been a Latinised version of the Greek *logos*. This assumption suggests that a phenomenon of a ratio is not merely a comparative number but it can refer to the founding ontic principle of the matter and all physical or substantial processes as well. Having inferred such an offer, we might conclude now that both logic and aesthetics enhance our self-knowledge while we discover ourselves to be a part of the greater ontic scheme, reflecting it in fact on the ground of material elements, both mechanically and metaphysically. For some spiritual school, to mention in particular, the Kashmiri Shaivism, and its luminary and polymath Abhinavagupta, 924–1020,

a philosopher, mystic, aesthete and artist in the realm of performing arts, the aesthetic experience was a kind of vehicle that triggered man's self-knowledge. He claimed that it resulted in recognition, *pratyabhi-jna* or direct knowledge of oneself that would lead to perceiving the Absolute reality or God and Divinity, if desired and searched for. Abhinavagupta put his stand elaborately in his *Abhinavabhāratī*, a commentary on *Natya Shastra*, a Sanskrit treatise on the performing arts. There he discussed the aesthetic *rasa* theory suggesting that an experience of the sacred might be sparked when a powerful and immersive piece of art is logically conceived, produced and grasped in aesthetic experience, be it the first or the third person perspective, such as an artist's or a viewer's.

Accidentally on purpose, there is a proof of that reasoning. However, it belongs to European culture: a *kantharos*, *κάνθαρος* in Greek, or *kotylōs*, *kotyle* in more ancient variants of this generic term (Fig. 7). It was used for drinking wine, characterised by its deep bowl, tall pedestal foot. We can see a pair of high-swing and high curving vertical handles which extend above the pot, set on each side. The lip and the bowl form a continuous curve.



Fig. 7. *Kantharos*. Archeological Museum in Athens, 5th century BC. Source: photo by Wiesna Mond-Kozłowska, Archeological Museum of Athens, Greece

Still, some researchers claim that *kantharos* may not be only a banqueting cup, but a vessel used in cult as well as a symbol of rebirth, resurrection or of the immortality offered by wine, significantly in both pre-Christian and Christian era. It is an attribute of Dionysus, the god of wine, who was associated with vegetation and fertility. From one side, wine may in-

duce an ecstatic-god-like euphoria in a drinker, from the other, the vines that produce it die each year to be born again and give new fruits. The early Christian art inherited a form of *kantharos* and every so often it represented a fountain of life shaped like a *kantharos*, thus fusing the symbolic meaning of Christ as a source of living water (J 7,37-39 & J 4,14-14) and wine as a redemptive blood of Christ.

It is able as well to evoke a mysterious wedding in Cana of Galilee when the cathartic power of pure water transformed into mystical and redemptive energy of wine. The common image in the ancient Christian iconography embedded in the Ancient Greece creative imagination is the vine growing from *kantharos* expressing harmony and immortality of the natural world related to salvific and redemptive mission and sacrifice of Jesus Christ (Stracke, 2018).

Independently from that, the aesthetic form of *kantharos* serves as a perfect embodiment of the dynamic symmetry. For some more precise mathematical analysis of the root or dynamic rectangle, a constructive principle in Greek pottery see Jay Hmabidge's works mentioned in the references below.

Conclusions

The concept of the implied logic is a result of parallel reasoning alongside the analytical thinking that deduces the mathematical principles of aesthetic layout of the piece of art being perceived. We offer a concept of the implied aesthetics as an introduction to the further investigation into the nature of the aesthetic experience in its variety of workings throughout the human organism. Especially when a powerful and immersive piece of art prior to its later perception and appreciation, is logically conceived, produced and grasped in dynamic unfolding of the aesthetic experience, be it the first or the third person perspective.

The mathematical underpinnings of the *kantharos* form demonstrate the operating presence of logos, tangible and intelligible through canonical, *of canon*, laws of mathematics being applied to create it. Internalised by perceiver's intentional act of perception and appreciation, they may play an important role in the person's developmental growth and self-knowledge. It might, if desired and pursued, result in the re-cognition in the meaning attributed to it by the Kashmirian Shaivism, tantamonut to personal identification with the very essence of Being. Under certain conditions, it is coterminous with experience of the sacred.

Thus, both logic and aesthetics appear to function as some decisive factors on man's cognitive path towards his/her self-knowledge and self-realisation resulting correlatively and eventually in some

deeper understanding of the nature of the Universe. The research apparatus of an emerging branch of experimental aesthetics called neuroaesthetics, the one that studies human perceptual systems in hand with exact science, its cognitive and humanistic scopes and aims, no doubt, it may open a new dimension in understanding educational and therapeutic functions of art.

To conclude, the nature of the visual perception as being scrutinised *inter alios* from that approach, it does postulates a perception of a sentient 'I'. In other words, of a person, or, to be more exact, of the thinking body. This already classical concept recurs in some recent research, to give an example of the Irish scholar, a psychologist, Paul Elliot Mulcachy. Obviously, we assume a monistic stand here, which posits a holistic discernment. To be more precise, by the thinking body we mean here the *esse*, the frame, that was called to existence, allegedly, in the immemorial time by the canon of the dynamic symmetry.

In memory of Edmond François Paul Pottier, 1855–1934 a pioneering scholar in the study of Ancient Greek pottery (Schneider, n.d.)⁸.

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⁸ His research, while working as a curator for the Louvre Museum, was instrumental in establishing the Corpus-vasorum antiquorum, the term coined to gather, describe and classify the complete corpus of Greek vases. In the year of 1919 he organised the first meeting of the Union Académique Internationale that brought about establishing the complete corpus of Greek vases held in the national collections of every nation, i.d. the *Corpus vasorum antiquorum*. Following that in 1922 he authored and produced the first fascicule related to this initiative for the Louvre.

Поняття художнього канону в античному мистецтві як приклад неявної логіки в розкритті естетичного досвіду

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Анотація. Метою статті є розвиток когнітивної позиції про те, що онтологічний концепт *логосу* як основоположного й конститутивного числа закладено в основу всіх творчих процесів. Це явище легко розпізнати в логічному реляційному мисленні, яке, перефразовуючи Елі Сігела (Siegel, n.d.), виявляє, де речі мають відношення між собою, їхні тотожності й відмінності. Відповідно, зв'язки в мистецтві є вираженням того, як об'єкти мають взаємодіяти один з одним. Отже, насамперед математичне співвідношення називається *каноном*. Як ілюстративний приклад того, що обговорюється в статті, виступає форма та математична структура давньогрецької вази. *Результати дослідження.* У процесі естетичного сприйняття зацікавлені глядачі створюють витвір мистецтва разом з майстром. Вони діахронічно сприймають ті самі потужні математичні закони, які запустив художник, щоб зобразити матеріальний світ. Це явище вказує на те, що видатні твори мистецтва мають значний вплив на людський розум завдяки своїй здатності відновлювати й підтримувати порядок у людській психіці, яка часто порушується внутрішніми й зовнішніми чинниками. *Наукова новизна.* Незважаючи на те, що ця стаття є частиною наявної на сьогоднішній день дослідницької роботи з динамічної симетрії грецької вази, проведеної Д. Хембіджем у XX ст., її все ж таки можна вважати незалежним науковим доробком і результатом попередніх досліджень авторки з естетичних переживань і відчуттів сакрального. Окрім того, це дослідження розглядає предмет в нейроестетичній перспективі. У ньому обговорюється природа розуму та моністична концепція людини. Крім того, феноменологічно можна простежити розвиток естетичного досвіду, який структурований у послідовному руслі, запропонованому Романом Інгарденом. *Висновки.* Логіка — це вправа мислення, якщо її теореми та дії не завжди чітко виражені у творах мистецтва, а приховані під поверхнею шедеврів, створених талановитими особистостями. Логіка спрямована на очищення людського розуму, на його відповідність універсальним онтичним законам. Практикування логіки в будь-який спосіб — насамперед через споглядання мистецтва — доводить розумове прагнення людини відновити єдність світу, яку закріплює та охороняє логос. *Ключові слова:* логос; динамічна симетрія проти статичної симетрії; канон; природа естетичного досвіду; перетворення людини через мистецтво

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