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Klismos - The Style and Form of the Ancient Greek chair

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Abstract - The Greek furniture tended to be round, curved, ornamental, comfortable, supportive to the body and functional. The most characteristically Greek furniture form was the klismos chair. Prior the Greek klismos, chairs had hard stiff backs and arms, while klismos is a less extravagant piece of furniture, an elegant Greek chair with a curved backrest and legs. Characterized by grace and symmetry, klismos was essentially plain, with legs curving out from the seat and a back support consisting of a simple rectangular panel curved inward from sides to center. The chair acquired a broad horizontal back slat at the top that encircled the shoulders of the seated person, establishing a fixed form of the classic chair. It offered a new type of support for the back than the straight back, or slanted back chairs of earlier times, while its light weight made it easily moveable. In this study the form and style of ancient Greek chair klismos are presented and analyzed, the evolution of the architecture and designs of ancient Greek chair through the ages, while valuable information is also recorded about the methods, the materials and types of connection used in klismos construction.

Ancient / Chair / Design / Furniture / Greek / klismos

1. INTRODUCTION

As the years went by, primitive man having satisfied the basic needs and having solved some of his basic problems like food, clothing and shelter, he embarked on a synthetic task and manufacturing operation, in which raw materials were manufactured and transformed into useful objects, among them also furniture. He realized that the human body performs a serious task, probably that it is a living organism which gets tired and needs to rest, so he invented constructions for repose, which nowadays are called beds, chairs, stools, etc. In order to meet other human needs other kinds of furniture was created respectively, for example to store and deposit fruits and other goods such as shrines, lockers, banks etc. were created.

In the ancient Greek house there were no complex and multicomponent furniture. There were few pieces of furniture and among them there was the klismos, a chair that is well known for its harmony and beauty, since it erects from the floor with calm curves and results in deep elliptic back (SARIDIS, 1982). Klismos is an autonomous Greek creation that is not influenced by Egyptian or Assyrian patterns, as some other types of ancient Greek furniture like stools, tables, beds, etc. (RICHTER, 1959).

As it is known, in ancient Greece the son or daughter that was going to marry, was taking as dowry from the family home, among other things also furniture. Undoubtedly, among other things, the furniture in Ancient Greece was also a means of social promotion and demonstration object. Quite remarkable is the fact that the production of elegant furniture of best fit and quality was a source of enrichment for ancient cities or regions like Chios, Miletus and Thessaly. The Greek furniture tended to be round, curved, ornamental, comfortable, supportive to the body and functional. From the 6th century BC, already formed Greek furniture are presented, which are clearly of Greek inspiration, elaborate, full of grace and harmony, elegant and simple (SARIDIS, 1982).

The image of the excavation material in relation to the architecture of the Late Classical and Hellenistic houses indicates that the amount of furniture in homes is proportional to the house area, the availability of materials in the surrounding area, the cost and of course the time one spending in the house. The quantity of perishable furniture cannot be accessed, but

some assumptions could be made: wooden furniture were used widely in areas where wood is abundant (eg, Macedonia), and possibly the construction did not require in all cases professional carpenters or joiners. The daily life did not necessarily require furniture in house, and there are iconographies that depict also dinners on the floor. Reports such as Menander declare that the furniture that we see most often depicted in the vessels were in homes of most privileged and was not the rule in all homes. The time of being inside the house was an other reason for not having so many furniture in the house. It is a fact that many household work takes place in the backyard or outdoors because of limited light in the house, that is the reason probably that they used furniture of easy transportation. Although some windows were found in Hellenistic Greece in Vergina Palace (houses of late Hellenistic Delos imitation windows on the grave of Lefkada) to name a few examples, large windows, bringing light into the house, appear only after the 1st century B.C. There is also a vagueness about the placement of furniture in the house, which indicates that the areas of the house was not dedicated to a single occupation, like today. The practice of separating specific spaces as bedrooms, kitchens, bathrooms, living rooms, etc. belongs to the 18th century and even more in the 1930s. Therefore, the house in antiquity should be seen as a vague space where everything happens according to the time of the day, the climate, the mood of owners, dimensions of the room, the number of persons who are at home that time etc. (ANDRIANOU, 2009).

The necessity, usability and the main types of furniture did not changed materially from the ancient times to the present. Klismos was selected to be analyzed and presented in this paper because it presents great interest from manufacturing point of view in relation to other types of furniture. From the existence of some klismos can be derived the metrology, their detailed dimensions and evidence of typological evolution, elements which help us in substantial study and conclusions about this seat. As often happens with archaeological data since the material remains of furniture of the houses are not enough to form a complete picture, researchers try to fill in the gaps, as far as possible, by combining findings from various geographic excavation places literary sources and iconography (ANDRIANOU, 2009).

2. HISTORY AND MORPHOLOGY OF KLISMOS

Generally, available material for information about the furniture of ancient Greece offer apart from the written tradition and the ancient monuments (sculptures, reliefs, vase paintings, frescoes, mosaics, coins, jewelry and stamps). The word klismos is a compound word with the first component «κλι-»(kli) coming from the Greek word «κλίνειν» (klinin), which means recline and has a direct relation to the «κλίνη» (klini) (bed). The word klismos was basically used to describe the comfortable chairs with curved backrests and legs that are not thrones.

Klismos depictions appear only in sculpted works or reliefs, as well as, angiography. Paradoxical and difficult to interpret remains the fact that while other archaeological sources depicted innumerable forms of other types of furniture, klismos was not shown.

From the earliest Neolithic period (6000 - 5000 BC) the type of a seated male figure has already formed, as evidenced by the clay effigy of seated man from Pyraso of Thessaly, which sits majestically on the stool with his hands resting on the thighs and knees. Respectively, identical seats were found in many Neolithic settlements in Thessaly. The two curved legs stool illustrated in that effigy are constructed with curved branches and have a flat mounting for the man who is seated (ALEXIOU, 1992).

During the Bronze Age that follows (2800 - 1100 BC) several metals were widely used (copper, gold, silver), and therefore, more powerful, bronze tools were constructed and used. The general intellectual, cultural and tooling development and realization of anatomical needs, such as support and rest of the user's back seat contribute in the evolution of the seat in a seat bearing a backrest. The form of klismos probably came from the evolution of some type of seat of the geometric or archaic period (RICHTER, 1959).

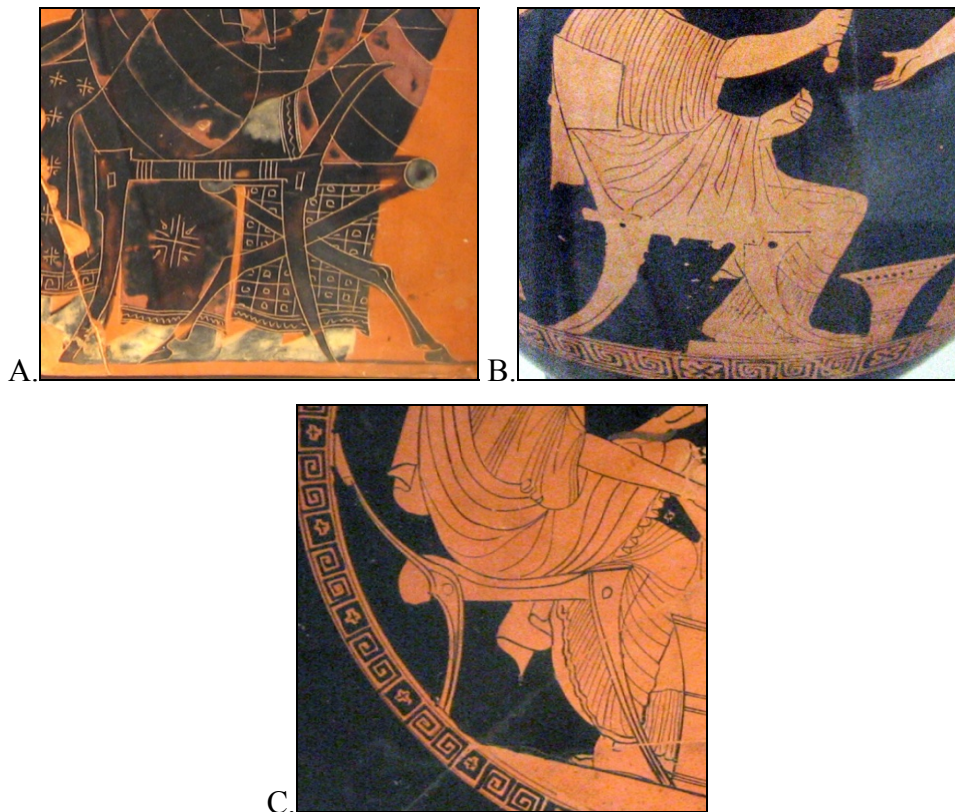


Figure 1 A., B., C. Klismos illustrated in angiography

The addition of the backrest is an important innovation because it shows that cabinetmakers comprehend that the furniture is a "nest" or "embrace" or "template" that accepts man to sit down, work or rest. It is true that the seat without backrest (stool) still remains in use, just like today. Great importance held that the manufacturers were aware of the anatomy of movement and function of the human body (ergonomics - anthropometry), as evidenced by the proportions of a chair and the dent on the top surface of the seat for better hospitality of buttocks. Klismos has often integrated a footrest/footstool between the two front legs, in order to place the feet and rest them and it was mainly used by mortal people that are socially superiors. Usually, this small piece of furniture was separate from the furniture of klismos. In ancient literature the form of a klismos was not fully described as we know it from the ancient Greek artworks, possibly because Homer often refers to another Mycenaean chair that is tripod.

Klismos was being used by men and women of any age and post, equipping homes, workplaces, palaces, in which case apart from simple chair it functioned as throne. The basic construction material of klismos was wood, and there were more lavish klismoι made of gold, either solid gold or of gold leaves, or silver with ivory in the back of the chair. Often a chair was covered with precious fabrics and animal skins, which is illustrated also in pots or tombstones.

Klismos consists of two front outwards curved legs, which are wide at the top and narrow at the bottom. The two rear legs are also curved outwards and here there is a progressive reduction of the leg width from the height of the seat and downwards. The hind legs extend over the height of the seat, creating a curve inwards. Thus, the elongated upwardly hind leg has the shape of "S" with gentle curves. The front legs are connected with the hind ones at the height of the seat with four edge beams-transoms, with joints of mortise and tenon, pegs or dowels. In the upper part of the rear leg rests a curved plank, that nowadays is called "omitis", in order, on the one hand, the seated person to rest the shoulders and on the other hand, for structural, static purposes and support of the furniture. In the interval between the lower part

of "omitis" and the highest point of the rear beam-transom, there is a slightly curved plank, that now is called "label", which supports the backbone of the seated person. The chair of klismos is usually austere, it does not bear a particular decoration, such as lion feet, heads of swans etc. nor transoms between the legs (ALEXIOU, 1992). Mainly in the first appeared klismos, the backrest often bended backwards, where a head swan or a palmette overtopped. The morphology of klismos is based on specific set of curved elements, so it is easily recognizable furniture. Nevertheless there are variations in the heights, the dimensions of the "omiti", the curvature of the legs etc. Frequently, we observe ancient Greek furniture that fold, such as folding stools, thrones etc., while klismos does not present this kind of folding design.

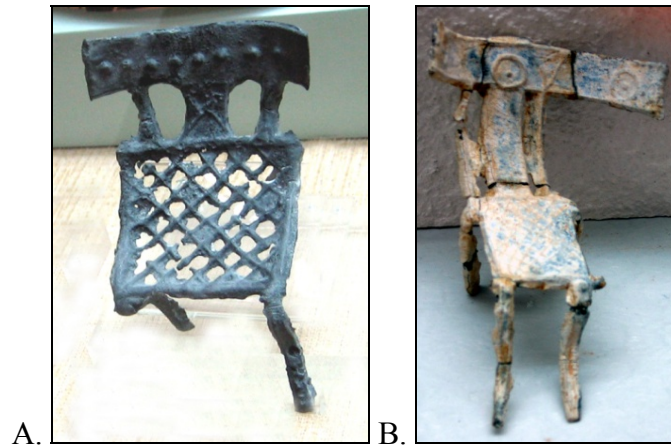


Figure 2 A., B. Configuration of klismos with wide "omitis"

Klismos is mainly illustrated in pottery within everyday life scenes, which demonstrates that it was not used as a throne. It also stands out for its simple and rectangular form and it got its basic form elements from the throne. From mid 5th century BC when klismos started to be widely used, it replaced to some extent the use of throne. The stone klismos was destined for outdoor environment, whereas the wooden one for indoor use. Unfortunately no wooden klismos survived till our times, because through the years this wood has been found under the appropriate conditions for growth of decay fungi, which totally destroyed these furniture pieces. Wood was used dry by the craftsmen, since they had already known that wet wood causes checks, bendings and distortion to the final structures. Furthermore, the ancient craftsmen used to dry out the wood naturally, covering it sometimes with manure, to protect it from the abrupt changes in weather conditions. In 475 BC, according to the ancient monuments of Greek art, the classic type of klismos was established, that specific type with the "omiti" which rests at the top of the rear legs (ALEXIOU, 1992).

Based on the illustrations of klismos and on the stone klismoi that were rescued, one could declare that the height of a klismos was 46 centimeters ± 2 . The acceptance of the height of existing stone chairs as a base for the metrology of such furniture is essential, since the depictions of klismos in other monuments such as vases, tombstones etc. do not reflect the real dimensions. Based on the dimensions of existing chairs, the proportions seem to create a sense of order and harmony among the elements of the chair synthesis. Thus, the imaginable rectangle with dimensions of 23 x 26 cm, in which the low backrest of a chair and the seat surface are two times smaller than that which the surface of the seat with the legs are included and has dimensions of 46 x 46 cm.

The unfussy morphology of the classic klismos, derived from all the curved elements that is comprised by, makes it undoubtedly one of the most beautiful creations in the field of furniture, combining relaxation with morphological simplicity and grace. Over the years, the shape of klismos evolves and the proportions are modified. Thus, the narrow "omitis" that

eminently dominated in the late Archaic and early Classical era, widens considerably during the Hellenistic era. The morphological relations between the seat, in relation to the other proportions of the furniture and the bowing of the legs etc. are all improved. Each piece of klismos is a unique chair and its construction is not precisely repeated, because it is difficult to achieve this, but also because of manufacturing specialties of klismos. Several attempts have been made to make a classification of klismos, based mainly on dimensions and proportions each one has. “Omitis” is characterized to be “narrow”, when it is narrower than the $\frac{1}{2}$ of the height of the seat, regardless of the total height of klismos or the height of seat. Mainly during the late classical and Hellenistic era the wide “omitis” predominates. Typical example of a klismos with a narrow “omiti” is the famous chair, the klismos of Hegeso («Ηγησώ»), depicted in a relief on the famous Attic Tombstone and dates from the late 5th century BC. There are also klismoι with “omiti” of “equal size”, in which the “omitis” height is equal to the half of the seat height, regardless to the total height of a chair, the slope of the seat backrest or the legs curving. This type is established in 450 BC and does not appear often, but still appears till the Hellenistic era (ALEXIOU, 1992).

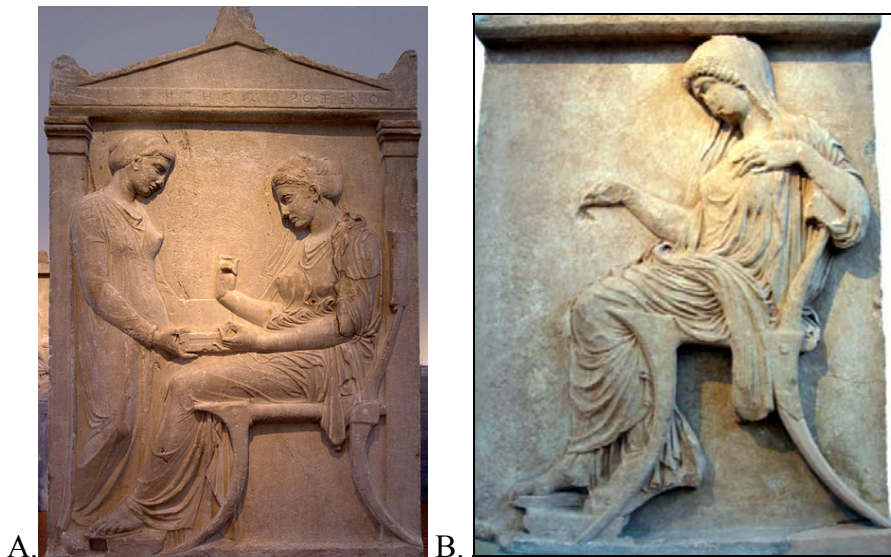


Figure 3 A., B. Characteristic pictures of Ancient Greek klismos: A. in tombstone of Hegesus, B. tombstone found in Viotia (late 5th cent. BC)

In the klismos category with a back rest of “equal dimensions” belong the chairs, whose backrest height is equal to the height of the seat. This type probably first appeared in the early 5th century BC and was repeated continuously on pottery, tombstones and votive columns up to the first fourth of the 4th century BC. In fact, in some klismoι also the depth of the seat corresponds and complies with these dimensions.

The most common type of klismos is that in which the backrest height is greater than the height of the seating surface. The very high backrest first appeared in the early types of klismos (around 520 BC), which had a decoration with swans heads, as has been mentioned earlier. The presence of this klismos type continues to appear until the end of the 1st century BC, as evidenced in tombstones, depictions on vases and the surviving stone chairs. Several times this klismos type presents narrow “omiti”, probably in order the harmony to be achieved in this klismos, which is considered the one of lower aesthetics (ALEXIOU, 1992). The backrest of a chair, regardless of its height, forms an angle to the seating surface, which differs from klismos to klismos. Klismos with a vertical backrest, where the seat back forms an angle of 90° to the seating surface is a relatively rare type of klismos and is found mainly in seats of prehistoric period. A seat of this kind makes the body form a right angle with thighs, an attitude that nowadays is considered to be not at all ergonomic for rest. It could be

more suitable for occasional seating in dining rooms or in short time gatherings. During the Classical era this klismos type reappears after 475 BC and continues to be met until the mid-3rd century BC.

The klismos with canted backrest is one of the most popular used klismos. The backrest is inclined about $110^{\circ} \pm 5^{\circ}$, from the seating surface. Klismos with canted backrest appear since the prehistoric era. This slope allows the relaxation and rest of the body, which is compounded even more when the slope of the seating surface is $5-7^{\circ}$ upwards, even though the seating surface of klismos was usually completely horizontal. A rare type of klismos is that, in which the backrest forms an angle of about $130^{\circ} \pm 5^{\circ}$ with the seating surface. This extreme slope of the backrest, which actually transforms the furniture into a kline, can offer the absolute rest, only under the basic condition that the seating surface is inclined $5 - 15^{\circ}$, in order the seated person to avoid sliding forwards. The specific type of klismos appeared only during the 5th century. The horizontal label is already found in klismos of prehistoric era, when the prehistoric craftsmen quite wisely considered it necessary to have this item in the middle of the backrest to support the human backbone. Unfortunately, most of klismoi are laterally depicted on the monuments, so the presence of the label is not always visible. On the other hand, there is a small but sufficient number of klismoi represented on their front side or designed prospectively, as in seated statues, or in the surviving stone klismoi that can be substantiated both the existence and morphology of the label.

The curving of the legs, irrespectively of the height or the seating surface depth, corresponds to an arc of a circle or an ellipse, most of times. The curved legs of klismos of "Hegeso" is arc of ellipse with major axis of 39.5 cm and a minor axis of 25 cm. However, the chord of the arc of the front leg is longer (38 cm) than that of the rear leg (36.5 cm). The curved legs of that type of klismos are normal, since most of klismoi are found to have similar sizes and carvings, while only minor deviations have been detected. It is extremely rare the phenomenon klismos to obtain vertical legs. However, from 510 BC a klismos type appears which has vertical hind legs and curved front legs. This type of klismos still appears until the end of the 5th century BC, perhaps even later (ALEXIOU, 1992).

The surface of seating is created using several bands which are placed and fixed from one edge to the opposite, thus they often cross with each other, creating a comfortable seating surface. Careful observation of klismos illustrations on pottery revealed the following four different ways, in which the leather bands were tied in rows to create the seating surface of klismos: 1. in doubles, triples or hexads, which is the most usual way of tying the bands, 2. in series, which is quite common way 3. combination of the above tying ways with cross way, 4. only crosswisely. The last two ways are much complicated and therefore, are not so commonly used in tying the bands of the seating of klismos (ALEXIOU, 1992).

The curved wooden members of klismos were not manufactured by carving a bigger wooden element to smaller, but with other more advanced techniques. The technique of bending the board mechanically was widely applied in ancient Greece (evidenced by Theophrastus). The bending was implemented using steam or soaking the piece for a long period in amorgos-olive, a substance that was used by the ancients as therapeutical - demulcent substance, and also to soften skin and wood. Afterwards, the wood was placed in a special mold in order to achieve the desired shape. Another version for the manufacturing of curved wooden elements is the use of laminated timber technique, which was already known in ancient Egypt.

The use of curved legs imposed the use of very resistant to loadings forest species. Mainly hardwoods were selected (beech, oak, etc.) rather than softwoods (pine, fir, cypress, etc.). The hardwoods were more easily rubbed, polished, bent, while they are also more durable and dense wood species. Several adhesives were being used in klismos assembly and construction. Various glues of plant origin were used, such as starch paste, Arabic gomi, gluten, glue of Semolina and pollen or of animal origin, such as casein, glue coming from blood, collagen protein etc.

For the preservation of klismos or other furniture of those times, two types of protective substances must have been used. Firstly, substances applied on surface or varnishes that have little penetrating potential and create a very thin film on its surface. These substances were usually originated from vegetable and pathological or traumatic tree secretions, such as gum of acacia, the balsam, generally komeoresines, derived from coniferous trees etc. These substances, however, can be also of animal origin, such as beeswax or the white part of egg. Secondly, there were impregnating substances that were totally absorbed by the wood pores, such as animal fat, oil derived from the cedar pith and amorgos from olives (ALEXIOU, 1992). The tools used most frequently were the ax, the saw, the deception, the hammer and lathe. Besides the classical joints of wood, such as mortise and tenon, dowels etc, used in the construction of klismos, metal studs and adhesives were also used (RICHTER, 1959). The joints of wooden elements in a chair were hidden and covered wisely with precious wood or metals.

The decoration of klismos could be accomplished by the same the klismos craftsman, but the elaborate decoration of luxurious klismoi certainly would be undertaken by a chair specialist/decorator (gold-plating, ivory craftsman, painter etc.) who knew the art of decorating these furniture. Frequent decorative element of Classical and Hellenistic periods klismos were glyphs (grooves) that were carved on the four corners of the front and rear legs, as in the klismos of "Hegeso". As mentioned earlier, palmettes, heads of swans and spirals often adorned the ends of the backrest, while the label was often adorned with various representations, satyrs pictures, grapes and other relief decorations. Klismos often displayed a decoration of paints or written representations, while part of the decoration could be also regarded the intonation or discoloration of a cheap wood, which after the appliance of paints and varnishes gives the impression of quite luxurious furniture.

3. CONCLUSIONS

During the Bronze Age (2800-1100 BC) a backrest was added to the plain stool and the first type of klismos started to appear and be formed, which is a seat of simple morphology and does not bear hand props. klismos is illustrated in numerous ancient Greek artworks from the Archaic, Classic and Hellenistic periods. Over the years, there has been recorded a rich typological evolution of klismos and while initially it was characterized by a rich and heavy ornamentation (archaic period), due to the fact that it was derived from a throne, then it was turned into a simple, attractive and comfortable seat (classical era). The major importance of klismos for peoples everyday life is proved, except for the ancient Greek literary sources, also by its frequent depiction on tombstones, which indeed indicates funerary luxury, which could be demonstrated only socially prominent and wealthy people.

4. REFERENCES

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