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The functional purpose of the cult pyramids during the Old Kingdom

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ABSTRACT
From the Old Kingdom onwards, a specific architectural element known as the Cult Pyramid was integrated into the royal funerary pyramid complexes. Unlike the other architectural components of the pyramid complexes, whose functions are well-established, the functional purpose of the Cult Pyramid remains ambiguous. Due to the lack of definitive and conclusive archaeological evidence, the scholarly debate on the subject continues to be a matter of contention. Consequently, this study reviews, analyzes, and refutes existing hypotheses to better define the true function of the Cult Pyramid based on available archaeological data and provides fresh insights into its significance, contributing to a deeper understanding of the Old Kingdom royal funerary architecture.

KEYWORDS
Subsidiary pyramids – satellite pyramids – cult pyramids – queens' pyramids – Southern Tomb

الغرض الوظيفي للأهرامات العقائدية خلال عصر الدولة القديمة

أحمد رحيمه

المُلخص
بداية من عصر الدولة القديمة، تم إضافة عُنصر معماري مُحدد – يُعرف باسم الهرم العقائدي – ضمن عناصر المجموعات الهرمية الملكية. وعلى عكس العناصر المعمارية الأخرى بالمجموعات الهرمية التي تم التحقق من وظائفها بشكل كبير، يظل الغرض الوظيفي للهرم العقائدي غامضاً. ونظراً لقلة الأدلة الأثرية القاطعة؛ لا يزال الجدال العلمي حول هذا الموضوع قائماً بين المُتخصصين. لذا، تستعرض هذه الدراسة وتُحلل وتُفند الفرضيات القائمة لتحديد الغرض الوظيفي الفعلي للهرم العقائدي بشكل أفضل استناداً إلى الدلائل الأثرية المُتاحة، وتُقدم رؤى جديدة حول أهميته، مما يُسهم في فهم أعمق للعمارة الجنزية الملكية في عصر الدولة القديمة.

الكلمات الدالة
الأهرامات الجانبية – الأهرامات الثانوية – الأهرامات العقائدية – أهرامات الملكات – المقبرة الجنوبية

The Royal Pyramids of the Old and Middle Kingdoms were not merely isolated monuments serving as burial places for the kings; rather, each major pyramid functioned as the centrepiece of an elaborate funerary complex. These complexes consisted of several architectural elements and sometimes reached up to 14 different components, each characterized by a unique design, remarkable construction techniques, and a clear, specific, functional purpose behind its construction (Hawass 2003a: 50).

Among the architectural components of the pyramid complex were small-scale pyramids, situated adjacent to or surrounding the major royal pyramids, known as the *Subsidiary* or *Satellite Pyramids*. The construction of these structures represented an innovative architectural shift initiated by the kings of the Fourth Dynasty, specifically during the reign of King Sneferu (Fakhry 1969: 31–32, 87; Arnold 2003: 61).

Archaeologists have identified forty-six Subsidiary Pyramids dating back to the Old Kingdom, categorized into two different types; Queens' Pyramids and Cult Pyramids. Due to the lack of definitive archaeological evidence regarding the identity and function of many of these small pyramids, a persistent debate has emerged among scholars. The core of this contention lies in distinguishing whether a pyramid served as a Queen's Pyramid, a real, functional burial place for a royal consort, or as a Cult Pyramid, dedicated to the king himself, for non-burial purposes (Hawass 1987: 112; Hawass 2003a: 50; Edwards 1993: 73).

The Cult Pyramid, frequently referred to as a Ritual Pyramid, is a small-scale Subsidiary Pyramid supported by evidence linking it directly to the king himself, the owner of the pyramid complex. Despite the ambiguity surrounding the purpose of the construction of such pyramids, it remains an established fact that they were an indispensable and significant architectural element within the royal funerary complexes, particularly during the Old Kingdom (Hawass 1987: 117; Hawass 2003b: 150).

Most scholars agree that the Southern Tomb of King Djoser, situated within his funerary complex at Saqqara (fig. 1), likely represents the precursor of the Cult Pyramid. It is widely regarded as the prototype of this type of Subsidiary Pyramid, which began to be erected alongside the main royal pyramid during the Fourth Dynasty and persisted throughout both

Fig. 1 General view of the Southern Tomb of King Djoser at Saqqara (photo P. Košárek)

the Old and Middle Kingdoms (Wegner 2001: 245–246; Hawass 2003a: 50; Radwan 2003: 100; Stadelmann 2003: 115; Dodson – Ikram 2008: 143, 148; Spencer 2000: 131). This connection is further supported by the standard topographic placement of Cult Pyramids to the south of the main royal pyramids, suggesting they fulfilled the same functional purpose as Djoser's Southern Tomb (Edwards 2005: 248).

The functional purpose of the Cult Pyramids remains elusive and difficult to ascertain (Edwards 1993: 166; Verner 2004: 89; Dodson – Ikram 2008: 143), primarily because the ancient Egyptians left no explicit textual references or depicted scenes clarifying the nature of these structures. Consequently, researchers have faced significant challenges in determining the precise function of these small subsidiary pyramids, leading to a reliance on varied interpretive hypotheses.

Many scholars maintain that the Cult Pyramid represents an intellectual, ideological, and functional evolution of King Djoser's Southern Tomb at Saqqara, despite their architectural difference (Jéquier 1936: 9, fn. 2; Ricke 1944: 106–107; Lauer 1962: 132–133; Lehner 1985: 78–79; Hawass 1987: 112; Hawass 2003a: 50; Radwan 2003: 100; Dodson – Ikram 2008: 148; Hornung 1996: 47). This implies that the functional purpose of Cult Pyramids may be identified and verified by establishing the intended role of the Southern Tomb itself. Therefore, the Southern Tomb serves as a fundamental benchmark for interpreting the significance of these later subsidiary pyramids.

Regarding the Southern Tomb, since it is established that King Djoser was buried within the Step Pyramid, providing a logical explanation for a second tomb within the same complex remains a complicated challenge (fig. 2). The notion of constructing such a structure is further complicated by the dimensions of its burial chamber; with a floor area of only 1.6 m^2, it was clearly not intended for a standard royal burial. While a deceased body could theoretically be lowered through the circular aperture in the chamber's ceiling, the space was insufficient for a body to be laid in a supine position (Firth – Quibell 1935: 57; Lauer 1976: 96; Hawass 2003b: 150), nor could it accommodate a traditional sarcophagus (Tawfik 1990: 79). The only viable way to place a human body within this burial chamber would be in a contracted position, a funerary practice that was entirely inconsistent with the royal burial traditions of the Third Dynasty (Edwards 1993: 61).

Furthermore, the inscriptions and scenes decorating the walls of the Southern Tomb leave no doubt that the tomb was intended for the personal use of King Djoser himself. Although initial theories following its discovery suggested the tomb might belong to his architect Imhotep, the absence of Imhotep's name on the panels and the omnipresence of Djoser's royal titles and ritualistic scenes effectively refute this hypothesis. The reliefs and depicted archaeological evidence conclusively confirm that the tomb was tied exclusively to the king (Firth – Quibell 1935: 63; Edwards 1993: 61).

The various hypotheses regarding the function of the Cult Pyramid can be categorized into two primary schools of thought. The first group posits that these pyramids were a direct architectural and ideological extension of Djoser's Southern Tomb, sharing the same functional purpose. Conversely, the second group maintains that no such connection exists, arguing that Cult Pyramids were established for distinct functional reasons independent of the Southern Tomb's tradition.

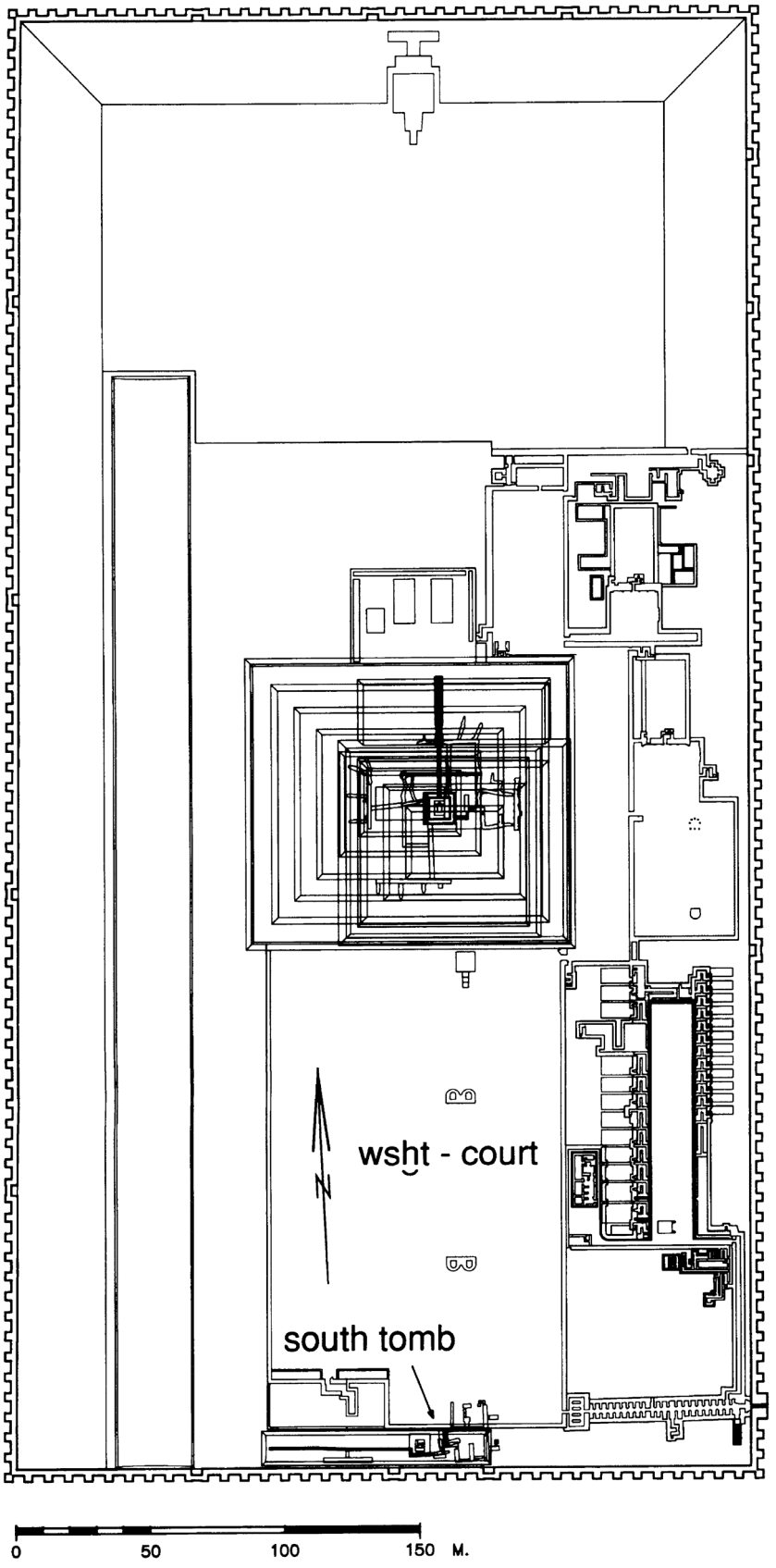

Fig. 2 Plan of the Step Pyramid complex at Saqqara (after Friedman 1995: fig. 1)

THE HYPOTHESES CONCERNING THE FUNCTION OF KING DJOSER'S SOUTHERN TOMB

THE SOUTHERN TOMB AS A PROVISIONAL OR A SECRET BURIAL SITE

Firth suggested that the Southern Tomb might have served as a provisional tomb to preserve the king's body until the Step Pyramid, which was the real burial place, was built (Firth 1929: 67; Ricke 1950: 125–126). Alternatively, he also hypothesized that it may have functioned as a clandestine burial chamber designed to deceive tomb robbers; by concealing the king's remains while leaving the more prominent Step Pyramid as a decoy to exhaust their efforts (Firth – Quibell 1935: 20, 63).

Although Firth proposed that the purpose of the Southern Tomb might have been as either a provisional tomb, pending the completion of the main pyramid, or a clandestine tomb to thwart grave robbers, he ultimately retracted these hypotheses during the advanced stages of his excavation. Firth concluded that the structure's architectural sophistication and elaborate design were inconsistent with the nature of a mere interim tomb. Furthermore, it is demonstrably clear, given the diminutive dimensions of the burial chamber, that the space was never intended to accommodate a full human corpse. Consequently, the physical evidence effectively invalidates the theory that the structure functioned as a secret royal sepulchre (Firth – Quibell 1935: 63).

THE SOUTHERN TOMB AS A REPOSITORY FOR THE ROYAL PLACENTA

Both Seligmann and Murray proposed that the Southern Tomb was dedicated to the preservation of the King's Placenta, which was traditionally regarded as the king's spiritual twin and should be preserved from birth to death (Seligmann – Murray 1911: 171; Lehner 2007: 92). They maintained that this was the only purpose that could be suggested as a plausible function for these later small Subsidiary Pyramids (Seligmann – Murray 1911: 169, 171; Jéquier 1940: 43–44; Frankfort 1978: 69). Quibell concurred with this proposal, despite acknowledging the lack of definitive evidence. He supported this view by observing that while the Step Pyramid remained unfinished at the time of Djoser's death, the Southern Tomb appeared fully completed. The meticulous sealing of its staircase and the finished state of its superstructure suggest that its construction was deliberate and not a rushed alternative, thereby reinforcing the idea that it served a specific, pre-planned, ritualistic purpose (Firth – Quibell 1935: 57, 63; Frankfort 1978: 70–73, 365, fn. 51).

Regarding this hypothesis; despite the recognized significance of the placenta in ancient Egyptian ideology, there is a total lack of archaeological evidence to sustain this assumption (Frankfort 1978: 365). No archaeological proof or specialized containers linked to this function have ever been discovered within the Southern Tomb or the subsequent Cult Pyramids. Consequently, this theory remains speculative, as it is unsupported by any in situ findings.

THE SOUTHERN TOMB AS A REPOSITORY FOR THE ROYAL VISCERA

Lauer and Quibell proposed an alternative hypothesis, suggesting that the Southern Tomb served as the actual burial place for the king's viscera. These internal organs, removed during the mummification process, were typically preserved within specialized vessels. This theory

aligns with the square architectural design of the burial chamber, which appears ideally suited for housing the standard set of canopic jars. According to this view, the Southern Tomb functioned as a precursor to the specialized structures used for the visceral interment in later royal funerary practices (Firth – Quibell 1935: 57; Lauer 1936: 110–112; Ricke 1944: 106–107; Ricke 1950: 125–126; Lauer 1955: 168; Edwards 1993: 61; Lauer 1962: 140; Fakhry 1969: 31; Lauer 1976: 96, 98).

Concerning this suggestion of both Lauer and Quibell, architectural evolution and archaeological findings suggest otherwise. Early evidence indicates that visceral remains were initially placed in determined niches or wall cavities within the main burial chamber. By the Fourth Dynasty, it became standard practice to position the canopic vessels at the southern end of the royal body, at the feet of the body, and sometimes they deviated in position slightly towards the southeast. It was common for these architectural features to be cubic-shaped niches in the wall of the burial chamber or to be trenches dug in the floor (Dodson 2001: 232). This tradition continued until the Middle Kingdom, when the canopic box regularly occupied a square niche cut in the wall of the burial chamber on the eastern side of the sarcophagus (Hayes 1990: 321). The earliest known example was situated in the paving blocks to the southeast of King Khafre's sarcophagus in the second pyramid of Giza.

Thus, the proposed link between the Southern Tomb of Djoser and the subsequent Cult Pyramids to the cavity for the canopic jars appears untenable (Dodson 2001: 232; Dodson – Ikram 2008: 143). This refutation is further bolstered by clear, definitive archaeological evidence: In the pyramid complex of Queen Neith, the consort of King Pepi II at Saqqara, her canopic box was discovered within the burial chamber of her main pyramid, despite the existence of a Cult Pyramid built for her in the complex (Jéquier 1933: 10–11; Lehner 1985: 79). Similarly, the remains of Pepi I's canopic preparations, including one of the four covered scrolls, were also found within the burial chamber of his main pyramid, notwithstanding the existence of a Cult Pyramid in his complex (Lauer 1988: 133; Lehner 1985: 79; Lehner 2007: 22). These findings conclusively demonstrate that the function of the canopic jars was integrated into the primary funerary monument, the main pyramid, rather than being delegated to the Cult Pyramid.

THE SOUTHERN TOMB AS A ROYAL CENOTAPH

Other scholars have proposed that the Southern Tomb functioned as a Cenotaph of King Djoser, situated to the south of the Step Pyramid, his actual burial place, mimicking the tradition of royal cenotaphs at Abydos. This arrangement allowed the king to reconcile his dual role as the king of Upper and Lower Egypt by incorporating both his real and symbolic tombs within a single funerary complex, with the Step Pyramid representing his northern burial (Fakhry 1969: 31; Lauer 1976: 98; Kamil 1996: 95; Verner 2004: 89; Arnold 2001: 429–430; Lauer 2005: 861; Aldred 1990: 72, 75; Tawfik 1990: 81; Shokry 1970: 290; Albarbary 2006: 284). Lauer (1976: 98) posited that Djoser, as a member of a new Memphite dynasty without ancestral roots in Upper Egypt, may have lacked the impulse to construct a cenotaph for himself as far south as Abydos; instead, he integrated his symbolic tomb at the southern extremity of his own vast funerary complex. Geoffrey Spencer (2000: 125) supports this suggestion that the Southern Tomb functioned as a symbolic burial place. Furthermore, given the scholarly consensus that Cult Pyramids are an extension of the Southern Tomb's tradition, Verner (2004: 89) suggests

that these Cult Tombs may also represent a symbolic burial of the ruler in Upper Egypt. Dobrev (2003: 28) supports this perspective, maintaining that Cult Pyramids served as royal cenotaphs, inherently devoid of any physical royal mummies.

Regarding the classification of the Southern Tomb as a cenotaph for King Djoser; the monument fulfills only two of three essential criteria typically required for such structures (Rehema 2013: 8). First, architecturally; it was built as a tomb, based on its similarity in many architectural and structural features to the substructure of the actual royal tomb of the king, the Step Pyramid. Second, geographically; although it is not located at Abydos, the placement of the Southern Tomb to the south of the main burial place, the Step Pyramid, provides a potential symbolic orientation. However, the Southern Tomb fundamentally lacks the religious criterion: there is no evidence of a direct or indirect theological connection to Osiris, the central deity to the concept of cenotaphs. His name, scenes, signs, symbols, and associated statuary are entirely absent from the tomb's walls (Rehema 2013: 144). Therefore, the lack of the Osirian connections to the monument makes it difficult to identify the Southern Tomb as a traditional cenotaph. Applying the same analytical framework to the subsequent Cult Pyramids, given their role as an extension of the Southern Tomb; it is evident that they similarly fulfill only the architectural and geographical conditions. Since no ritualistic link to Osiris has been identified within these Cult Pyramids, they cannot be functionally categorized as Royal Cenotaphs. Dodson and Ikram emphasize the total absence of physical archaeological evidence linking the traditional royal cenotaphs with that of the Cult Pyramids (Dodson – Ikram 2008: 143).

THE SOUTHERN TOMB AS A PLACE ASSOCIATED WITH THE HEB-SED

Firth proposed that the Southern Tomb may have been intrinsically associated with the Heb-Sed Feast, which was a pivotal celebration observed during the Old Kingdom and characterized by the ritual rebirth of the king (Firth – Quibell 1935: 20; Edwards 1993: 61). Under this hypothesis, the structure served as a mock tomb for the king's ritual death during the Heb-Sed and subsequent renewal of his vital potency (Lehner 2007: 92). Lehner (1985: 78) agrees with this suggestion due to the proximity of the Southern Tomb's location to the large open courtyard south of the Step Pyramid. Hawass partially adopts this hypothesis, depending on the supposition that the scenes and inscriptions that exist on the walls of the Southern Tomb's substructure represent King Djoser wearing the White Crown and running while holding a stick and a mace, which are scenes that could be interpreted as representations of Heb-Sed rituals (Hawass 1987: 118; Hawass 2003b: 150–151).[1] However, Hawass believes that the Southern Tomb, much like the later Cult Pyramids, served a symbolic practical function, as a vestiarium where the king would change his clothes during the celebration, discarding the Heb-Sed cloak in favour of a short kilt adorned with a bull's tail

1 According to Hawass; while researchers continue to investigate the complexities of this celebration, the prevailing consensus identifies it as a form of jubilee. Typically celebrated for the first time after the king had occupied the throne for thirty years, the feast was designed to enable the king to symbolically rejuvenate his vital forces and reaffirm his divine right to rule. Hawass (2003b: 150) further posits that this celebration likely occurred upon the completion of the royal funerary complex, serving as a ceremonial declaration that the king had fulfilled all the theological and architectural requirements mandated by the gods.

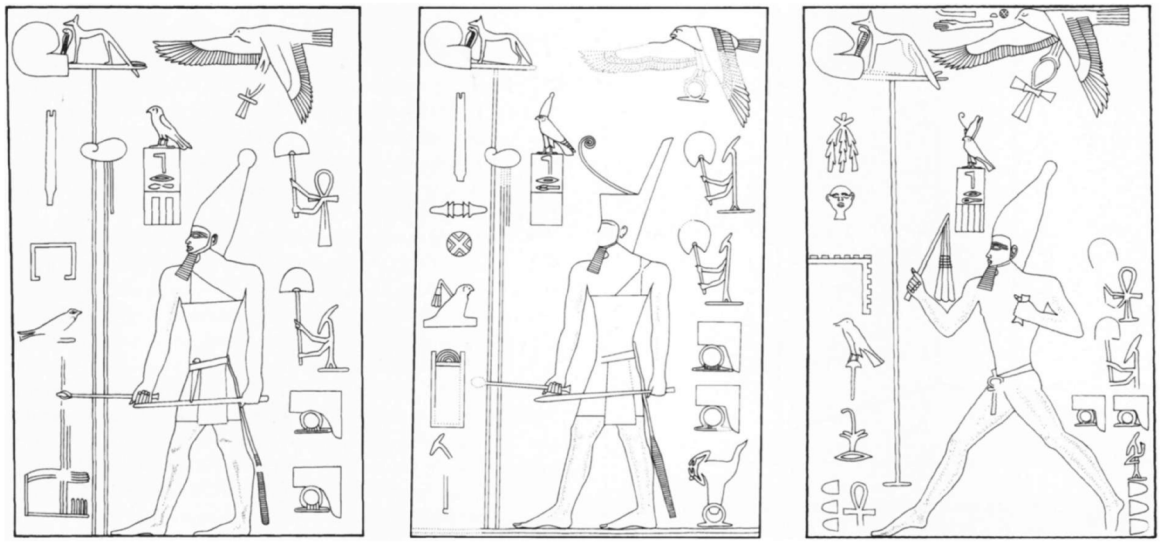

Fig. 3 Scenes on the panels in the substructure of the South Tomb (after Friedman 1995: fig. 2b)

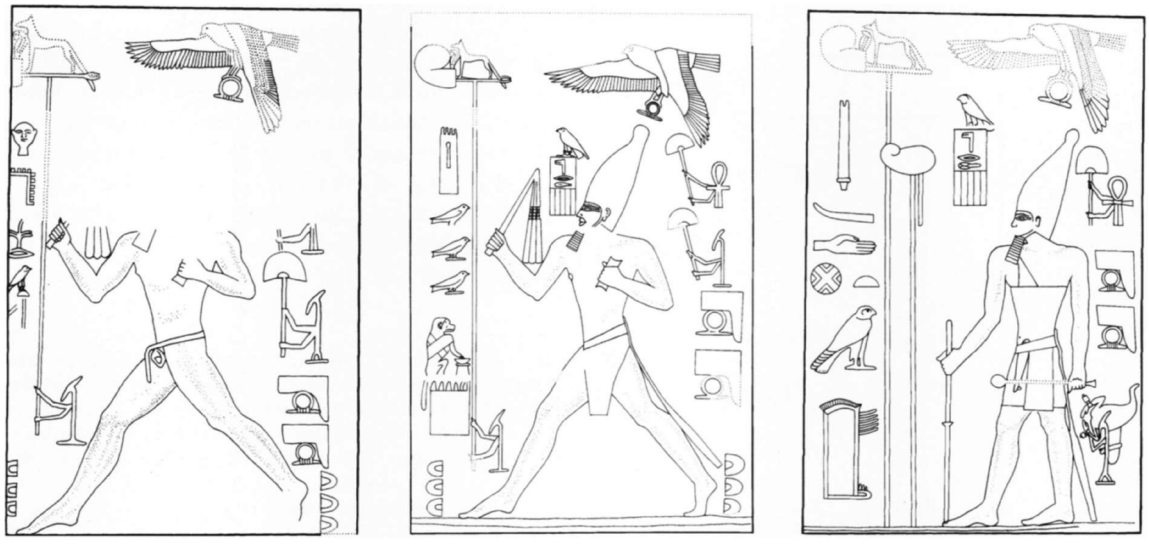

Fig. 4 Scenes on the panels in the substructure of the Step Pyramid (after Friedman 1995: fig. 2a)

to perform his ceremonial dance, which was known as the Heb-Sed dance (Hawass 1987: 495; Hawass 2003b: 151).

Several archaeological and architectural facts provide a strong basis for the refutation of this idea. While numerous kings celebrated the Heb-Sed throughout ancient Egyptian history, some of them celebrated more than once (Frankfort 1978: 79; Netzley 2003: 264); no monument analogous to the Southern Tomb has been identified in other complexes, suggesting that such a structure was not a standardized requirement for the feast. Furthermore, although the reliefs and scenes on the walls of the Southern Tomb depict the king performing rituals often interpreted as representations associated with the Heb-Sed, identical reliefs and scenes are presented within the substructure's walls of the Step Pyramid itself, the king's primary burial place.

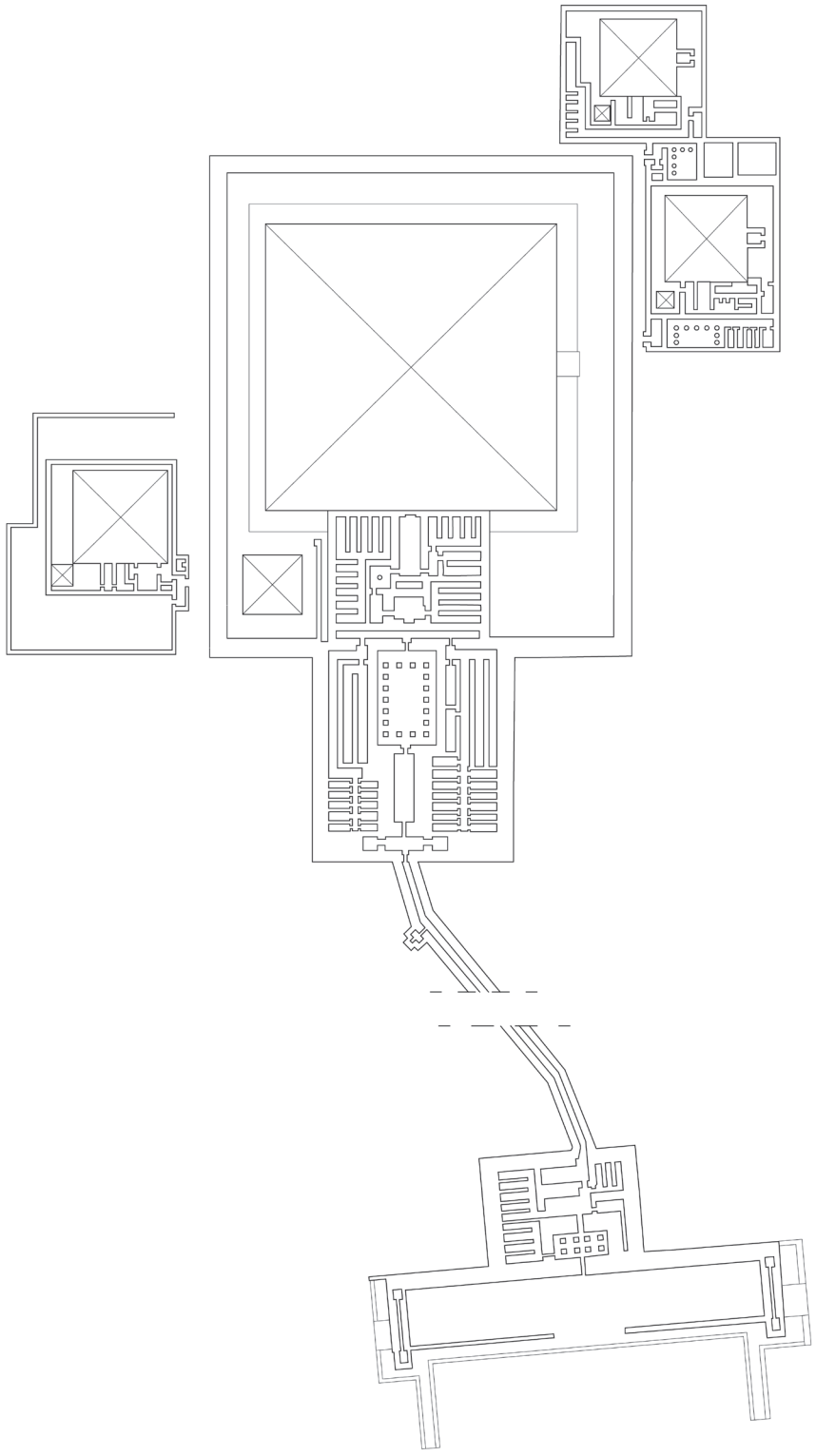

Fig. 5 Ground plan of Pepi II's pyramid complex, including the pyramid complexes of his queens (after Verner 2020: fig. 8.13)

In the Southern Tomb's corridors, three carved panels portray the king in various ritualistic stances: the southern panel (the left one) depicts him standing, wearing the White Crown of Upper Egypt (fig. 3); the central panel shows him standing, wearing the Red Crown of Lower Egypt; and the northern panel (the right one) represents the king wearing the White Crown and standing in a striding posture (his legs spread taking a wide step) (Firth – Quibell 1935: 19), traditionally interpreted as the ritual Heb-Sed dance (Aldred 1982: 74; Aldred 1990: 82; Kemp 2000: 378; Spencer 2000:126). However, a comparative analysis of the Step Pyramid's substructure reveals three nearly identical panels in the lower corridors (fig. 4). The "striding" or "dancing" posture scene of the Southern Tomb is not only mirrored here beneath the Step Pyramid; it is actually emphasized, appearing in both the southern and central panels.[2] The northern panel corresponds to the standing poses seen in the southern and central panels of the Southern Tomb (Firth – Quibell 1935: 5). Consequently, the fact that the purported Heb-Sed dance appears twice in the actual burial chamber's vicinity, but only once in the Southern Tomb, undermines the argument that the latter was uniquely or primarily dedicated to this feast.[3]

Based on the aforementioned comparative analysis, the scenes and inscriptions that appear within the Southern Tomb cannot be regarded as definitive evidence of an exclusive connection to the Heb-Sed rituals. Since these scenes are equally, if not more, prevalent within the Step Pyramid itself, their presence in the Southern Tomb does not inherently define its functional purpose, and this conclusion extends to the later Cult Pyramids.

In addition to the above, a significant philological argument can be made: the Ancient Egyptian terminology for the Heb-Sed (Faulkner 1986: 167) (in its different forms), is entirely devoid of any ideograms or determinatives related to a Pyramid or a Subsidiary Pyramid. Instead, the term is characteristically written with the sign of a double pavilion (Allen 2010: 440) which is widely recognized as the ceremonial gallery for the feast (Gardiner 1957: 495). The absence of any linguistic link between the Heb-Sed and pyramidal monuments further weakens the hypothesis that the Cult Pyramids were specifically associated with the celebration.

Furthermore, the hypothesis that the Cult Pyramid is linked to the Heb-Sed conflicts with an established archaeological fact regarding the funerary complexes of the Old Kingdom queens (fig. 5). Specifically, during the Sixth Dynasty, several queens, such as queens Khentkaus II, Khouit, Apout I, Oujbeten, Neith, and Apout II (Lehner 2007: 163), possessed their own Cult Pyramids in their pyramid complexes (Hawass 1987: 116). If these Cult Pyramids were truly connected to the Heb-Sed, it would imply that the jubilee was not exclusive to male reigning kings but extended to include royal consorts as well; such a claim that lacks any verified historical or archaeological basis. Historical records indicate that royal ladies never celebrated the Heb-Sed, except for some specific queens who ruled the kingdom indeed and exercised full sovereign power, such as Queen Hatshepsut in the Eighteenth Dynasty (Shaw –

2 The part which is supposed to have the king's head in the southern panel is missing. Firth suggested that he was likely depicted in this panel wearing the crown of Upper Egypt (Firth – Quibell 1935: 5).

3 One may propose that those scenes depicted on the corridors' walls of both the Step Pyramid and the Southern Tomb were simply representations of different events and occasions that occurred during the king's lifetime, and because of their importance; they were depicted and recorded on the walls of these structures. However, none of the mentioned scenes connected to the function of the structure itself.

Nicholson 2002: 256). Thus, it becomes necessary, in order to consider this assumption, to find an appropriate interpretation for the existence of these Cult Pyramids that relates to royal ladies during the Old Kingdom.

THE SOUTHERN TOMB AS A REPOSITORY FOR THE ROYAL CROWNS

Some scholars propose that the Southern Tomb functioned as a secure repository for the royal crowns. According to this view, the structure served as a consecrated storehouse where the king's regalia were preserved, further emphasizing the tomb's role as a symbolic chamber for the essential attributes of kingship (Ricke 1950: 126; *cf.* Lauer 1962: 136–137).

Regarding this hypothesis, such an assumption remains highly improbable due to the lack of substantial archaeological evidence. Despite the hundreds of diverse royal crowns depicted in scenes throughout Ancient Egyptian history, fewer than ten actual specimens have been discovered. These uncovered crowns include the *sšd*-crown of the King Intef from the Seventeenth Dynasty, a cloth headdress from the tomb of King Tutankhamun, a hood found on Tutankhamun's mummy, and a gold *sšd*-headband from the same tomb. This profound discrepancy between the great number of depicted representations of headdresses and royal crowns, and the limited archaeological yield raises a critical question: Were these crowns, particularly the more elaborate compound versions, physical objects or merely symbolic representations reserved for temple and funerary reliefs? Current evidence leans toward the latter. By examining the crowns on royal statues, we can realize that the majority of them are simple crowns, while many of the complex shapes of each major type of crown appear only in scenes and engravings. This could be an indication of the difficulty of sculpturing the compound crowns as parts of the royal statues, and the scarcity of representing simple crowns in reality (Collier 1996: 5–6). Furthermore, it is historically unestablished for the ancient Egyptians to have constructed such massive, elaborate structures, as the Southern Tomb or Cult Pyramids were, solely to house regalia. Therefore, the "crown-repository" theory fails to provide a compelling functional justification for these monuments.

THE SOUTHERN TOMB AS AN ABANDONED BURIAL PLACE

Last but not least, some scholars suggested that the architect Imhotep initially commenced construction at Saqqara with this Southern Tomb, intending it to be the king's actual burial place. However, at a later stage, this idea was purportedly abandoned in favour of a more elaborate monument; the Step Pyramid to the north (Ali 2001: 475). Abdel Aziz Saleh posited that Djoser began his reign by commissioning the Southern Tomb as an actual burial place, modelled after the large mastabas erected by his predecessors, with an east-facing entrance in accordance with the ancient traditions. Given its original purpose as a royal tomb, the architect utilized stone instead of mudbrick and meticulously executed its substructure, reliefs, scenes, and decorations. At a later stage, when the capabilities and resources flourished during the king's reign, and the architect's expertise matured alongside the increasing state resources, Djoser ordered the cessation of work on this tomb in order to initiate a grander project. This new monument was distinguished by its unprecedented scale and a shift in religious orientation, clearly evidenced by the tomb's entrance facing north rather than east. Saleh (2006:

387–388) suggests that once the pyramid was completed, the new overshadowed Southern Tomb was likely repurposed to serve one of the ritualistic functions previously discussed.

Concerning the proposal that the Southern Tomb was intended as the original burial place for King Djoser and subsequently its use as a burial place abandoned in favor of the Step Pyramid (Arnold 2001: 430), the archaeological evidence suggests otherwise. Typically, the abandonment of royal funerary monuments is attributed to either constructional/architectural failures (as assumed in Sneferu's Bent Pyramid)[4] or political and religious shifts (as evidenced by the Amarna Tombs) (Wegner 2001: 245). Neither scenario applies to the Southern Tomb.

This hypothesis is further refuted by the fact that the Southern Tomb was fully completed, featuring both a finished substructure, including a deliberately small burial chamber, and a mastaba-style superstructure. Logically, as the substructure precedes the superstructure in construction, the diminutive size of the burial chamber was a premeditated architectural choice rather than an unfinished project. This scale is widely recognized as insufficient to accommodate a royal mummy of the Third Dynasty.[5] Furthermore, the archaeological finds within Room L confirm that the structure was functionally utilized rather than unattended. Ultimately, if the Southern Tomb were an exceptional case of abandonment, it would be theoretically inconsistent to apply the same exceptional logic to all subsequent Cult Pyramids throughout the Old Kingdom.

THE HYPOTHESES CONCERNING THE INDEPENDENT FUNCTION OF THE CULT PURAMIDS

The aforementioned views primarily address the function of the Southern Tomb as a prototype for the later Cult Pyramids. However, alternative perspectives seek to explain the functional purpose of those small-scale subsidiary pyramids independently. Scholars such as Lauer and Ricke posit that a functional shift occurred when these structures transitioned from mastaba--tomb shape, prevalent during the Third Dynasty, to the small-scale subsidiary pyramids characteristic of the Fourth Dynasty onwards. This shift is particularly evident during the Fifth and Sixth Dynasties, when the burial chambers within these pyramids often exhibited a lack of architectural refinement, suggesting a stagnation in their structural development (Ricke 1950: 125; Lauer 1955: 169; Lehner 1985: 79).

Three distinct hypotheses emerge from this independent school of thought. The first was provided by Jéquier, who suggests that beyond serving as a place for offerings, the Cult Pyramid represents the *benben*, the solar symbol of Heliopolis (Jéquier 1927: 59–60; Jéquier 1936: 9; Lehner 1985: 79). The second, proposed by Ricke, is that the Cult Pyramid may have

4 The civil engineer Steve Burrows scanned four different Egyptian pyramids; the Step Pyramid of King Djoser, Meidum Pyramid, the Bent Pyramid, and the Great Pyramid of King Khufu, using Time Scanners, and it was shown in a documentary. He reached an important conclusion that the Bent Pyramid was intended to be in this design on purpose, which means it was not an architectural or constructional mistake as it was believed for a long time. *Cf.* National Geographic: Time Scanners' Series, Egyptian Pyramids.

5 Abdel Aziz Saleh (2006: 387) states that the small size of the Southern Tomb's burial chamber could contradict his own hypothesis when he considers that the tomb was built at the beginning as an actual burial place of the King Djoser; however, he justified the burial of the king in this expected planned? contracted position due to the ancient burial customs that influenced the architect Imhotep.

served primarily as storeroom for ritual offerings (Ricke 1950: 125–126; Lehner 1985: 79). The last was suggested by Lauer, who posits that the burial chamber of a Cult Pyramid may have functioned as a temporary storage facility, used either during the embalming process or as a ritual apparatus during temple ceremonies (Lauer 1955: 169; Lehner 1985: 79; *cf.* Firth 1929: 67).

For Jéquier's hypothesis, a fundamental counter-argument arises: the pyramidal form itself, whether primary or subsidiary, is inherently derived from the primeval mound and the solar *benben* stone (Allen 2003: 22–24). Therefore, if the main pyramid already embodied this solar symbolism, there would be no architectural or theological necessity to construct an independent, subsidiary pyramid to replicate the same symbolic function.

As for Ricke's belief that the Cult Pyramids functioned as storehouses, this view is starkly contradicted by established archaeological evidence. Since the First Dynasty, funerary complexes included numerous independent chambers specifically allocated for storing offerings and grave goods surrounding the main burial vault. Furthermore, from the Third Dynasty onwards, dedicated offering areas and magazines were integrated into the funerary temples (Hawass 2003a: 50). Given the profound sanctity of the pyramidal form during the Old Kingdom, it is highly improbable that the Egyptians would employ such a powerful solar and royal symbol exclusively for storage. Regardless of the significance of the items housed within, the architectural prestige of the pyramid suggests a spiritual or ritualistic purpose far beyond a mere utilitarian function.

Regarding Lauer's assumption; this hypothesis conflicts with the established functional role of the Valley Temple. It is widely maintained by scholars that the Valley Temple was the primary venue for mummification rituals and the purification of the royal body (Fakhry 1969: 16; Dobrev 2003: 28; *cf.* Hassan 1943: 69).[6] Scholars believe that the valley temples were provided with special rooms and courtyards to accommodate the various stages of preparations that took place during the embalming of the body of the deceased king (Bunson 2002: 424).

THE SOUTHERN TOMB AS A PLACE ASSOCIATED WITH THE ROYAL KA

Certain researchers posit that the Southern Tomb was associated with the Royal Ka, and functioned as a symbolic residence for King Djoser's Ka to settle down in, and frequent back and forth (Lehner 1985: 78; Lehner 2007: 92; Jéquier 1936: 9; Borchardt 1937: 110, fn. 5; Ricke 1944: 106–107; Ricke 1950: 125–126; Wegner 2001: 246; Chauvet 2001: 176). Then, the Ka sometimes went to its body buried under the Step Pyramid, and came back to its private symbolic house at another time (Tawfik 1990: 81). A related perspective suggests that the tomb was specifically dedicated to the Ka-statue of the king (Ricke 1944: 56; Ricke 1950: 13; Altenmüller 1972: 3–5; Brinks 1979: 79; Radwan 2003: 100), providing a focal point for ritual offerings (Lehner 1985: 79). Lehner adopts this view, observing that ancient Egyptian funerary traditions often accorded the Ka distinct treatment through separate burial structures or statues. He further suggests that the wooden beams, box and poles discovered in storeroom L of the Southern Tomb may have been parts of the ritual equipment used to carry and transport the Royal Ka-statue (Firth – Quibell 1935: 20; Lehner 2007: 92). This view is reflected successively on the Cult Pyramids as

6 Hawass does not concur with this explanation; he believes that the Valley Temple was used for the cult of the king himself as a human form of the god Horus (Hawass 2003a: 52).

well, as the proponents of this assumption believe that the small Cult Pyramids may have been associated with the king's Ka (Lehner 2007: 18), and therefore they distinguished that kind of pyramid with the name "Ka-Pyramid" (Fakhry 1969: 87; Wegner 2001: 246; Arnold 2003: 61; Lehner 2007: 19). This claim is bolstered by conclusive evidence from the Cult Pyramid of King Khafre, which might have contained a statue (Wegner 2001: 246; Lehner 2007: 92). Furthermore, the internal chambers of the other Cult Pyramids are generally regarded as architecturally suitable for the interment of statues rather than human remains (Arnold 2003: 61).

CONCLUSION

In light of the preceding analysis, it is highly evident that none of the aforementioned assumptions were based on conclusive archaeological arguments; they largely remain speculative and lack rigorous logical support. Reviewing the available archaeological evidence, one may believe that the Cult Pyramids, whether as mastabas or Subsidiary Pyramids, were specifically designed to accommodate the Royal Ka. It is highly probable that these structures served as a permanent residence for a ritual statue of the king. This conclusion is supported by the following considerations:

The importance of the Ka as one of the most prominent factors affecting human existence, according to the ancient Egyptian beliefs (Lehner 2007: 23); this is reflected through the special funerary approach and the respected treatment that the Ka received throughout the ancient Egyptian history. The Egyptians assigned the Royal Ka a distinguished position (Lehner 2007: 92), since it was the only Ka depicted on the monuments in absolute terms. It was believed that the Royal Ka was born with the king as his twin and accompanied him during his life as his protective patron and lasted with him after his death as well (Frankfort 1978: 69). In addition to its fundamental importance to ensure the eternal existence for the deceased, it was regularly summoned through rituals to descend from the heavenly world in order to provide life to both the mummy and the Ka statue of the tomb (O'Connor 2005: 110).

The ancient Egyptians distinguished the Royal Ka through specific architectural privileges, which were followed by a linguistic reflection. From the Old Kingdom onwards, the term *ḥwt-kꜣ* appears in ancient Egyptian language texts and refers to a shrine annexed to a temple or a tomb (Erman – Grapow 1971: 5; Faulkner 1986: 166; Dickson 2006: 163) or a soul house (Gardiner 1957: 580). These Ka shrines were attended by special independent priests who were called in the ancient Egyptian language by the term or *ḥm-kꜣ*, which means Servant of the Ka (Erman – Grapow 1971: 90; Faulkner 1986: 169; Dickson 2006: 22; Gardiner 1957: 581; O'Connor 2005: 110). Thus, the dedication of such funerary monuments to the Royal Ka was not excluded from ancient Egyptian thought. Therefore, it was acceptable to propose that these small subsidiary Cult Pyramids were functional and dedicated to the Royal Ka.

In storeroom L in the Southern Tomb of King Djoser, which was closed and intact at the time of its discovery gilded poles, a wooden beam, and equipment for carrying boxes were found. Firth interpreted these objects as the remains of a funerary Canopy that once rested on gilded poles, and that they were used to hide the royal coffin. He also believed that these boxes were used to store the linen curtains that covered the Canopy (Firth – Quibell 1935: 20). Lehner (2007: 92) suggested a more logical explanation; he believed that the wooden beam, the gilded poles, and the box were probably dismantled parts of the equipment used to carry

the Royal Ka-statue. He pointed out the similarity of these objects to the dismantled Canopy frame that was discovered in the corridor attached to the Cult Pyramid of King Khafre, GII-a. Both Lehner and Lacovara suggested that the statue of the Royal Ka was transported to the tomb inside that frame, and after placing the statue inside the funerary complex, the frame was dismantled and placed inside the box (Lehner – Lacovara 1985: 171–174). The importance of having a statue of the Royal Ka in this kind of funeral structure is due to the fact that through this statue the deceased king could witness and participate in the various funeral rituals, which were considered essential procedures to ensure the renewal of the individual and the universal power of the deceased king (O'Connor 2005: 110).

Due to the absence of the Cult Pyramid as an architectural element of some royal pyramid complexes, Ricke (1950: 125–126) raised a question about the place in which the Royal Ka settled in the pyramid complexes whose plans lacked the existence of a Cult Pyramid. According to his perspective, Ricke proposed that a Cult Pyramid had not been built in some royal pyramid complexes at all. Despite the logic of Ricke's question; there is no archaeological evidence that can be used to support his hypothesis. The author believes that the Cult Pyramid was an essential architectural element that was built in all of the royal funerary pyramid complexes; however, the absence of the Cult Pyramid in some royal complexes could be ascribed to the lack of excavation work in these pyramid complexes. The author leans towards the proposal that a cult pyramid was already built in each funerary pyramid complex, only that some of them have not been discovered yet. The Cult Pyramid of King Khufu, GI-d, is considered a clear example to support that. After well-organized excavations were conducted to the east of Khufu's main pyramid, first by George Reisner, then by Selim Hassan, and followed by Kamal Al-Mallakh, the Cult Pyramid GI-d was discovered by Zahi Hawass in 1991, in the same area where the previously mentioned excavations were conducted.[7]

Lauer thought that it was not reasonable to believe that the Cult Pyramids functioned exclusively in connection with the Royal Ka, since the main pyramid, its mortuary temple, and the other architectural elements of the pyramid complex, in addition to the offerings made, were all intended to be for the Royal Ka, which means that there was no need to build a separate architectural element for it (Lauer 1962: 133, fn. 2; Lehner 1985: 79). However, the present author believes that Lauer's perspective contradicts the fact that the ancient Egyptians differentiated between the deceased king and his Royal Ka with regard to funerary allocations, as each of them had his own allocations, which is clearly evident from the previous archaeological evidence.

Another significant piece of evidence supporting this theory, although not originating from the Old Kingdom (consequently, it falls outside the scope of this study), is the nearly life-sized wooden statue of King Hor found in his tomb at Dahshur (The Egyptian Museum in Cairo, JE 30948; de Morgan 1895: 91–92, figs. 212–216, pls. 33–35). Furthermore, the concept of the "ka-burial" can be found in high-ranking officials' tombs from the Middle Kingdom, as noted by Arnold (*cf.* Arnold 1987: 99; Arnold 2007: 55–61).

Based on the above, concerning the term that should be used to refer to this kind of Subsidiary Pyramid, and contrary to Jánosi's opinion on the matter (Jánosi 2024), the present

7 The discovery of the Cult Pyramid of King Khufu, GI-d, was considered a surprise for most specialized scholars who were convinced for a long time that Khufu's pyramid complex did not include a Cult Pyramid (Hawass 2006: 94).

author suggests using the term Cult Pyramid or Ka-Pyramid to describe this funerary architectural element, instead of the term Ritual Pyramid, based on the functional purpose of these structures, since they were connected with the Royal Ka, which had remarkable value according to the ancient Egyptian beliefs. On the other hand, these Subsidiary Pyramids were not, according to the discovered archaeological evidence, associated with any funerary rituals that could be attributed to them.

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