

## PYRAMID AGE: HUNI TO RADJEDEF

### عصر الاهرامات: حوني إلى رجدف

Richard Bussmann

Das Pyramidenzeitalter: Huni bis Radjedef  
L'âge des pyramides: de Houni à Râdjedef

*The early to mid-4<sup>th</sup> Dynasty (c. 2600-2500 BCE) stands out as a peak of monumentality in the early historical periods of Pharaonic Egypt. Within 100 years, Sneferu, Khufu, and Radjedef built pyramids on an unprecedented scale at Maidum, Dahshur, Giza, and Abu Rawash. Pyramid construction absorbed enormous resources and reflects a new quality of large-scale organization and centralization. Pyramids are the nucleus of Old Kingdom court cemeteries. The early 4<sup>th</sup> Dynasty examples were a template for the generations following the 4<sup>th</sup> Dynasty. Like few other sites, the workmen settlements and ancillary buildings in Giza and Dahshur allow for a "contextual approach," embedding pyramids in the interplay of people, materials, and landscape. The areas outside the political center are less well-known, although the body of evidence is constantly growing. The imbalance of the record makes the relationship of center and periphery one of the key questions for research on the 4<sup>th</sup> Dynasty.*

برزت الفترة من بداية عصر الأسرة الرابعة (2500-2600 قبل الميلاد) إلى منتصفها باعتبارها القمة (المباني) الأثرية خلال العصور التاريخية لمصر الفرعونية. حيث خلال 100 عامًا، بني كلا من سنفرو، خوفو، ورجداف الأهرامات على نطاق لم يسبق له مثيل في ميدوم، دهشور، الجيزة، وأبو رواش. إن بناء الهرم يستوعب موارد هائلة ويعكس نوعية جديدة من المركزية والتنظيم. وتعتبر الأهرامات نواة مقابر كبار رجال الدولة القديمة. وشكلت نماذج بدايات عصر الأسرة الرابعة القالب (المعماري) للأجيال التالية للأسرة الرابعة. مثل عدد قليل من المواقع الأخرى، مستوطنات العمال والمباني الملحقة في الجيزة ودهشور تسمح "بالمناهج السياقي" تضمين الأهرامات في (عملية) التفاعل بين الناس، والمواد، والمناظر الطبيعية. أما المناطق خارج المركز السياسي فهي ليس معروفة بالقدر الكافي، على الرغم من أن مجموعة الأدلة تتزايد باستمرار. إن الخلل في السجلات الأثرية يجعل العلاقة بين المركز والأطراف أحد المسائل الرئيسية في عمليات البحث العلمي للأسرة الرابعة.

**T**he reigns from Huni to Radjedef are a period of great technological and ideological innovation.

Sneferu, the founder of the 4<sup>th</sup> Dynasty, built the first true pyramid at Maidum, originally ascribed to his predecessor Huni, and two

additional pyramids at Dahshur (fig. 1). The colossal pyramid of Khufu even surpasses the pyramids of Sneferu in size, although not in total volume. Pyramid building required social organization on an unprecedented scale and went hand in hand with the restructuring of court society.



Figure 1. Second pyramid of Sneferu, the so-called Bent Pyramid. Dahshur.

Different from the later Old Kingdom, the pyramids and court cemeteries of this period are located within a radius of seventy kilometers from Maidum in the south up to Dahshur, Giza, and Abu Rawash in the north (fig. 2). This wide geographical spread is typical of the early and mid-4<sup>th</sup> Dynasty. In the late 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> Dynasties, the court cemeteries cluster around Saqqara and Abusir, closer to where an urban center formed, later called Memphis (Love 2003). The Manethonian copies insert a break before Sneferu (Waddell 1940), whereas the earlier annalistic tradition does not single out the early 4<sup>th</sup> Dynasty as a separate period (Redford 1986; Wilkinson 2000; Ryholt 2004).

Most historical studies include the reigns from Huni to Radjedef in broader syntheses of the Old Kingdom (Malek 2000; Baud 2010). The bulk of research literature focuses on the archaeology of pyramids, the royal funerary cult, and the associated court cemeteries (see bibliographic notes below). Provincial archaeology of the third millennium BCE concentrates on the Early Dynastic Period, the early and the late Old Kingdom (Seidlmayer 1990; Alexanian 2000; Bussmann 2010), whereas the evidence is comparatively thin for the reigns of Khufu and Radjedef.

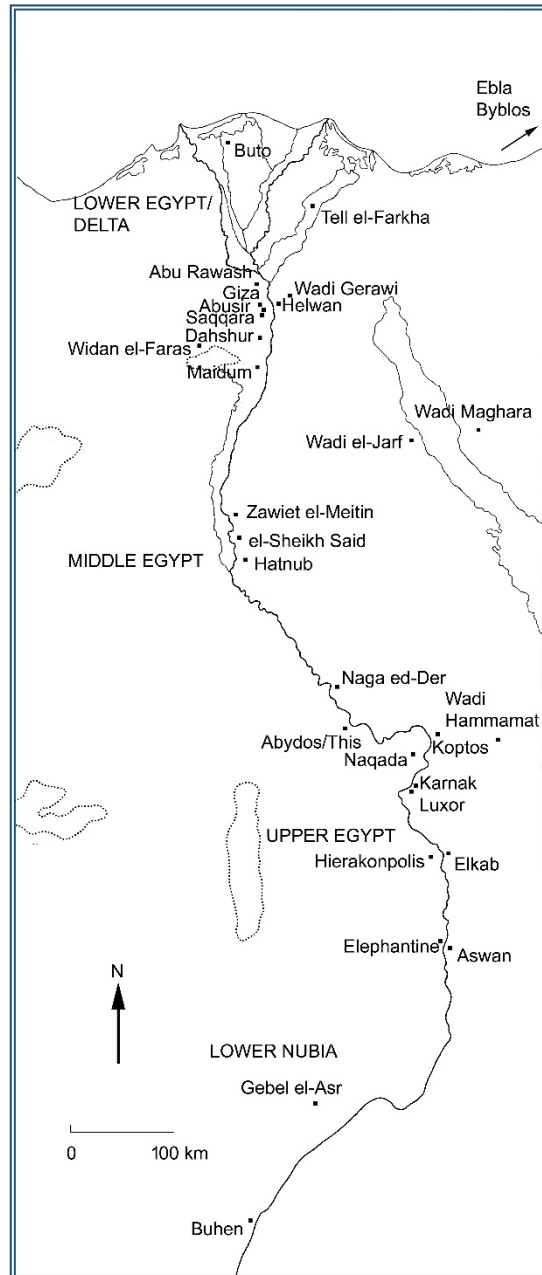


Figure 2. Map of sites mentioned in the article.

### *Chronology and Geography of Royal Evidence*

The reigns from Huni to Radjedef date approximately to the mid-third millennium BCE. However, the annalistic tradition offers conflicting information on the names of kings and the length of their reigns, especially for the 3<sup>rd</sup> Dynasty (Seidlmayer 2006). If “year of counting” and “year after counting” refer to a

strictly biannual rhythm, the entries in the Turin Royal Canon would contradict the contemporaneous 4<sup>th</sup> Dynasty evidence derived predominantly from graffiti on pyramid blocks (Nolan 2003; Bárta 2006). Absolute dates for the reigns of Huni to Radjedef vary between a “high chronology,” 2637 to 2558 BCE (Shaw 2000: 480), and a “low chronology,” c. 2550 to 2475 BCE (Hornung et al. 2006: 490-491). Radiocarbon dates are in better agreement with the high chronology (Dee et al. 2008; Dee 2013). Estimations of the length of the early to mid-4<sup>th</sup> Dynasty significantly exceeding 100 years have not been proposed so far.

The closest one can get to a political history of the 4<sup>th</sup> Dynasty are the entries on the reign of Sneferu on the Palermo Stone (Wilkinson 2000: 140-147, fig. 1). In his sixth to eighth year of counting, Sneferu built large boats of cedar and pine wood, seized 7,000 Nubian captives and 200,000 cattle, constructed the wall of the southern and northern land, created 35 estates, erected a double building (palace?), and furnished the palace with a wooden gateway. However, the Palermo Stone was compiled long after the 4<sup>th</sup> Dynasty, and the symmetric expressions and abbreviated writing style obscure the scale, location, and exact nature of the activities recorded. The numbers, e.g., of prisoners, create a fictional reality and caution against a too literal reading of the Palermo Stone.

Geographically, the archaeological and inscriptional evidence of the early 4<sup>th</sup> Dynasty concentrates on the Memphite cemeteries. The location of Huni’s tomb is unknown (Ćwiek 2008). Sneferu built the pyramid at Maidum and the Bent Pyramid and Red Pyramid at Dahshur (Stadelmann 2007). The tombs of the 4<sup>th</sup> Dynasty courtiers and later officials at both sites have recently been reinvestigated (Alexanian 1999, 2007; Harpur 2001). Khufu moved the court cemetery to Giza and buried huge boats next to his pyramid (Jánosi 2005; Romer 2007). The burial (?) equipment of Hetepheres, perhaps Khufu’s mother, was found secondarily deposited in a cache (Münch 2000) and yielded spectacular finds, such as

wooden poles of a royal canopy, a bed, and a carrying chair (Reisner 1927). The pyramid and court cemetery of Radjedef is located at Abu Rawash (Baud et al. 2003). When Khafra returned to Giza (Hölscher 1912), he embedded his pyramid and the sphinx in the infrastructure established by Khufu.

Royal evidence from across North Eastern Africa and the Eastern Mediterranean reveals that pyramid construction went hand in hand with increased exploitation of natural resources and interregional trade (fig. 2). Rock inscriptions near the turquoise mines of Wadi Maghara depict Sneferu and Khufu striking down an enemy (Gardiner and Peet 1917: pls. II-IV). The iconic gesture claims Pharaonic superiority, perhaps mirroring also minor military quarrels with local Bedouin. The gneiss and basalt quarries at Widan el-Faras in the Northern Fayum and at Gebel el-Asr near Abu Simbel were exploited for 4<sup>th</sup> and 5<sup>th</sup> Dynasty pyramid temples (Bloxam 2010). Cylinder seal impressions of Khufu and pottery sherds indicate royal quarrying activity at el-Sheikh Said during the 4<sup>th</sup> Dynasty (Willems et al. 2009; Vereecken 2011). Khufu also left rock inscriptions in the travertine quarry of Hatnub some 15 kilometers further to the south (Anthes 1928: 13). Copper processing is attested in a 4<sup>th</sup> Dynasty Egyptian outlier at Buhen, where seal impressions of Khafra and Menkaura were found (Emery 1963). In Wadi Gerawi, a dam with a short-lived workmen camp attached to it, monitored the flow of water down into the Helwan area in the early 4<sup>th</sup> Dynasty (Dreyer and Jaritz 1983).

Old Kingdom rock inscriptions flank the expedition route to the Red Sea through the Wadi Hammamat. Some may date to the 4<sup>th</sup> Dynasty (perhaps Goyon 1957: nos. 23 and 36). The inscription with a list of 4<sup>th</sup> Dynasty kings and princes was probably carved during the Middle Kingdom (Drioton 1954). Recently, the administrative papyri of an official of Khufu were found at Wadi el-Jarf, an Old Kingdom harbor site at the Red Sea (Tallet 2014). Seal impressions and inscriptions recording expeditions of Khufu’s officials were also found at a camp in the Western Desert, a

Los Angeles.

resting place on the Abu Ballas trail to sub-Saharan Africa (Kuper and Förster 2003; Kuhlmann 2005; Förster 2008).

Stone bowls bearing the names of Hetepheres and Khafra were recovered in post-4<sup>th</sup> Dynasty contexts at Ebla and Byblos together with later material (Sowada 2009: no. 157 and 180). Similar to stone sherds found at Coptos (fig. 3) and Hierakonpolis (Quibell and Green 1900: 7, pl. 18.6, 1902: 38, pl. 46.13, Chicago 4751), both inscribed with the name of Khufu, they may have passed through several hands, during trade and gift exchange, prior to their final deposition.

Royal penetration into local administration is evident at various sites. A granite fragment of Huni found on Elephantine might belong to the local pyramid attached to an administrative area (Seidlmayer 1996a, 1996b). The sealing material from Elephantine includes royal names of the 3<sup>rd</sup> to 6<sup>th</sup> Dynasties, but none with a name of an early 4<sup>th</sup> Dynasty king (Pätznick 2005). Seal impressions with names of Sneferu were found in the town area of Hierakonpolis (fig. 4). A small statuette of Khufu came to light in one of the mud-brick buildings within the temple enclosure of Abydos (Hawass 1985; JdE 36143).



Figure 3. Fragment of stone vessel, inscribed with the name of Khufu, possibly as part of a private name or title.

### *Kingship and Court Society*

The archaeology of court cemeteries is a key for exploring innovation of royal ideology in



Figure 4. Clay sealing with Horus name of Sneferu from Hierakonpolis.

the early 4<sup>th</sup> Dynasty. The Khufu cemetery at Giza (fig. 5) has sparked wide interest in the research literature due to its planned layout (Jánosi 2005). The pyramid of the king lies at the heart of the cemetery and is accompanied by the ancillary pyramids of the queens. The princes are buried in large mastabas in the Eastern Cemetery, other court officials in medium sized mastabas in the Western Cemetery. Both Eastern and Western Cemetery were originally laid out on a checkerboard, later populated with other tombs in a less rigid fashion.

The distinctive arrangement at Giza has clear forerunners at Maidum and Dahshur (Alexanian 1995) but differs from the early dynastic royal cemeteries. At Abydos, the royal tombs are surrounded by subsidiary burials, each of almost identical size. The same template is used by other high-ranking contemporaries and their courts, buried at Naqada, Tarkhan, Saqqara, Giza, and Abu Rawash (Vaudou 2008). In contrast, there is only one court cemetery in the 4<sup>th</sup> Dynasty. Tomb types and sizes reflect a nuanced hierarchy of an interdependent court community (Roth 1993), cascading down from kings to queens, and from princes to mid-ranking courtiers. The change of the spatial

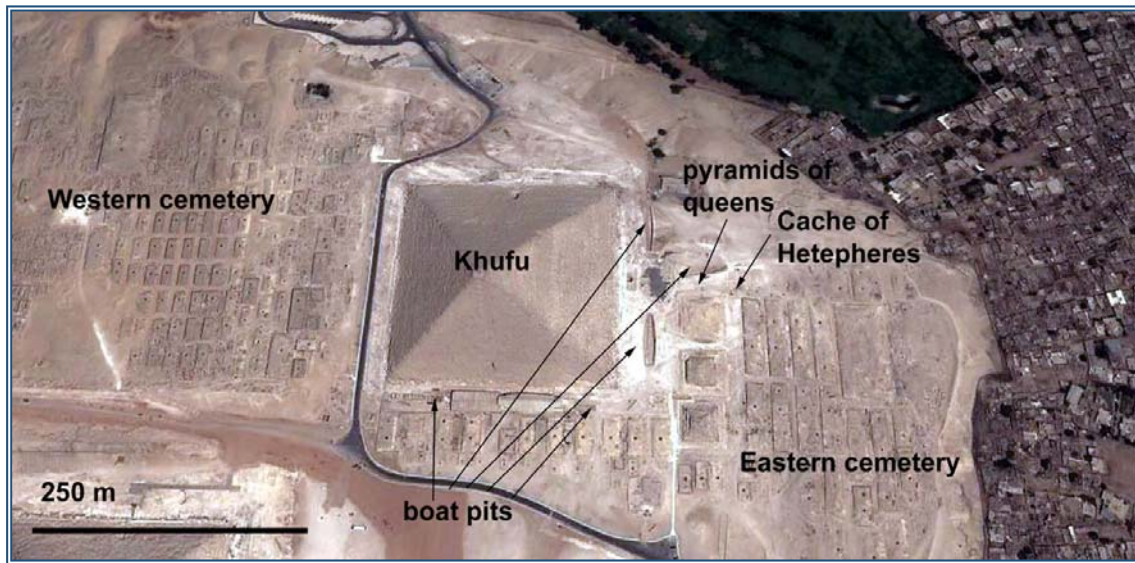


Figure 5. Map of Khufu cemetery with names of sites mentioned in the text.

layout and the different geographical distribution patterns of court cemeteries mirror two interrelated processes during the 1<sup>st</sup> to 4<sup>th</sup> Dynasty: centralization and stratification of the core elite.

An interesting corollary is the stronger emphasis on the royal family as opposed to the king alone. This indicates perhaps the birth of a dynastic principle based on father-son succession. It is probably no coincidence that the royal title “son of Ra” is first attested for Radjedef (von Beckerath 1999: 25) and the title “son of the king” is typical of the highest court officials in the early to mid-4<sup>th</sup> Dynasty (Roemer 1977; Baud 1999: 312-323). Both titles suggest that the father-son model was explored more widely for the display of status and legitimacy in the 4<sup>th</sup> Dynasty than it was before.

Practice may well have been at variance with ideology. Kings may not have been the sons of deceased predecessors, the Eastern Cemetery at Giza was probably not used by “true” princes only (Jánosi 2005: 98-111), and the hierarchy of tombs must not be conflated with real power relationships at court. In other words, cemetery organization reflects an imagined model of court society, which takes a new distinct shape in the early 4<sup>th</sup> Dynasty.

#### *A Contextual Approach to Pyramids*

The “contextual approach” (Lehner 1985) embeds pyramids in their wider natural and organizational environment (Bussmann 2004; Kemp 2006: 201-211; Lehner and Wetterstrom 2007; Lehner and Tavares 2010; Lehner 2011; Tavares 2011). At Giza, the area south of the pyramid plateau was the focus of construction activities (fig. 6). The massive Heit el-Ghurab, the “Wall of the Crow,” held back material washed down from the plateau and served to control access to the pyramid field. Walking south, a gate led to a settlement laid out as a series of oblong mud-brick galleries, probably used as temporary dormitories. Bakeries and cattle, imported perhaps from sites in the Delta (Redding 2009), served the needs of the workmen who erected additional buildings from stone rubble for living and sheltering. Hundreds of seal impressions (Nolan 2010) suggest that the adjacent area to the south was an administrative center that controlled the stream of people, goods, and activities. The seal inscriptions mention the names of Khafra and Menkaura, and the pottery confirms that the site was used predominantly in the mid to late 4<sup>th</sup> Dynasty (Wodzinska 2007, 2011).

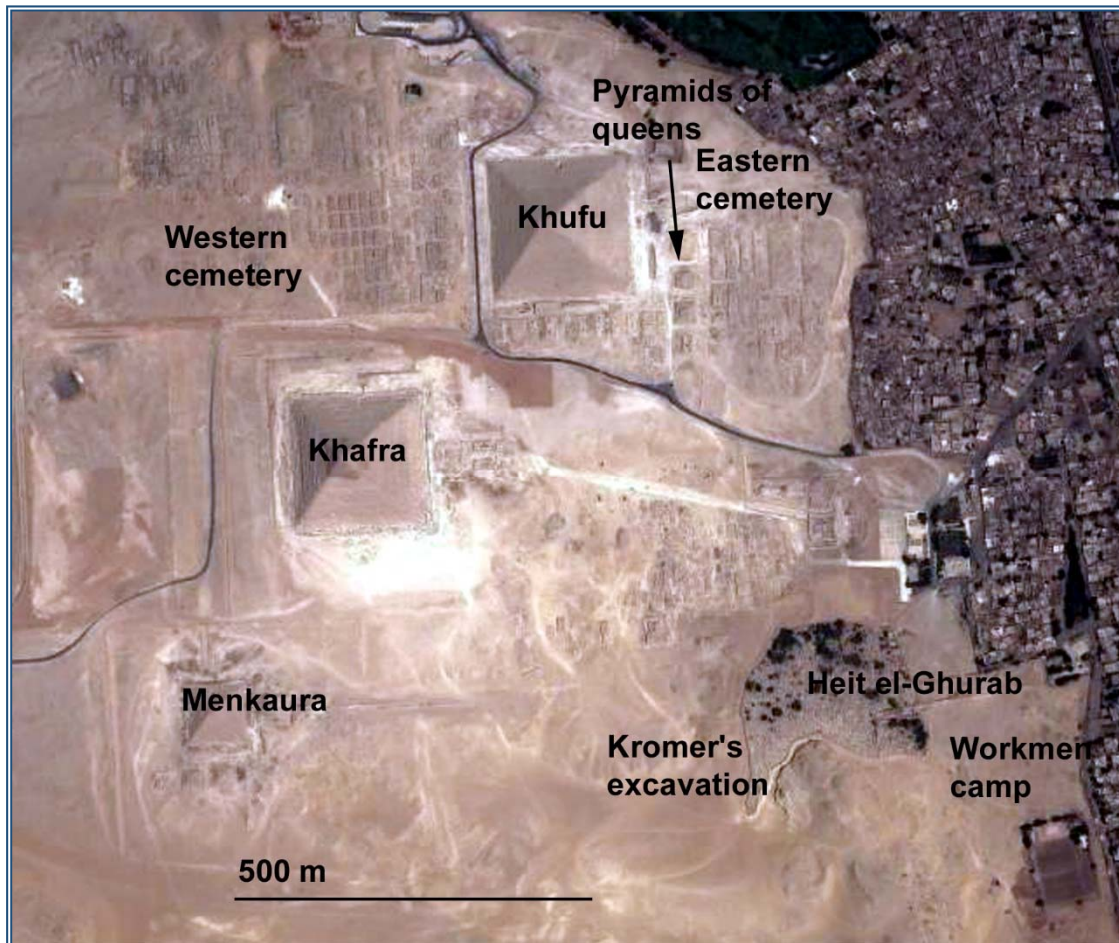


Figure 6. Map of Giza with names of sites mentioned in the text.

South of the Menkaura pyramid, Kromer (1978) found the dump of a settlement, originally perhaps comparable to the settlement excavated by Lehner. The seal impressions date to Khufu and Khafra (Torcia Rigillo 2003), and the pottery can be paralleled with other early 4<sup>th</sup> Dynasty material. Nearby, a series of workshops, open courts, and an administrative building were located around what seems to be an S-shaped ramp (Saleh 1974).

Excavations at Dahshur demonstrate that social and technological organization on a large scale was already in place a generation earlier. A large open court halfway between cultivation and the Red Pyramid (Faltings 1989; Eger 1994) and a temporary workmen camp to the

south (Stadelmann et al. 1993: 291-294) formed part of the construction activities. One section within the valley temple of the Bent Pyramid was converted into living space during the later Old Kingdom (Fakhry 1961b), perhaps for accommodating the royal funerary priests on duty. “Pyramid towns” are well known from titles since the early 4<sup>th</sup> Dynasty, but are archaeologically still elusive (Stadelmann 1981; Lupo 2008). They may have housed administrators, skilled workmen, and those recruited for the royal funerary cult. A decree of Pepy I indicates that the pyramid towns of Dahshur were located near the valley temple of the Red Pyramid where a large enclosure wall was found (Alexanian and Seidlmayer 2002).

The “contextual approach” shows that pyramids are part of a dynamic landscape. Many settlements and workshops are short-lived, reflecting constant change. Large-scale planning is evident from sites such as the Giza galleries and, presumably, pyramid towns. At the same time, the wide range of secondary buildings at all sites hints at a substantial degree of management on a local level, necessary to realize insufficient master plans of the central government.

### *Provincial Egypt*

The infrastructure that went with pyramid building probably fostered the urbanization of the capital region. Although an increasing number of communities had inhabited the area since the Early Dynastic Period (Jeffreys and Tavares 1994; Köhler 2008), the urban infrastructure around Memphis was still not strong enough to run the pyramid business with a sufficient number of people. The capital was probably not one single city but a series of villages and small towns, mirroring social models that prevail in the rural countryside.

The view of the political center on 4<sup>th</sup> Dynasty provincial Egypt is guided by administrative needs developed through an infrastructure of nomes and domains (Jacquet-Gordon 1962; Martin-Pardey 1976; Moreno García 1999, 2013). The decoration of the valley temple of the Bent Pyramid, for example, represents Egypt as a series of nomes populated by royal domains, the latter bringing offerings to the king (Fakhry 1961a). Although references to nomes predate the 4<sup>th</sup> Dynasty (Engel 2006), the blocks from Dahshur are the first pieces of evidence for a fully-fledged system that embraces the whole of Egypt. The names of domains are composed of royal names, and the primary function of domains was the delivery of products for the pyramid cults. This suggests that domains were agricultural estates set up by kings for taxation. On a local level, the establishment of kingship was not self-evident. A series of small pyramids (fig. 7) scattered across the Nile Valley and dated to the late 3<sup>rd</sup> or early 4<sup>th</sup> Dynasty are discussed in the context of royal colonization

(Ćwiek 1998; Marouard and Papazian 2012). Seidlmayer (1996a, 1996b) argues from evidence on Elephantine that the local pyramid was originally connected to a royal administrative center, but, similarly to the Early Dynastic royal fort on the island, was a short-lived affair. Early Dynastic and Old Kingdom seal impressions from Elephantine (Pätznick 2005) and other settlements, such as Elkab (Regulski 2009) and Hierakonpolis (Quibell and Green 1902: 16-17, pls. 70-71), demonstrate that small towns maintained the administrative infrastructure in provincial Egypt. Judging by the later role of local temples as interfaces between the crown and provincial Egypt, the early shrines seem to have been the administrative nucleus of local communities already in the 4<sup>th</sup> Dynasty (Papazian 2008; Bussmann 2010). The political core, however, did not recognize the role of towns and temples in provincial Egypt.

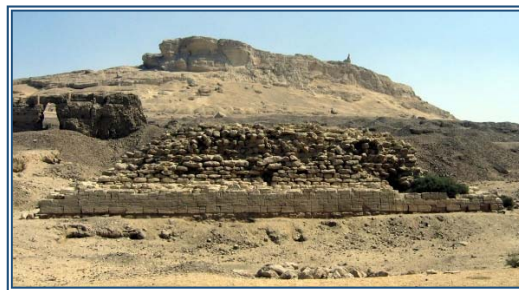


Figure 7. Small pyramid at Zawyet el-Mayitin, Middle Egypt. Late 3<sup>rd</sup> to early 4<sup>th</sup> Dynasty.

Archaeological evidence of settlements and cemeteries seems to fade out in the 4<sup>th</sup> Dynasty and reappear in the 5<sup>th</sup>. However, tombs without burial equipment, e.g., at Naga el-Der (Reisner 1932), are difficult to date stylistically, and the gap of the 4<sup>th</sup> Dynasty might simply reflect a change of burial customs (Arnold 1976 with 4<sup>th</sup> Dynasty examples at Thebes). Settlement layers of the 4<sup>th</sup> Dynasty might have been removed for later buildings or are not or badly preserved in the excavated trenches, such as at Buto (Köhler 1997; Hartmann 2007), Elephantine (Raue 1999; Kopp 2011), and Tell el-Farkha (Chlodnicki et al. 2012). Despite this dearth of evidence, the reigns of Huni to



Radjedef do not necessarily have to indicate a break in the demographic history of provincial Egypt.

*Major Features and Significance*

Junker (1929: 74-81) famously described the austere style of the early 4<sup>th</sup> Dynasty court cemeteries as “strenger Stil,” which differed from the more vivid expression of 3<sup>rd</sup> Dynasty art and architecture. The term implies severity, rigor, and political control. According to Junker, Khufu commanded that elaborate false doors be restricted to “slab stelae,” mounted over the cult place, and statues replaced with “reserve heads” (fig. 8), deposited in front of the subterranean burial chamber, in order to draw the attention of the viewer exclusively to the pyramid, the symbol of the eternal power of the king. Alexanian (1995), Stadelmann (1995), and Flentye (2011) argue that Khufu’s vision was already developed in the reign of Sneferu. Jánosi (2005: 280-283), in contrast, interprets slab stelae as emergency solutions of individuals who died prematurely rather than as a reflection of royal power (but see Der Manuelian 2003).

The debate resonates modern attitudes towards the period, oscillating between the appreciation of human achievements and the dismissal of total power. Whatever drives their perception, the empirical record certainly contributes to the difficulties. The lack of a broad stream of written sources, other than royal inscriptions and the names and titles of high officials, and the monumentality of pyramids and tombs tend to overshadow the human factor in the evidence and invite for visions of the extreme.

Following Lehner (2010), the discussion above contextualizes monumentality in questions of social modeling, urbanism, and core-periphery interaction. It is argued that the royal family became the center of a hyperhierarchy at court. Large-scale organization, reflected in settlement and cemetery planning around the court cemeteries, was possible only due to a web of informal structures filling the gaps. The administrative integration of the country was

not fully successful because the political center did not understand how the society was organized on a local level (Bussmann 2014). Egyptian kings increased the exploitation of natural resources within the country and maintained interregional trade connections, possibly with the help of military force. Compared to the dense record of later periods, however, the scale and permanency of these activities seems yet limited, even if the royal annals suggest a different scenario.



Figure 8. Reserve head. Provenance unknown.

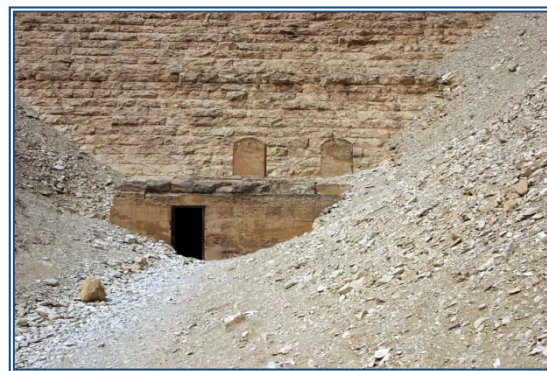


Figure 9. Mortuary temple to the east of the pyramid at Maidum.

The early 4<sup>th</sup> Dynasty is a true age of pyramids. The pyramids at Maidum, Dahshur, Giza, and Abu Rawash are the biggest ever built in Egypt. Pyramids also served as a template for royal representation in provincial Egypt in the late 3<sup>rd</sup> to early 4<sup>th</sup> Dynasty. On a morphological level, the early 4<sup>th</sup> Dynasty witnessed the emergence of the mortuary temple to the east of the pyramid (fig. 9). The focus of royal funerary culture shifted from the burial itself towards the mortuary cult, a process originating in the Early Dynastic Period (Roth 1993). Over time, the royal funerary cult maintained a growing number of priests and became the center of royal representation and economy in the Old Kingdom (Posener-Kriéger 1976; Ćwiek 2003; Stockfish 2003; Posener-Kriéger et al. 2006).

Administrative titles of the early 4<sup>th</sup> Dynasty show that kingship depended on a complex web of people. High courtly titles were typically combined with the title “son of the king” in this period (Baud 1999: 312-323). The majority of high-ranking titles were probably of an honorific nature designed to monitor rivalry at court. Some officials, such as Meten (Gödecken 1976) and Neteraperef (Alexanian 1999), were responsible for specific Egyptian provinces, but were buried at court. 4<sup>th</sup> Dynasty administration is often described as highly centralistic and focused on the royal family. Seal inscriptions (Kaplony 1977, 1981; Nolan 2010) reveal that lower ranking officials, who were not members of the royal family, were also instrumental for royal administration already in this period.

On the level of material culture, the mastaba is the typical type of non-royal tomb during the 4<sup>th</sup> Dynasty. The idea of rock tombs,

so popular among Egyptian elites from the late Old Kingdom onward, is not yet fully established (but Jánosi 2005: 297-430; Bárta 2011). Petrie coined the term “Maidum bowls” for the red-polished bowls with carinated rim that he discovered at Maidum. They play a key role for dating in the Old Kingdom (Op de Beeck 2004) and have two distinctive shapes in the early 4<sup>th</sup> Dynasty, one being deep (fig. 10), the other shallow with a flaring rim.

The reigns from Huni to Radjedef left a clear footprint on the ground and in reception history. The pyramid of Khufu became one of the wonders of the world and the Giza plateau is today a touristic magnet. Within the literary tradition of ancient Egypt, Sneferu and Khufu enjoyed a long afterlife (Wildung 1969). Sneferu was worshipped in the valley temple of the Bent Pyramid during the Middle Kingdom and his name remained popular throughout Pharaonic history (Graefe 1990).



Figure 10. Maidum bowl of the early 4<sup>th</sup> Dynasty, from Maidum

## *Bibliographic Notes*

The early to mid-4<sup>th</sup> Dynasty is usually included in discussions of the Old Kingdom more generally. For historical overviews of the Old Kingdom, see Kemp (1983, 2006), Malek (2000), Baud (2010). Relevant edited volumes are Bárta and Krejčí (2000), Seidlmayer (2005), Bárta (2006), Bárta et al.

(2006, 2011), Vymazalová and Bárta (2008), and Strudwick and Strudwick (2011). For pyramid construction, see Stadelmann (1991), Lehner (1997), Haase and Stadelmann (2003), Hawass (2003), and the journal SOKAR. *PM III* (Porter and Moss 1974) remains crucial for earlier excavation reports of court cemeteries at Dahshur, Giza, and Abu Rawash. For recent monographic studies on Maidum, see Harpur (2001), on Giza see Jánosi (2005), on Dahshur see Alexanian (1999).

Diachronic studies of administration focus on higher ranking titles, especially those of the court cemeteries, see Helck (1954), Baer (1960, for methodology), Schmitz (1976), Roemer (1977), Kanawati (1977), Strudwick (1985), Jones (2000, annotated list of titles), and Baud (1999). Administrative titles of seal inscriptions, including those of lower ranks, have been analyzed by Kaplony (1977, 1981) and Nolan (2010). For analyses of administrative institutions, see Jaquet-Gordon (1962), Moreno García (1999), Andrásy (2008), and Papazian (2012). Overviews of Old Kingdom administration are offered by Helck (1975) and Moreno García (2013), see Müller-Wollermann (1987-1988) for one with a theoretically informed framework.

For iconographic and written evidence of kingship, see Silverman and O'Connor (1995). For archaeological material of Old Kingdom temples, see Bussmann (2010). For Old Kingdom art history, see Smith (1946) and Arnold (1999), and the discussion based volumes *Deutsches Archäologisches Institut* (1995), Grimal (1998), Ziegler (1998). For tomb decoration, biographies, and funerary practice of the Old Kingdom, see Harpur (1987), Cherpion (1989), Seidlmayer (1997), Willems (2001), Kloth (2002), van Walsem (2005), Fitzenreiter (2006), Fitzenreiter and Herb (2007), Baines (2007). For Old Kingdom pottery, see Rzeuska and Wodzińska (2009) and Warden (2014). For interregional interaction, see Gratien (1995), Sowada (2009), Török (2009), and Old Kingdom contributions in O'Connell (2012) and Speiser et al. (2013).

Useful online resources include the websites of the Giza Archives, the Giza Plateau Mapping Project, the Dahshur project, the Abu Rawash project, and the Oxford Expedition to Egypt.

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## External Links

- The Giza Plateau Mapping Project  
*AERA*. (Internet resource: <http://www.aeraweb.org/>. Accession date: May 2015.)
- The Giza Archives – Museum of Fine Arts, Boston  
*Museum of Fine Arts, Boston: The Giza Archives*. (Internet resource: <http://www.gizapyramids.org/>. Accession date: May 2015.)
- Dahshur Project  
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(Internet resource: <http://old.dainst.org/de/project/dahschur?ft=all>. Accession date: May 2015.)
- Abu Rawash Project  
*Abou Rawach*. (Internet resource: <http://www.ifao.egnet.net/archeologie/abou-roach/#en>. Accession date: May 2015.)
- Oxford Expedition to Egypt  
*Oxford Expedition to Egypt: Scenes of Old Kingdom tombs*. (Internet resource: [http://archaeologydataservice.ac.uk/archives/view/oece\\_ahrc\\_2006/index.cfm?CFID=61728&CFOKEN=717BF022-BD5B-4DFB-AAE17225BF097871](http://archaeologydataservice.ac.uk/archives/view/oece_ahrc_2006/index.cfm?CFID=61728&CFOKEN=717BF022-BD5B-4DFB-AAE17225BF097871). Accession date: May 2015.)

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- Figure 1. Second pyramid of Sneferu, the so-called Bent Pyramid. Dahshur. Photograph by Kristina. Licensed under Creative Commons Attribution Share Alike CC BY-2.0. ([http://en.wikipedia.org/wiki/Dahshur#/media/File:Bent\\_Pyramid\\_\(I\\_love\\_Naples\).jpg](http://en.wikipedia.org/wiki/Dahshur#/media/File:Bent_Pyramid_(I_love_Naples).jpg))
- Figure 2. Map of sites mentioned in the article. Compiled by the author.
- Figure 3. Fragment of stone vessel, inscribed with the name of Khufu, possibly as part of a private name or title. Purchased at Koptos (Petrie 1896: 4, 23, pl. 21.3). Copyright: Petrie Museum of Egyptian Archaeology, University College London. UC11760.
- Figure 4. Clay sealing with Horus name of Sneferu from Hierakonpolis. Cambridge, Museum of Archaeology and Anthropology, 2005.537. Photograph by the author.
- Figure 5. Map of Khufu cemetery with names of sites mentioned in the text. Image by Google Earth and the author.
- Figure 6. Map of Giza with names of sites mentioned in the text. Image by Google Earth and the author.
- Figure 7. Small pyramid at Zawyet el-Mayitin, Middle Egypt. Late 3<sup>rd</sup> to early 4<sup>th</sup> Dynasty. Photograph by the author.
- Figure 8. Reserve head. Provenance unknown. Copyright: Petrie Museum of Egyptian Archaeology, University College London. UC15988.
- Figure 9. Mortuary temple to the east of the pyramid at Maidum. ([http://en.wikipedia.org/wiki/Meidum#/media/File:Mortuary\\_Temple\\_at\\_Meidum.jpg](http://en.wikipedia.org/wiki/Meidum#/media/File:Mortuary_Temple_at_Meidum.jpg))
- Figure 10. Maidum bowl of the early 4<sup>th</sup> Dynasty, from Maidum. Copyright: Petrie Museum of Egyptian Archaeology, University College London. UC18204.