



McDONALD INSTITUTE CONVERSATIONS

# The Evolution of Fragility: Setting the Terms

Edited by Norman Yoffee



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of Fragility:  
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Edited by Norman Yoffee

*with contributions from*

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Norman Yoffee, 2019

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## Chapter 5

# Ancient Egyptian Exceptionalism: Fragility, Flexibility and the Art of Not Collapsing

Ellen Morris

In comparison to other early states, Egypt cannot be considered fragile. From its first through its eighth dynasty, for instance, pharaoh followed pharaoh for nearly 800 years (c. 2900–2118 BC).<sup>1</sup> Some runners in this relay stumbled, but others invariably picked up the sceptre and ascended the throne. Thus, the state endured as an essentially recognizable and functional entity for a seemingly unfathomable amount of time. This is especially notable given that multiple lines of evidence reveal points of stress and fracture that should have brought it to its knees many centuries before.

This meditation on the extraordinary longevity of the first iteration of Egypt's pharaonic state has three main sections. It begins with a brief consideration of the factors that allowed Egypt to skirt dangers that laid low many comparable polities. This discussion draws heavily on James Scott's *Against the Grain: A Deep History of the Earliest States* and concludes that while geopolitics may have saved the state from many dangers, it could not inoculate it against Scott's category of politicide. The second section investigates three points in Egypt's history in which the downfall of the pharaonic regime must have seemed immanent due to governmental abuses of power, infighting, and societal schism. This section concludes with a short discussion of factors that may have led to Egypt's remarkable resiliency.

All things – good or not – come to an end, and the essay concludes by tackling the question of just what it was that made the demise of the Old Kingdom different. After the last pharaoh of note died (c. 2153), the crown passed to the welter of obscure kinglets who together make up the Eighth Dynasty. Like the regime that came before them, these rulers did their best to maintain the unity of the nation by courting a powerful provincial family and lavishing benefits upon it. After the last of their number perished (c. 2118), however – and quite probably well before that point

– the centralized state broke asunder and remained so for nearly a century and a half. Because the length of this interval between two successive Kings of Upper and Lower Egypt was so entirely unprecedented, the final argument here mounted is that there are indeed climates inimical to political stability.

### Dangers skirted, bullets dodged

In contrast to the often-enduring material signatures of ancient states, most were unstable entities that rarely lasted long. This argument animates this volume as well as James Scott's book *Against the Grain*. In a chapter titled 'Fragility of the Early State: Collapse as Disassembly', Scott discusses threats to the stability of ancient states (Scott 2017, 183–218). Reading through the chapter with an Egyptologist's eye, however, one is struck by how many of these potential state-wrecking shoals Egypt evaded by virtue of its location in a fertile river valley at the edge of the Sahara (see Fig. 5.1).

### *Salinization of the soil*

Death by declining yield due to the progressive salinization of soil was not an issue for the Egyptian state. The annual inundation blanketed the Nile Valley with a fresh layer of nutrient-rich soil each year just prior to the sowing season, and thus fields did not need to be fertilized or left fallow. Satiric texts composed in Egypt's Middle and New Kingdoms dwell at length on the supposed miseries of the Egyptian peasant (Camino 1997). Visitors like Herodotus, who came from countries where the life of the farmer was indeed truly miserable, however, were impressed with the comparative ease of farming in Egypt (Herodotus II.14). This does not mean that erratic floods, passing pests, or highly exploitative social and fiscal policies didn't cause misery. It simply means that the soil could not have been more fertile.

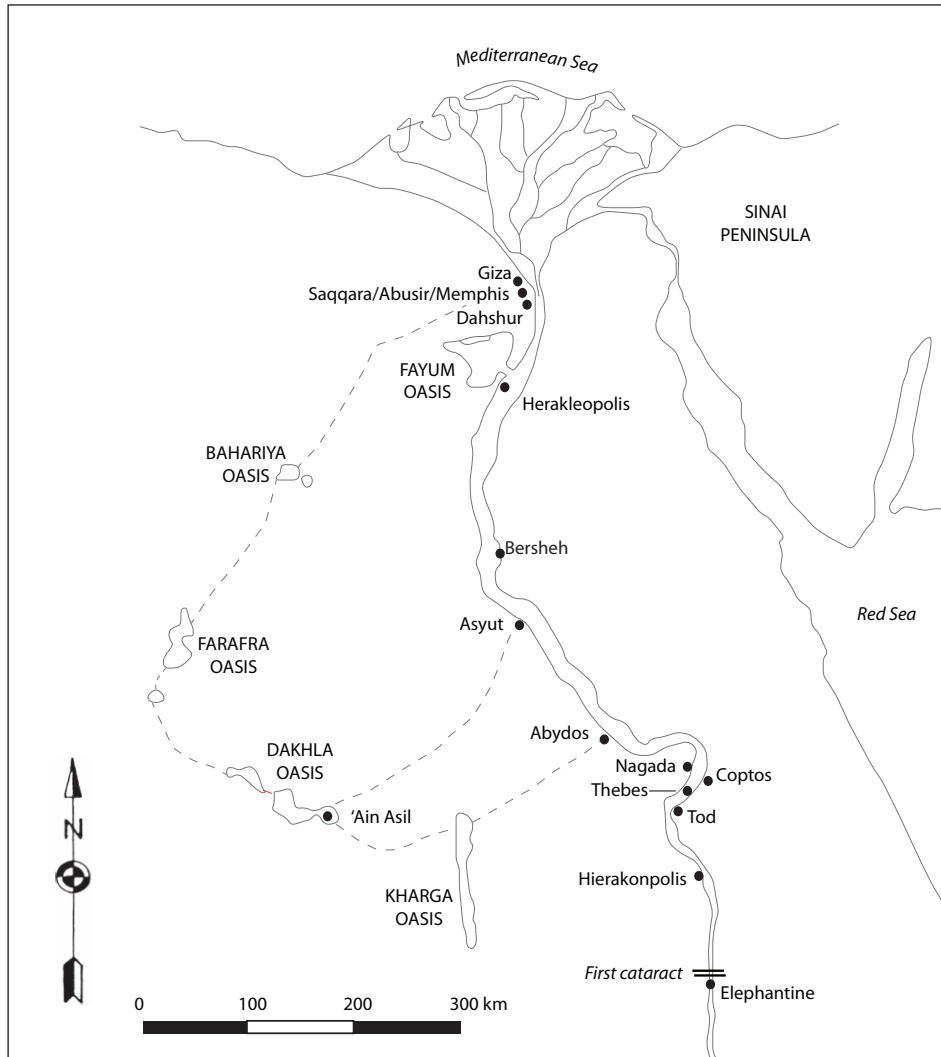


Figure 5.1. Map of Egypt showing sites mentioned in the text.

#### Deforestation

Deforestation, admittedly, may have posed far more of a threat. Certainly, it is notable that the conspicuous consumption of local woods in monumental architecture largely ceased in the Fourth Dynasty, perhaps in an attempt to mitigate a growing crisis. Although the evidence is frustratingly piecemeal, both text and archaeology demonstrate a growing investment in the importation of boatloads of coniferous wood from the northern Levant as well as acacia wood from Nubia (Creasman 2015, 47–50). The designation of certain trees, and indeed groves, as sacred and/or as state or temple property may well have aided efforts at conservation. So too, it is likely, would a general reliance on the use of charcoal, dung, and other scavenged or harvested combustibles as fuel (Nicholson & Peltenburg 2000, 192).

#### Disease

Egypt's population was not immune to communicable diseases, as records from Roman Egypt and other earlier evidence indicates. Communal burial pits at Tell el-Dab'a, for instance, suggest that at least some residents of this city died from a fast-acting contagion during the Thirteenth Dynasty. Likewise, a well-attested plague that raged in the Near East and in Cyprus may also have surfaced in Egypt during the late Eighteenth Dynasty (Kozloff 2006; David 2017, 280–4). Both ancient and more modern discussions of pestilence in Egypt suggest that relatively muted episodes of contagion struck on an annual basis, often in conjunction with the *khamāsīn* winds, which occurred during the spring months before the Nile's rise. Indeed, this sickness was known in ancient Egypt as *'i3dt rnpt'*, the 'annual pestilence' (Contardi 2015, 20–3; Mikhail 2011, 220–1).

Deaths due to infectious diseases appear to have accelerated primarily at times when the pathogen was new to Egypt (as may have been the case at Tell el-Dab'a) or when an epidemic occurred in close conjunction with a famine (Mikhail 2011, 217–18, 229). The fact that epidemics alone never proved fatal to the state, however, is likely due to the fact that Egypt was a territorial rather than a city-state. Communicable diseases and plagues thrive in the close quarters of urban settings and thus would indeed ravage a polity whose population clustered for the most part in a single centre (Duhig 2009, 50). From the First through the Sixth Dynasties in Egypt, however, dense populations outside of the city and pyramid-building projects of Memphis are difficult to identify. Disease, therefore, would likely have been localized.

#### *Overreliance on the core*

Scott argues that many states failed because the logic of transportation caused them to place too much pressure on territory within a 50 km radius of their centre – the distance a draught animal can traverse with a full load of grain before the cargo is not worth its weight. As Scott recognizes, however, waterborne transport represents a crucial exception (Scott 2017, 205). Linked for 1100 km or so from the First Cataract to the Mediterranean Sea by a navigable river, Egypt experienced little practical difficulty in transporting heavy loads of grain towards its political centre at Memphis. Throughout most of the Old Kingdom the monumental and material signatures of the state were indeed to be found in close proximity to the capital. This was not, however, because it was too expensive to build elsewhere. It was because both grain and manpower were gathered in from the provinces to the capital in an effort to help materialize the ideology that Egypt's elite stood at the centre of the world and at the apex of its social pyramid.

#### *Problems with porous borders*

This category collapses two separate dangers to early states. The first is the danger of invasions, whether from predatory 'barbarians' or more organized armies. The other is from population seepage (or hemorrhage in the worst case scenario). Both of these threats were greatly alleviated by the fact that the Nile cut a swath through one of the world's most formidable deserts. Equally important was the fact that neighbouring regions could not easily sustain robust populations and that the country offered very few points of entry and, conversely, escape. Indeed, even in the first millennium BC, when naval technology was far more advanced and at the service of aggressively expansionistic empires, very few seaborne invasions were successful. Shifting

sands around the Nile's many mouths, dangerous currents, unhelpful storms and wind patterns, and the logistical nightmare of the inundation combined to repel enemies and keep them out. Likewise, it is undoubtedly significant that prior to the domestication of the camel, ground invasions launched by sizeable non-nomadic forces simply never occurred (Kahn and Tammuz 2008).

This natural isolation, which served Egypt so well in the third millennium BC also greatly aided the rise and enduring strength of the state which, as Scott has pointed out, depended largely on its own ability to corral its subjects into effective 'grain and manpower modules' and, moreover, to hold them there, so as to maximize the surplus of the state (Scott 2017, 122, 152–3). As Robert Carneiro (1970) argued long ago, many people who live under states and other hierarchical systems that depend for their existence on institutionalized inequalities remain because they feel compelled to do so. If offered an option to leave that was not profoundly disadvantageous or dangerous, they would take it.

#### *Some old chestnuts are true: the pharaonic state was a gift of the Nile*

By virtue of its setting, then, Egypt's Old Kingdom state was immunized against many of the factors that often occasioned collapse. As a territorial state based on the banks of a river, the country could easily be protected and policed by government agents. The threat of contagious diseases was minimal, given a dispersed population, just as was the threat of an organized invasion. At the same time, however, the flood ensured that with enough hands to till the soil, the government could count on a robust surplus with which it could supply itself with all the manual labourers, bureaucrats, craftsmen, traders and soldiers necessary to enact its most ambitious agendas.

Ample agricultural potential is worth next to nothing without the means to obtain it, and so it is important to note that the state acted early on to assert its rights to prime agricultural lands through the establishment of 'domains' and 'estates', which transferred ownership of land to living and dead kings as well as to gods. Making use of a coercive system that transformed farmers into serfs, the state concentrated labour near areas of prime agricultural productivity. Moreover, in order to ensure that this labour stayed where it had been gathered, domains may have been walled, and their administration – as well as that of 'royal colonists' – could be paired with that of watch-towers (Strudwick 2005, 423; Wilkinson 1999, 118–20; Moreno García 2010, 9–10, 13–14). In addition, just as Scott observes is entirely characteristic of states (ancient



or modern), the government created regular censuses to assess its resources and then imposed levies on produce, livestock and labour (Wilkinson 1999, 76, 113–14, 220–1; Muhs 2016, 15–16, 29–30).

### Politicide, state effects and near death experiences

While Egypt's enviable geographic position buffered it from the dangers described above, its government would have been as vulnerable to Scott's category of politicicide as any ancient state. According to Scott, 'Crushing taxes in grain and labour, civil wars and wars of succession within the capital, intercity wars, oppressive measures of corporal punishment and arbitrary abuse may be called state effects, and they can singly or in combination bring about a state's collapse' (Scott 2017, 212–213). Throughout the nearly eight hundred or so years that the pharaonic state persisted in its first incarnation, it must have suffered innumerable brushes with death due to the backlash of such state effects.

In discussions of collapse, dynasties add an extra element of confusion. In Egypt's case this is certainly so. While some breaks in ancient king lists were occasioned by the cessation of a family line or by changes of capital or in the extent of territory governed, others surely mask a bitter end. As Guy Middleton asserts, viewing history through the lens of dynastic king lists often obscures our view of 'distinct political entities that were independent, rivalrous, and that effectively created new states or empires' (Middleton 2017, 23–4). In the three case studies presented below, I argue that dynastic breaks mark points at which a severe crisis due to James Scott's category of 'state effects' occasioned a radical shift in strategy – a shift deemed necessary, in fact, for the survival of the state. The issues underlying the three dynastic breaks are difficult to understand and were no doubt complex. What follows then are not necessarily correct reconstructions of each scenario. They are, however, interpretations of the evidence that are both plausible and, I hope, potentially generative of productive discussion.

#### *Abuse of power: the break between the First and Second Dynasties*

The seven kings and one queen regent of Egypt's First Dynasty (c. 2900–2730) were involved in a radical experiment aimed at divinizing the office of kingship. Given the elaborate royal burials at Hierakonpolis in the late Nagada I and early Nagada II periods, such experiments may have had an early precedent (Friedman, van Neer, & Linseele 2011, 162, 1734). As numerous ethnohistories attest, rulers who claim kinship with the gods do not require the backing of a state. When the resources of a state are coupled with

such an ambitious ideological agenda, however, the combination can be deadly. In Egypt, as in numerous other early states – such as Shang China, Kerma, the First Dynasty of Ur, Dahomey, and Benin – the natural deaths of certain particularly important religio-political figures occasioned the untimely deaths of many others. In some cases the deceased appear to have been cultural outsiders (such as prisoners of war), but almost always these executions were accompanied by the deaths of insiders – the loved ones and/or the servants of the deceased. In First Dynasty Egypt, so far as can be ascertained, the dead were primarily drawn from the latter category. Given that there is no evidence for institutionalized slavery at this time, each sacrificed retainer must be envisioned as firmly enmeshed within an extensive socioeconomic network of relatives and friends (Morris 2014).

The First Dynasty began with an instance of retainer sacrifice the likes of which had not yet been seen. At his death king Hor-Aha seems to have arranged to take forty or so people with him to the grave – providing them with prebuilt tombs situated in the direct vicinity of his funerary enclosure and mortuary monument, both at Abydos (see Fig. 5.2). Intriguingly, the two graves closest to the king's were larger than the rest, and one of these apparently belonged to a person whose name, 'Pleasant (or Sweet)-of-heart' (*Imz-ib* or *bnr-ib*), was inscribed on a comb and other cosmetic items. The presence, then, of two miniature funerary enclosures next to the king's own – enclosures which *also* had been provisioned with sacrificed retainers – led Laurel Bestock to suggest that these belonged to the same two individuals that had been buried next to the king and served to compensate them for willingly having sacrificed their own, particularly highly valued, lives. The rest of the retainers, archaeological remains indicate, consisted of young men of military age, arranged behind their sovereign as if in marching order (Bestock 2009, 26, 100–102).

This initial experiment with human sacrifice seems to have been deemed so successful that at the death of the second king of the First Dynasty the number of sacrifices increased exponentially. In preparation for the funeral of King Djer, graves for 587 retainers had been prepared ahead of time. Now – presumably to sweeten the pot for participants – the dead were provided not only with a grave that was provisioned from royal warehouses and was situated in close proximity to the king's own but also with a stele engraved with their name, image, and occasionally their title (see Fig. 5.3). Legible steles preserve the names and images of two court dwarves, 11 men and 76 women, each of whom received a memorialization that was unparalleled among their contemporaries (Bestock 2009, 33).



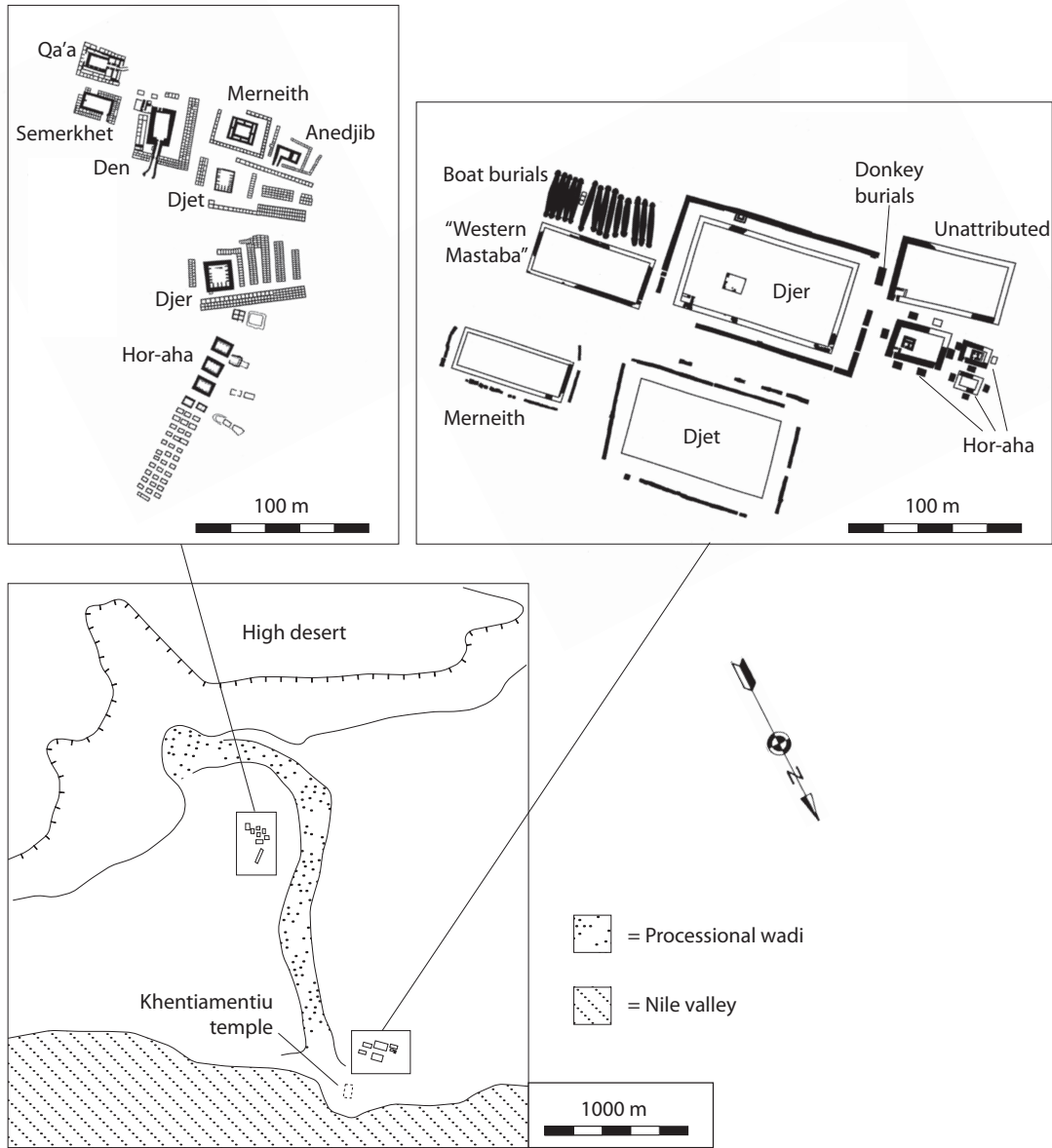


Figure 5.2. First Dynasty Abydos (after Bestock 2009, figs. 1 & 10).

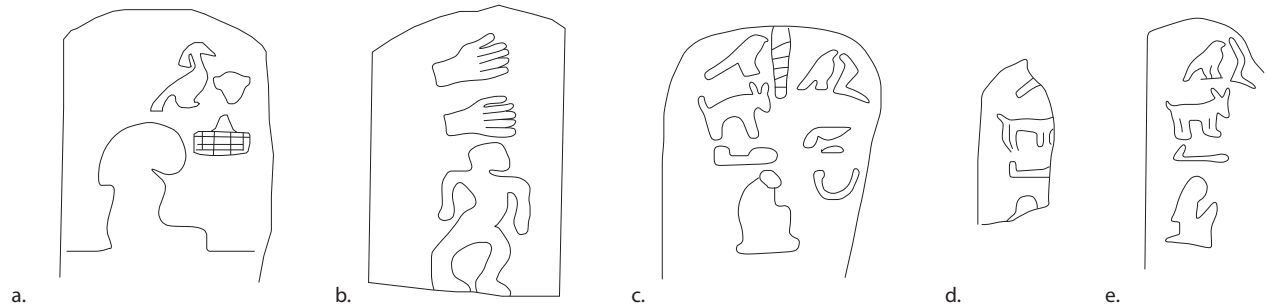
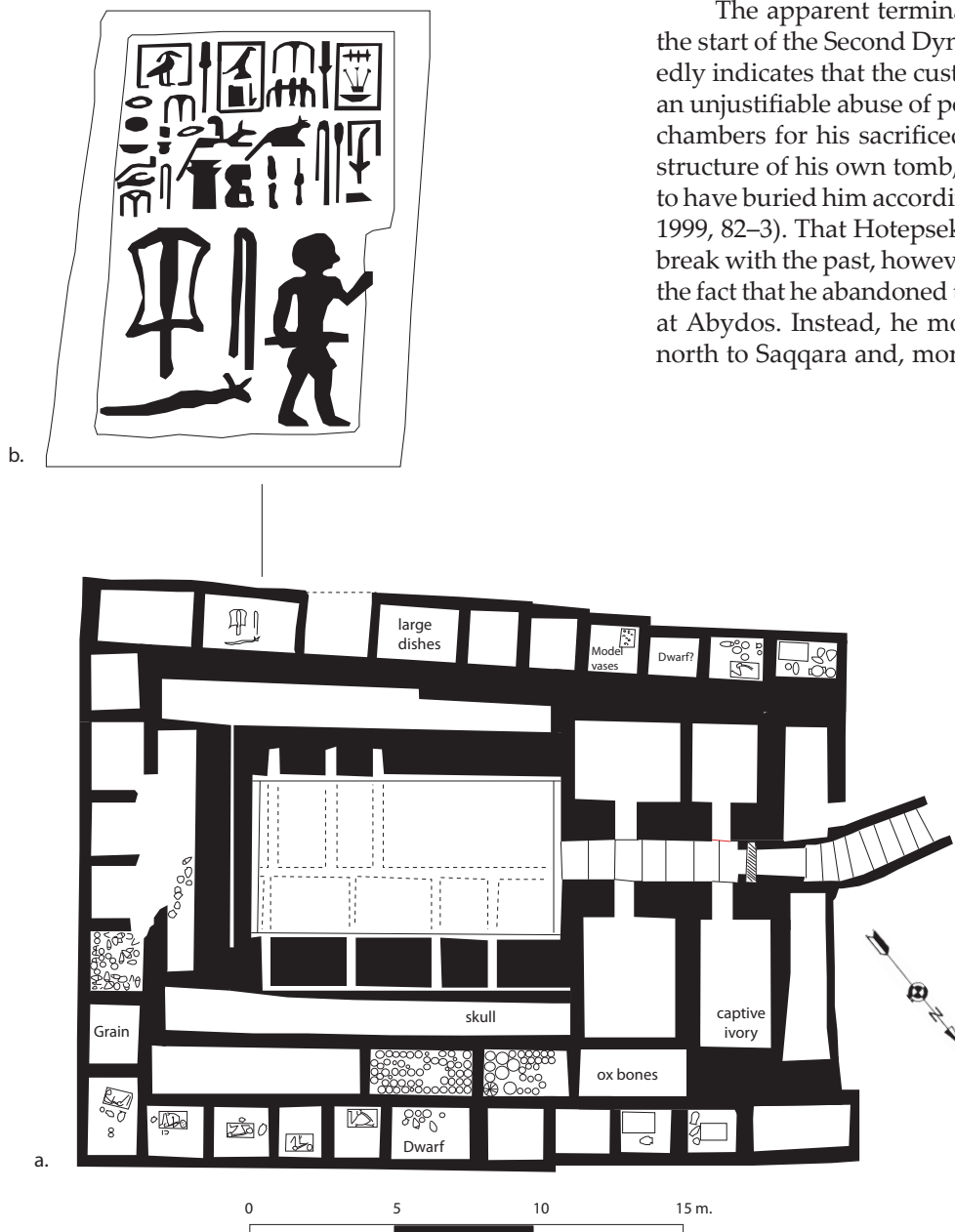


Figure 5.3. Stelas belonging to the sacrificed retainers of Djer [a.-c.] and Den [d.-e.] (after Petrie 1901, plates: a. 26, no. 70; b. 26, no. 58; c. 27, no. 96; d. 27, no. 128; e. 27, 129).

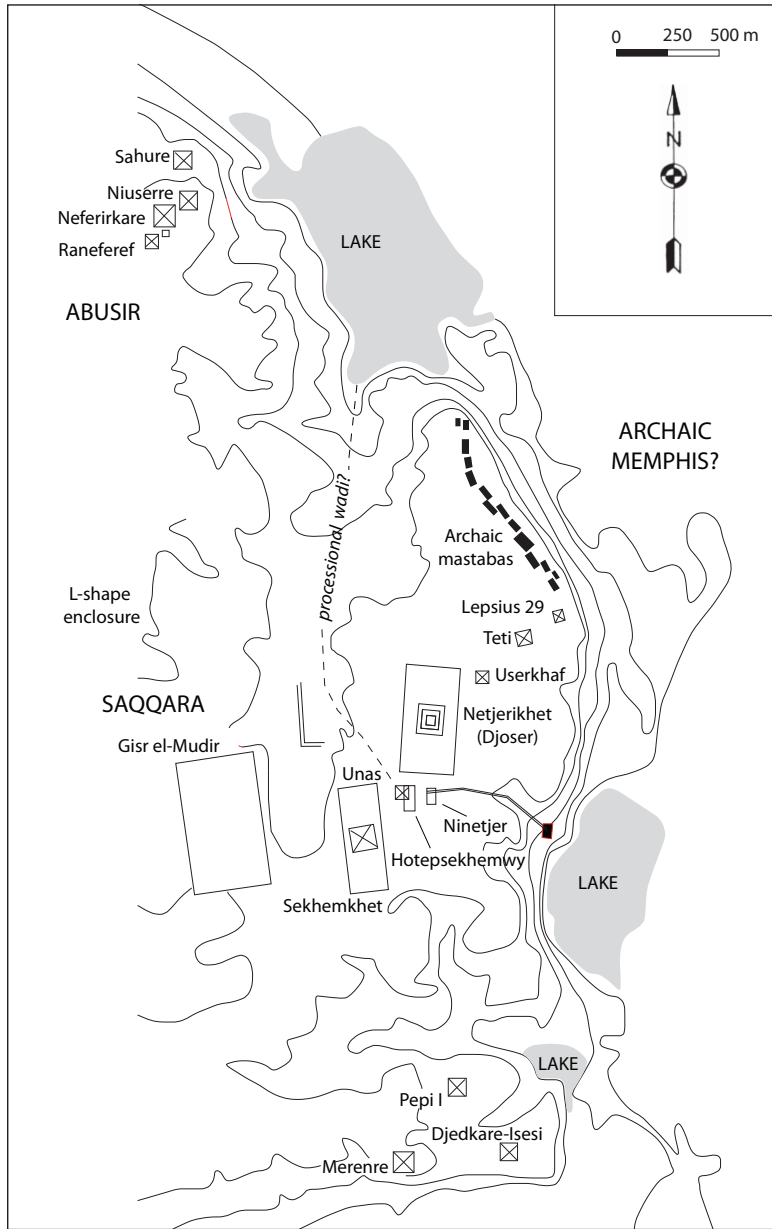
Of all types of conspicuous consumption, that of the lives of loyal subjects provokes the most strenuous societal discussions. It is also the most costly – as the state loses labour that might otherwise have been channelled in its service and often expends resources in compensating the families of those who willingly sacrificed their lives. Thus, in the face of rising costs and increased societal resentment, it is perhaps not surprising that the numbers of retainers sacrificed at the death of First Dynasty kings steadily decreased and that a corresponding emphasis was placed on the quality of royal retainers rather than their quantity (Morris 2014, 85–6). That said, the grave of the last king of the

First Dynasty, King Qa'a, still included chambers for the interment of 26 individuals, one of whom, judging by the length of the titles on his funerary stela, appears to have been extremely important (Petrie 1900, 44–5, pl. 30; see Fig. 5.4). In Zhou Period China, a poem of mourning was written for three similarly socially significant sacrificial victims. About one it was said that he 'was the pick of all our men; But as he drew near the tomb-hole his limbs shook with dread. That blue one, Heaven, takes all our good men' (quoted in Chang 1974, 6–7). Grief and horror, one suspects, must have increasingly displaced awe as the predominant emotion that the custom of retainer sacrifice evoked among those subject to the state.

The apparent termination of human sacrifice at the start of the Second Dynasty (c. 2730) almost assuredly indicates that the custom had come to be seen as an unjustifiable abuse of power. Qa'a had constructed chambers for his sacrificed retainers within the sub-structure of his own tomb, and his successor appears to have buried him according to his wishes (Wilkinson 1999, 82–3). That Hotepsekhemwy himself desired to break with the past, however, is strongly suggested by the fact that he abandoned the ancestral royal cemetery at Abydos. Instead, he moved his burial monument north to Saqqara and, moreover, to a part of Saqqara



**Figure 5.4.** (a) *Tomb of Qa'a* (Petrie 1900, pl. 60); (b) *stela of Qa'a's sacrificed retainer Sabef* (after Petrie 1900, pl. 31, no. 48).



**Figure 5.5.** Major monuments of Saqqara and Abusir until the end of the Old Kingdom (after Reader 2017, 73, fig. 1).

that bore no associations with the monumental mastaba tombs of the First Dynasty's innermost elite. The new tomb, which departed from its predecessors in structure as well as locale, however, may have consciously preserved royal resonances. As Colin Reader has argued persuasively, the positioning of Hotepsekhemwy's tomb with respect to the Abusir wadi echoed the spatial relationship of the First Dynasty tombs to the processional wadi that led to the funerary enclosures at the valley's edge (Reader 2017, 85–6; see Fig. 5.5). Thus, and not for the last time, a pharaoh might jettison aspects of royal tradition or ideology that he deemed tainted and yet seek to curate others that enhanced the recognizably sacral character of kingship.

Hotepsekhemwy not only changed the location and style of his tomb, he also appears to have eliminated, or virtually eliminated, the custom of retainer sacrifice. While the disturbed state of known and suspected Second Dynasty tombs at Saqqara precludes certainty on this matter, neither skeletal material nor other commemorative or otherwise indicative objects exist. Indeed, this is true not only with respect to the tombs of royals at Saqqara but also with respect to those of the highest elite, who had likewise indulged in retainer sacrifice in the First Dynasty, albeit to a much more modest extent. Thus, the physical relocation of the royal tomb and its radical rethinking undoubtedly marked a movement more political

than spatial. In occasioning this departure from past practice, Hotepsekhemwy may have succeeded in rescuing divine kingship from a dangerous decline in perceived legitimacy. In folk tales, after all, the creature that demands the sacrifice of noble youths is almost always a monster – and one destined, moreover, soon to be slain at the hands of a hero.

*Religio-political schisms: the break between the Second and Third Dynasties*

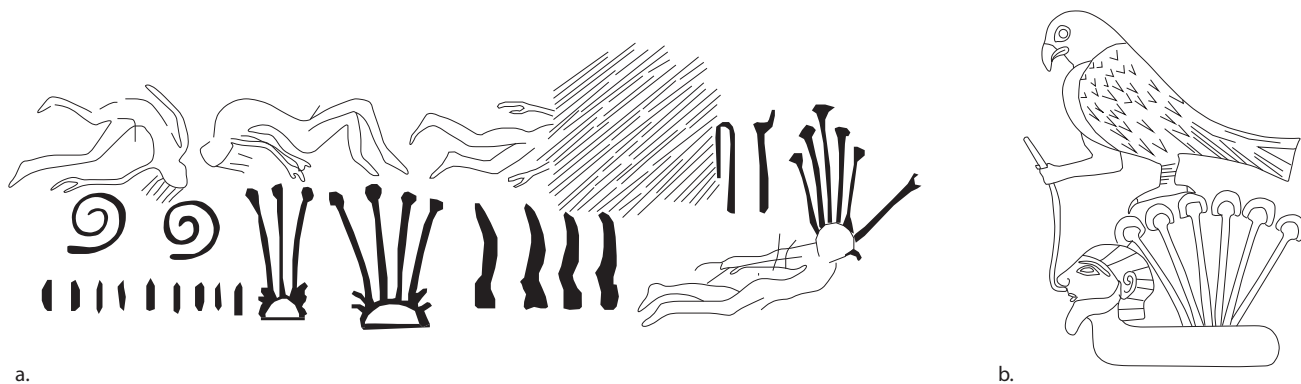
The Second Dynasty (c. 2730–2590) ended at some point following King Khasekhem's brutal slaughter of close to 50,000 of his Lower Egyptian subjects. Numbers of the slain and images of their distorted corpses decorate the bases of two statues in which the king is posed wearing a crown of Upper Egypt (see Fig. 5.6a). Fittingly, he dedicated these commemorations to an Upper Egyptian shrine – that of the god Horus at Hierakonpolis (Quibell 1900, pl. 39, 40). What appears at first glance like a drastic response to a regional rebellion, however, may well have been the result of tensions that had both cosmic and terrestrial manifestations. These events are intriguing precisely – and frustratingly – due to the fact that only tantalizing hints remain. What is certain, however, is that the upheaval that marked the end of the Second Dynasty was traumatic enough to persuade the sovereign who followed to make a decisive break with the practices of his predecessor.

By way of background it is vital to understand the ideological importance of the god Horus and also that of his rival Seth. The tradition that Seth had fought Horus, the avatar of the rightful king, for the throne of Egypt but had eventually admitted defeat and worked to support him is a powerful and overarching theme in the Pyramid Texts, Egypt's first corpus of religious literature. In these spells, which are of varying antiquity

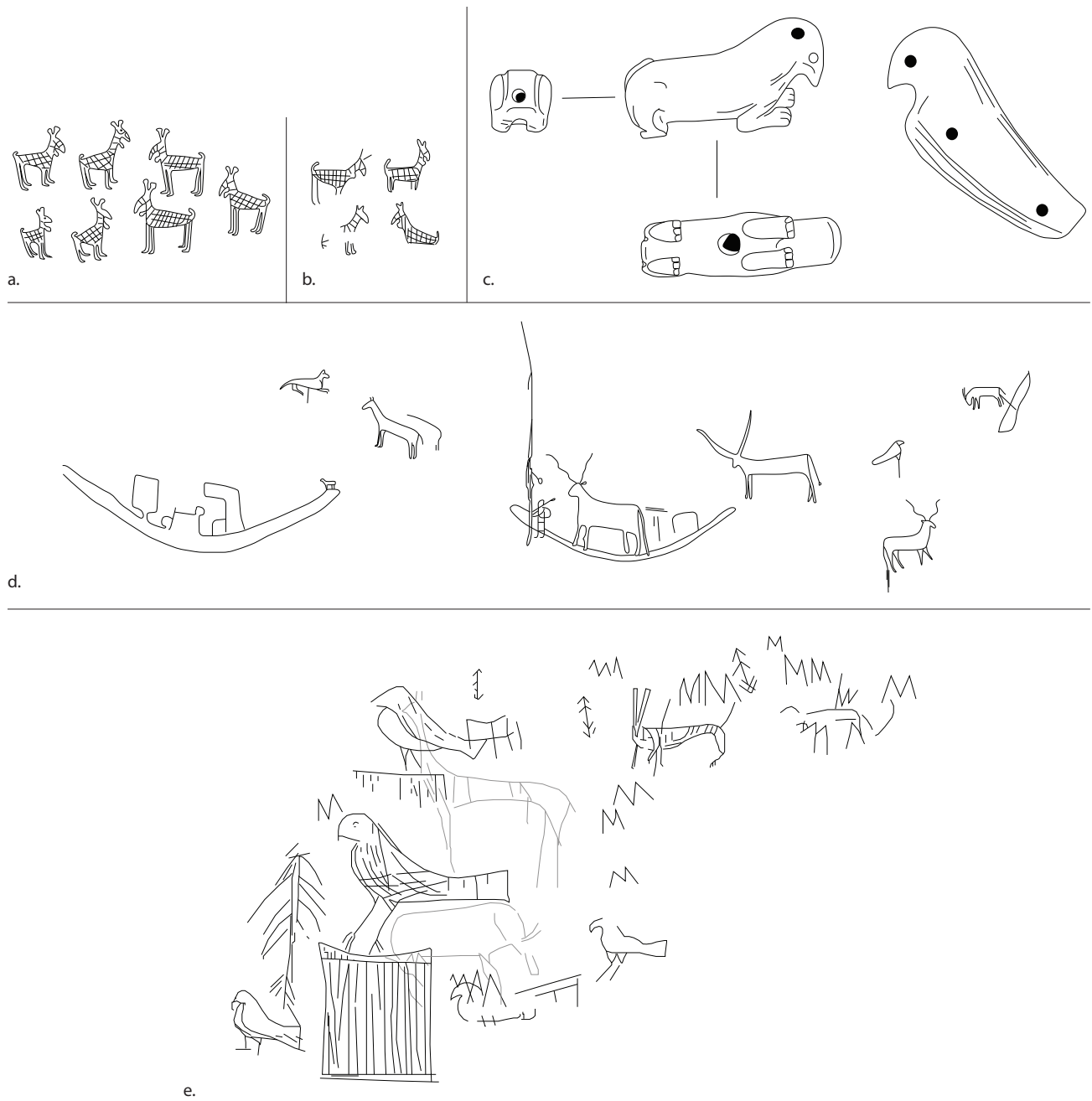
and were inscribed in eleven pyramids belonging to kings and queens from the late Fifth until the Eighth Dynasty, nearly 18 per cent of the spells reference the god Seth. In these texts, Seth appears as an enemy of Horus and, like him, to have been grievously wounded in their battles. In the end, however, the injuries of both gods healed, the two reconciled, and Seth utilized his strength to uphold the rightful order of the cosmos (Griffiths 1960, 1–27; Turner 2013, 16–17, 71–84). While it is dangerous to reverse-engineer religion into politics, this story of war and peace – in which 'Seth dwelling in Nubet, Lord of Upper Egypt' (Utterance 222) – played such a starring role likely had its origins in the armed encounters and alliances of prehistory.

In the Nagada II period (c. 3500–3325), the towns of Hierakonpolis and Nagada possessed elite cemeteries and graves that archaeologists have identified as royal. In ancient Nekhen (later designated Hierakonpolis, or City of the Hawk, by the Greeks), it is surely significant that the earliest known (Nagada IIA–B) complete and unambiguous representation of a falcon in Egypt's history was found in an enigmatic pillared hall situated within the funerary precinct of tomb 23, the resting place of a ruler. Fragments of three other falcon figurines were subsequently identified, one from the same complex and two others from subsidiary graves associated with tomb 16, the very earliest royal burial at Hierakonpolis – or for that matter in Egypt as a whole (Nagada IC–IIA). It is worth noting that falcons are not known from Cemetery T at Nagada or Cemetery U at Abydos, the other two cemeteries at which elite graves in the Nagada IIC–D period suggest the presence of local aggrandizers (Hendrickx, Friedman 2007, & Eyckerman 2011, 130–2).

Early images of Seth are difficult to identify with certainty. Canids that bear a resemblance to Seth's cult



**Figure 5.6.** (a) The body count of slain northerners depicted on Khasekhem's limestone statue, dedicated at the Horus temple at Hierakonpolis (after Quibell 1900, pl. 40); (b) Horus dominating the personification of the north from the Narmer palette, dedicated at the Horus temple at Hierakonpolis (after Quibell 1898, fig. 13).



**Figure 5.7.** Probable early representations of Seth from Nagada and its environs. 7a. From a White Cross-lined vase, Nagada tomb 1644 (after Hendrickx et al. 2009, fig. 18.1); 7b. From a White Cross-lined bowl, Nagada tomb 1644 (after Hendrickx et al. 2009, fig. 18.3); 7c. Three views of a model Seth standard and a Horus figurine, Nagada tomb 721 (after Petrie 1896, pl. 60, nos. 13, 15 and Crowfoot Payne 1993, fig 4, no. 16); 7d. Seth and Horus on standards similar to 7c. Rock art from the mouth of the Wadi of the Horus Qa'a, west of Nagada. (after Darnell 2009, 97, fig. 19); 7e. Rock art showing Seth in the entourage of Horus, Gebel Tjauty, west of Nagada (after Darnell 2002, 19).

creature – and would be contemporary in time with the falcons at Hierakonpolis – appear in conjunction with Barbary sheep in the imagery of White Cross-lined pottery excavated at Nagada (see Figs. 5.7a. and 5.7b).

The identification is far from iron clad, however, and at least two similar vessels are thought to have come from neighbouring polities (Hendrickx 2009, 207, fig. 18, 2 and 4). Even more intriguing are two slightly

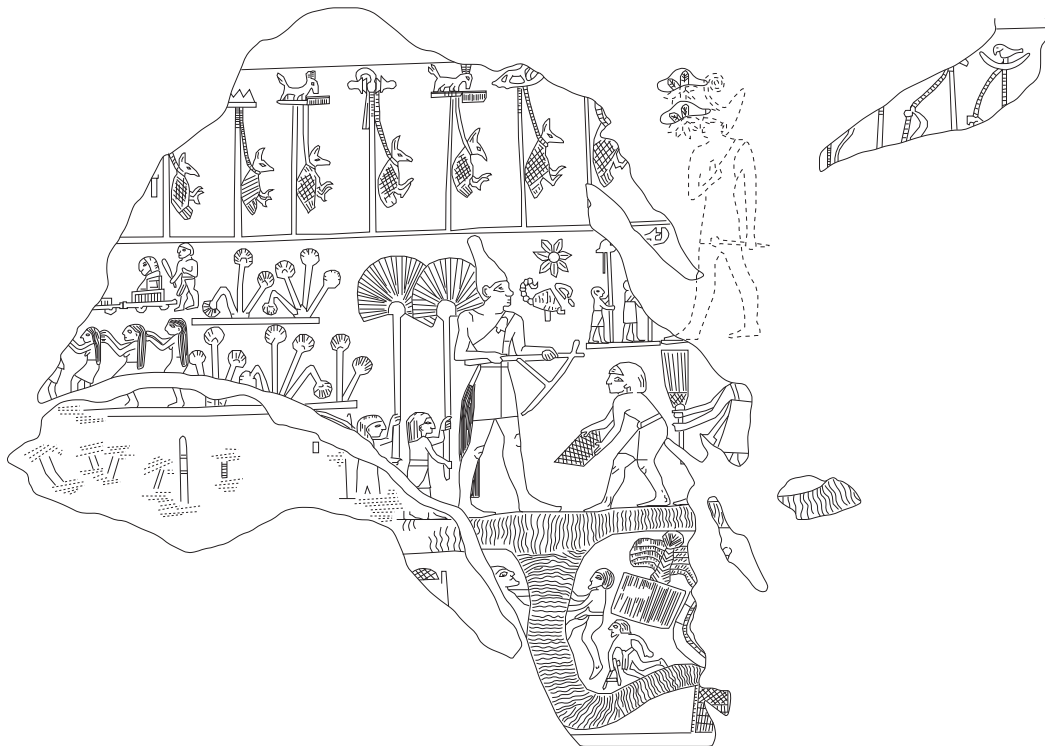


later (Nagada IIC–D) figurines excavated from tomb 721 at Nagada. One of these depicted a falcon that may have been encased in lead (Ashmolean 1895.136 and 1895.137). Alongside it, however, was an animal that looks a great deal like the Seth animal, especially if the missing ears and tail (signalled by drilled holes) had stood straight up. What is vitally important about this potential representation of the god, however, is that it was pierced, apparently to serve as the ornament on a model standard (see Fig. 5.7c). Similar standards appear in a contemporary rock carving discovered in the desert west of Nagada in conjunction with a scene involving boats and wild bovids (see Fig. 5.7d).

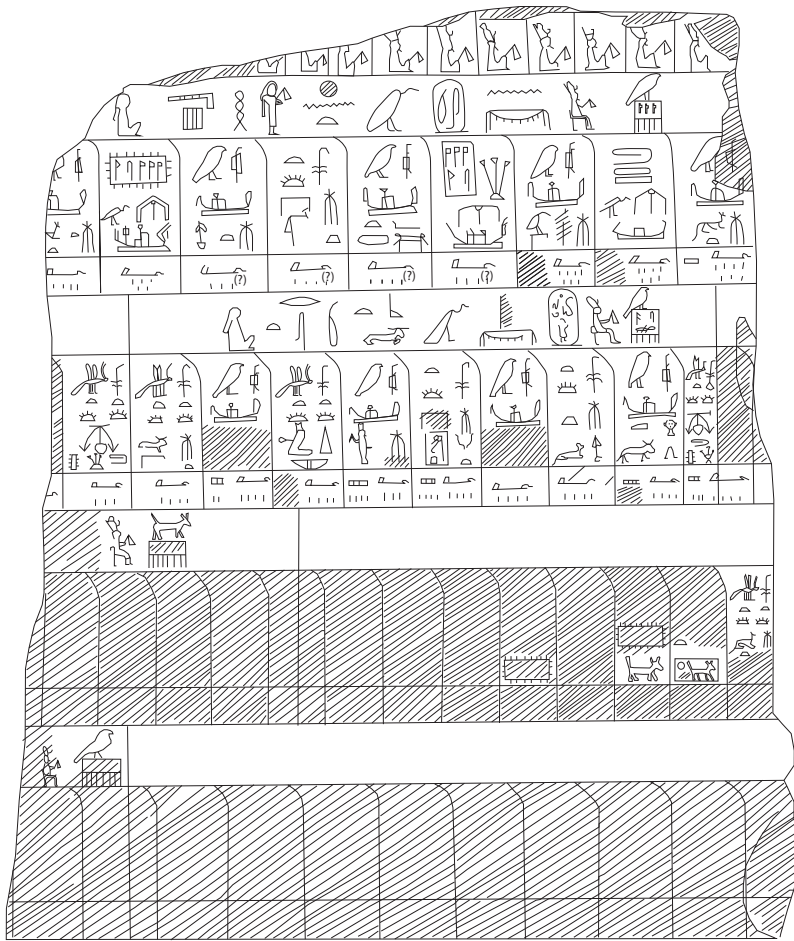
Standards in the late Nagada II–III periods seem to have done double duty, referencing both deities and the polities that claimed these deities as their patrons. In Dynastic times, the town of Nagada (a.k.a. Nubt or Gold Town) would be defined by its temple to Seth and its allegiance to a deity that was known to be as powerful as he was problematic. It is significant, then, that archaeological evidence demonstrates that the area around this temple in prehistory not only saw the town's earliest urban occupation but remained its symbolic centre even when economic and administrative activity shifted southward (Hassan, van Wetering, Tassie 2017, 91–2, 94).

If Nagada and Hierakonpolis appear to have been the two most powerful polities in the Nagada II period, whose elites likely competed for status and supremacy in Upper Egypt, the true beneficiary of their rivalry appears to have been the rulers of Abydos, who would appropriate the divine personage of the falcon and incorporate the god into their own royal titulary. These Abydene kings subdued both Nagada and Hierakonpolis by the start of the Nagada III period and disrupted their traditional power structures. At Hierakonpolis, the rulers of Abydos supported the establishment of a temple to the god Horus in his role as the patron deity of the rightful king. The fate of Nagada is less certain, but the local elite seem to disappear for a period rather than to have been reoriented and remunerated, as at Hierakonpolis (Bard 1989, 240–5; Friedman 2008, 23–6; Hassan, van Wetering, Tassie 2017, 95–6, 120–2).

By the period just prior to the First Dynasty, however, Nagada may have become a much more active and enthusiastic supporter of the new state. Certainly, on a large votive macehead donated to the temple at Hierakonpolis, Seth animals are depicted subduing rebels for the king alongside the cult fetishes of other polities (see Fig. 5.8). Likewise, a roughly contemporary rock inscription at Gebel Tjauty, west of Nagada, seems



**Figure 5.8.** Scorpion macehead, dedicated to the Horus temple at Hierakonpolis (after a drawing by K.M. Ciałowicz published in Adams and Ciałowicz 1997, 8, fig. 1).



**Figure 5.9.** Seth makes an appearance in the Cairo Annals, Main Cairo Fragment (CF1), reigns of Ninetjer and Peribsen (Wilkinson 2000; fig 4).

to show the Seth animal in the entourage of the Horus king (Darnell 2002, 19; see Fig. 5.7e.). While Nagada would be the Upper Egyptian site most closely associated with Seth in Dynastic times, the presence of two Seth animals on the Scorpion macehead may suggest that his worship had already spread farther afield. In this context the repeated evocation and apposition of the ‘mounds of Horus’ and the ‘mounds of Seth’ in the pyramid texts is striking (Turner 2013, 74–5, 78, 81–3, utterances 213, 224–225, 306, 308, 359, 424, 470, 474–475, 477, 480, 572, 612, 665).

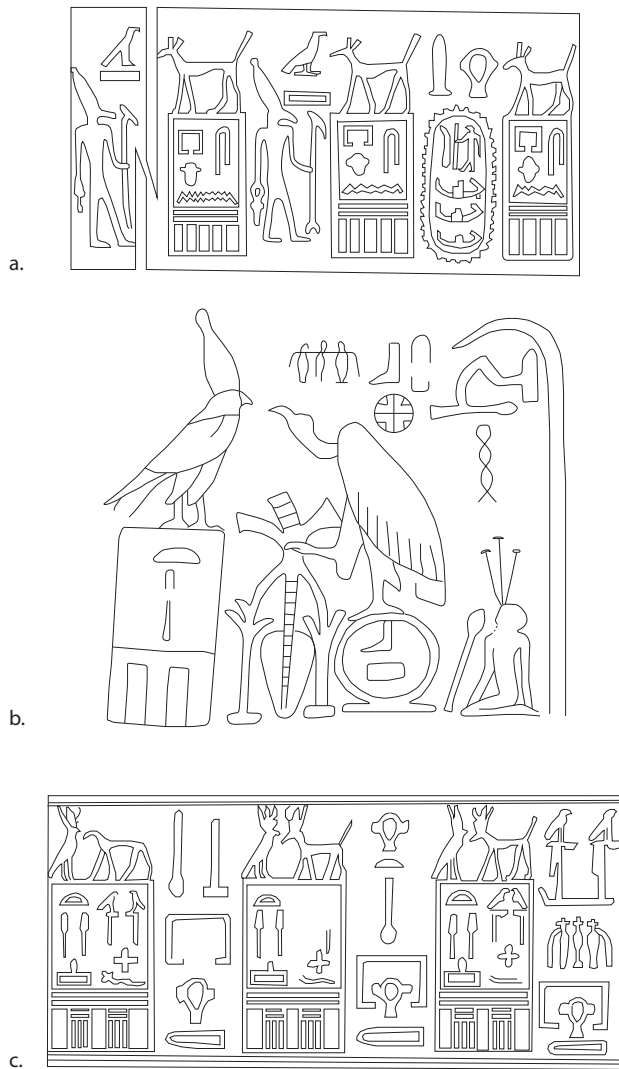
In seeking to unify the realm, the rulers of Abydos acknowledged Seth as a partner of Horus – one of the ‘Two Lords’, occasionally depicted as two falcons, or even envisioned as a composite entity that could be embodied in the king himself. That this notion was present already in the First Dynasty is indicated by a title witnessed in the steles of three First Dynasty women interred in the posthumous retinue of Djer and Den, namely [She] ‘who sees Horus-Seth’ (See Fig. 5.3c–e; te Velde 1967, 68–71). If these women were subsidiary wives of the king, as the adoption of this same title by queens of the Fourth through Sixth

Dynasties strongly suggests (Turner 2013, 16), it is also worth noting that Seth’s hometown of Nagada may have furnished the First Dynasty with one of its earliest and most prominent queens, Neithhotep. If not, the massive mastaba erected at Nagada in which her name is frequently attested assuredly belonged to her son (Wilkinson 1999, 37–8, 70; van Wetering 2012, 111–5). Regardless, relations between Nagada and Abydos were clearly intimate.

During the entirety of the First Dynasty, Horus far eclipsed his rival-turned-partner in visibility and importance, and no hint of discord is noted. Even the name of the first king of the Second Dynasty – Hotepsekhemwy (The-two-powers-are-satisfied) – appears unsettling only in retrospect. Much about the Second Dynasty remains obscure, and some speculate that a possible rebellion of two towns in Ninetjer’s thirteenth year heralded the fracturing of a unified pharaonic state, though the writing leaves it ambiguous as to whether the apparently Egyptian towns were being founded or destroyed (Dodson 1996, 23)! A badly damaged section of the Cairo annals (see Fig. 5.9) also shows two consecutive years, apparently



from Ninetjer's reign, in which the god Seth was paired with walled enclosures, one crenellated and one rectangular (Wilkinson 2000, 203). If at the end of Ninetjer's reign the god Seth was receiving an unusual amount of attention, the theory that the Horus of Gold throne name in fact referenced the king's relationship to the god of 'Gold-town' is bolstered. Ninetjer, after all, is designated with a 'gold name' – thought to be a predecessor of the Horus of Gold name – on this very same monument (Griffiths 1959, 64–81; 1960; Wilkinson 2000, 119).



**Figure 5.10.** (a) Peribsen with Seth atop his serekh, seal impression from Abydos (after Petrie 1901, pl. 22, no. 179); (b) Inscription on a vase dedicated by Horus Khasekhem to the Horus temple at Hierakonpolis (after Quibell 1900, pl. 38); (c) Horus-Seth Khasekhemwy in whom the Two Lords are at peace, seal impression from Abydos (after Petrie 1901, pl. 23).

Seven (all unfortunately obscured) years following Seth's debut in the annals, the ascension of King Peribsen is recorded.<sup>2</sup> Unlike any ruler before or after, Peribsen replaced the falcon in his 'Horus'-name with a Seth animal (Figs. 5.9 and 5.10a; Wilkinson 2000, 74). This king likewise promoted the message – expressed on a contemporary cylinder seal – that Seth of Nagada had 'given the Two Lands to his son, Peribsen'. As if to clarify that this was no casual change of allegiance, Peribsen even dropped the name of Horus from his funerary domain, being the first king ever to do so. His decision to construct his tomb at Abydos – deep in the royal cemetery of the First Dynasty – must also have been ideologically loaded (Wilkinson 1999, 89–91, 121).

The unrest that presumably prompted Peribsen's abrupt shift in loyalties seems to have continued to percolate in the succeeding reign. Peribsen's successor, King Khasekhem, assumed the name 'The-power-appears' – surmounted, as was traditional, with a Horus falcon – and undertook military action against northern forces. Interestingly, most of what we know of these struggles comes from gifts that he dedicated to the temple of Horus at Hierakonpolis. Inscriptions on two votive stone vases read 'Year of fighting the northern enemy in front of the city of Nekheb,' a locale directly across the river from Hierakonpolis! Directly facing the king's serekh and in front of the year name was a depiction of Nekheb's chief deity, a vulture that grasped the hieroglyphs for 'rebel' with one claw and the symbol for a unified Egypt with the other (Fig. 5.10b).

If the fighting started in Nekheb against northerners or those acting on behalf of a northern rival, it eventually led to carnage. According to the inscriptions on the king's statues, Khasekhem slaughtered perhaps as many as 48,205 northern foes. Considering the findspot of his memorials, it is notable that the king seems to have indulged in some artistic intertextuality with the Narmer palette, which – given the fact that it was interred in the same deposit as Khasekhem's statue – was likely on display at the time he donated his statues. On both monuments, the northern enemy who had to be defeated in order for the victorious king to (re)unify his country lay prostrate, hooked by the nose and sprouting the papyrus-plant ideograph for the north from his body (compare Fig. 5.6a with 5.6b).

At some point following his victory, Khasekhem added a dual to his name, so it read: 'The-two-powers-appear'. Moreover, he topped the serekh of this modified 'Horus'-name with a Seth animal in addition to the falcon, strongly implying that the 'two powers' were none other than Horus and Seth. Khasekhemwy also added the perhaps optimistic epithet: 'The two lords are at peace in him' (Fig. 5.10c; Wilkinson 1999,

91–4). Given that in later times both Horus and Seth possessed cult centres and partisans in the Delta as well as Upper Egypt, the exact nature of the religio-political conflict (and, indeed, even whether emphasis should best be placed on the *religio* or on the *political*) remains frustratingly difficult to determine. What is apparent, however, is that, following this slaughter, Khasekhemwy focused his energy on preparing his mortuary monuments at Abydos, in the same cemetery as his strongly Sethian predecessor.

The degree to which the two powers were indeed satisfied in the aftermath of this late Second Dynasty massacre is perhaps dubious. Certainly, the next king who came to power acted so as to distance himself from his predecessor. Available evidence suggests that Netjerikhet was a son of Khasekhemwy who buried his father with honour at Abydos, just as Hotepsekhemwy had done for Qa'a at the start of the Second Dynasty (Dreyer et al. 1996, 71–2; Dreyer 1998). Like Hotepsekhemwy, however, Netjerikhet intentionally disassociated himself from his predecessor by moving the site of the royal burial back to Saqqara.<sup>3</sup> Moreover, as if to enshrine his message of unity in stone, he commissioned an entirely innovative funerary monument that stressed as a central message throughout its architectural programme the unity of both Upper and Lower Egypt and the king's role in maintaining that unity. As a testament to the success of his mission, no king of the Old Kingdom would return to be buried at Abydos nor would any commission offerings, as Netjerikhet had, to Khasekhemwy's cult (O'Connor 2009, 176, 178). Moreover, this same king appears to have acted quickly – and perhaps quite literally – to bury old grievances, for the objects on which Khasekhem had memorialized his slaughter were quickly whisked out of sight. Seth too, had had his day and was never again destined to surmount a royal serekh.

#### *Abuse of power: the break between the Fourth and Fifth Dynasties*

In terms of the ability of a state to conspicuously consume human lives, the Fourth Dynasty (c. 2543–2120) rivalled the First. At the time that Snefru began work on the first of the three full-sized pyramids completed in his reign, a fundamental restructuring of society had been mandated, for the demands of the state on its subjects had never been higher. In order to complete the Great Pyramid, constructed by Snefru's son at Giza, for example, it has been estimated that one 2611 kg block of stone would have had to have been moved into place every two minutes of each daylight hour of Khufu's reign. Likewise, while it seems that only 1360–2000 men could have been employed in

active construction on the pyramid at any one time, behind these stone-haulers it is suggested that 23,000 additional men were busy quarrying more blocks, providing water, baking bread, building ramps and slipways, sharpening tools, feeding, transporting, and butchering animals, preparing meat and meals, registering tools, repairing tools, and so on (Lehner 1997, 224–5).

This number takes into consideration only those working on the Giza Plateau – not the tens of thousands of others who quarried stone elsewhere, mined copper and fashioned tools, herded cattle, etc. Indeed, the tireless journeys of a man named Merer and his levied team of workmen, as recorded in the earliest papyri yet found in Egypt, is a case in point. In the span of any given ten-day week, this man and his crew made two or three round trip journeys from the limestone quarries at Tura to harbours near the Giza Pyramids – loading stone, ferrying stone, unloading stone, and then beginning the cycle once more (Tallet 2017, 160). It is difficult to imagine that any family would have been unaffected by the demands of the pyramid builders – which continued unabated for over a century.

Egyptologists not infrequently compare the creation of the great Fourth Dynasty pyramids to a public works project in which an essentially beneficent state provided its citizens with income as well as a chance to participate in a collective enterprise that 'would have developed a sense of identity and common purpose with the state' (Tavares 2011, 277). Ethnoarchaeological experiments and excavations in the barracks and cemeteries of the Workmen's Village at Giza, however, tell a story of backbreaking labour, close quarters, and rigid surveillance that render Khufu's reputation as a tyrant – attested in a Middle Kingdom story as well as in tales told to Herodotus – readily understandable. It would appear, then, that to many of those dragooned into building the great pyramids – whether as part of their labour tax or as the sum of their entire working life – such monuments provoked more resentment than pride (Fig. 5.11).

Disaffection with the state may not have been limited to the labouring classes. In seeking to materialize their power via the creation of massive and increasingly technologically perfect feats of engineering, the Egyptian state had to radically increase its supply of literate officials. The creation of this bureaucracy interpolated an educated middle class into a system that prior to the pyramid-building endeavour had only accounted for two types of people: nobles (*iri-pꜣt*) and commoners (*rꜥyt*). Men like Merer, however, who meticulously kept their records and served the state were neither one nor the other, and their numbers





**Figure 5.11.** *Some of the millions of multi-ton blocks that make up Khufu's pyramid (Photo published with permission of Franck Monnier).*

increased without any effort on the part of the state to enfold them in its ideology or its governing structure. Fourth Dynasty political power seems instead to have been jealously guarded by the royal family and those Memphite officials chosen to marry into it. From this nepotistic core orders were dispatched and obedience was expected. The imbalance of power must have been acutely obvious, however, for in return for the goods and services rendered, communities located outside the country's capital enjoyed neither local autonomy nor any archaeologically observable signs of royal largess (Bárta 2013a, 162–5; Moreno García 2013a, 95).

While no documentation of contemporary unrest has survived, its existence can perhaps again be surmised given the profound break with previous practice that took place in the last reign of the Fourth Dynasty and in a much more pronounced manner in the Fifth (c. 2435–2306). The last king of the Fourth Dynasty, Shepseskaf, made pious donations to Menkaure's burial cult, however, he emphatically did not follow his predecessor's example. After six or eight years of rule, the king was buried in a mastaba at South Saqqara, and while the brevity of his reign undoubtedly contributed

to the modest nature of his tomb, there are no signs that he had ever set his sights on a pyramid complex (Stadelmann 1998, 70).

Why the Egyptians inserted a dynastic break between Userkaf and Sheseskaf – rather than Menkaure and Shepseskaf – is unclear, given that the former pair seem united both in the unusual formation of their names and also in their decision to situate their comparatively modest mortuary monuments at Saqqara. Indeed, the positioning of Userkaf's pyramid, nestled in the shadow of Netjerikhet's own, speaks volumes (see Fig. 5.5). In choosing this locale, Userkhaf positioned himself as heir to Netjerikhet's legacy rather than that of the Fourth Dynasty pharaohs. In addition, Userkhaf scaled down the size of his pyramid from that of Menkaure, such that it was only 73.3 m to a side and 49 m high (as opposed to roughly 105 m to a side and 65 m. high). In an even more profound innovation, he allowed the interior to be made up of artfully stacked limestone rubble, which rendered the process of building it far less labour intensive. When finished with fine limestone blocks, the pyramid would have occasioned awe but without the accompanying aftertaste of exploitation.

The rest of the Fifth Dynasty kings followed suit in the construction of their own monuments (Lehner 1997, 140–54). While the modest scale of the Fifth Dynasty pyramids is commonly attributed to practical concerns rooted in the availability of state funds or quality bedrock (Bárta 2005, 186), the accompanying religious and governmental reforms issued by this regime suggest that these monuments were scaled back purposefully, and perhaps primarily, in order to signal the Fifth Dynasty's commitment to ameliorating discontent.

The wholesale devotion of the Fifth Dynasty kings to the cult of Re is well known from their lavish royal donations to his cult at Heliopolis, the establishment of sun temples at Abu Sir, and the likely dissemination of propaganda that the Fifth Dynasty's legitimacy came not from any tenuous genetic tie to the Fourth Dynasty sovereigns but rather from their direct descent from the Sun God. In the end, however, their governmental reforms were what likely did the most work towards rendering them legitimate in the eyes of their subjects. These sovereigns acted quickly to eliminate nepotism and to radically expand access to government offices among the class of officials that the pyramid-building project had created and yet failed to embrace. These new officials boasted of their roles and responsibilities in a bevy of biographical inscriptions, and it is perhaps no accident that Fifth Dynasty mastabas constitute the most impressive private monuments of Egypt's Old Kingdom (Bárta 2013a, 165–72).

Fifth Dynasty kings also made a concerted effort to expand their relevance to areas outside the Memphite core. To this end, the kings donated land, labour and workshops to provincial temples and sponsored work at sites like Abydos, El-Bersheh, Tod, and Karnak. Important individuals were newly awarded oversight of state and temple property in their own hometowns and felt free to bequeath these positions to their heirs in documents that they inscribed in their own elaborate provincial tombs (Moreno García 2007, 322–3; 2013a, 196–7). In the words of Miroslav Bárta (2013a, 166), the effects of the Fifth Dynasty reforms were to make kingship more 'socially obliged' such that state revenues were now far more open to mid and high level officials who, in turn, dispensed benefits to their own network of supporters. Such moves to lessen the abuses of power while expanding access to its benefits undoubtedly defused dangerous levels of tension among both upper and lower classes of society.

### Resiliency

Resiliency in ecological or sociocultural spheres refers to the ability of a system to reorganize after suffering a disturbance such that, although altered, it still retains

its essential characteristics and functions (Middleton 2017, 42). So far, three instances have been examined in which abuses of power and dangerous divisions in society threatened the fabric of the Egyptian state. The fact that the state recovered its footing at each point of potential (or actual) rupture and persisted, without break, as a recognizable entity would indicate that the pharaonic state possessed an unusual capacity for resilience and reformation. Indeed, considering that each successive iteration of the state seems to have corrected abuses, one wonders whether the Old Kingdom's governing structure might indeed fall into Nassim Nicholas Taleb's category of the 'antifragile' – a concept he applies to entities that not only absorb shock but ultimately become better for it (Taleb 2014, 3).<sup>4</sup>

Early Egypt's extraordinary capacity for resilience is perhaps attributable to two main factors: one geopolitical and the other ideological. The first factor that aided the pharaonic state's capacity for resilience is simply that the Nile Valley affords statehood for reasons already referenced, i.e., it is both extremely fertile and circumscribed. Thus, so long as the government can prove itself either powerful or beneficial (and especially if it is seen as both), dominance is relatively easily established. The second factor is that the ideological underpinning of pharaonic kingship seems to have allowed for the notion that while the office of kingship (*nsw*) was eternal and god given, its occupant was a discrete individual (*hm*) (Goedicke 1960, 17–37, 51–79). Thus, any failure in governance was not the fault of kingship *per se* but rather the failure of a particular king to rule in accordance with divinely inspired righteous order (*ma'at*).

An apparently longstanding 'law of the pharaoh' commanded: 'Let the possessions be given to him who buries' (Kemp 2006, 310). Thus, adherence to their own law may well account for why transfers of power that one expects should have been fraught appear so orderly in the archaeological record. For example, with respect to the case studies presented above, mud sealings demonstrate the involvement both of Hotepsekhemwy in Qa'a's burial and of Netjerikhet in Khasekhemwy's (Wilkinson 1999, 83, 95). Nor did kings of the Fifth Dynasty repudiate their predecessors, though they made every effort to distinguish themselves from them. This royal ideal that privileged the peaceful transition of power lasted for millennia. Thus both Amasis and Octavian granted that royal funerary rites be performed for their bested rivals in a bid, presumably, to placate the partisans of their enemies and to increase the odds that their own assumption to power – irregular as it was – would be regarded as at least somewhat legitimate. Such rites were useful in that they promoted the notion that kingship was larger than any individual ruler or



regime. Indeed, in the wake of deeply unpopular predecessors, the impulse of new pharaohs was to erase all evidence of the offending monarch(s) and to align themselves – through artifice or archaism – with former kings of better repute.

### **An autopsy report on Egypt's first failed state**

Although the Egyptian state was far less fragile than the vast majority of its ancient equivalents, it was not invincible. It failed very shortly after the reign of the Sixth Dynasty king Pepi II from a combination of many of the same ailments that appear to have laid low its less long-lived equivalents. If scholars of failed states can be compared to coroners, the autopsy reports that have been filed for Egypt's Old Kingdom state are typically equivocal. Below, however, a variety of different diagnoses are couched together within three broad categories in an admittedly speculative order of escalating importance: death by management failure and a corrosive loss of legitimacy, death by disaffection, and finally death by a drastic diminishment of spiritual and physical capital.

#### *Death by management failure and a corrosive loss of legitimacy*

There is considerable confusion as to the length of Pepi II's reign. The Turin Cannon gives a figure exceeding ninety years, which would suggest that the king had come to the throne unfit to rule and – unless he were truly extraordinary – would have left it the same way. The lack of attested regnal years for the last quarter century of Pepi's reign has often been blamed on the king's increasing irrelevancy to regional rulers and to an ever more impoverished elite. A graffito in Pepy II's pyramid, however, suggests that he died and was buried in his sixty-fourth regnal year. If so, his reign (c. 2216–2153) would have been comparable to Ramesses II's in length, and no extended period of irrelevancy need be posited (Müller-Wollermann 2014, 3). Sixty years, however, would still have been over twice the average lifespan of an ancient Egyptian, and so an increasingly fragile monarch may well have been viewed as an ominous avatar for the troubled state of the state.

Whatever the length of Pepi II's enormously long rule, he must, like Ramesses II, have outlived scores of crown princes. Of the scramble of short-lived kings that made up the subsequent Eighth Dynasty, one was certainly a son of Pepi II and others aggressively asserted kinship with him – however tenuous or fictive it may have been – by virtue of their choice of throne name. If numerous claimants assumed the crown in rapid succession, the lustre of the office would quickly

have dimmed. It may have been, however, that issues of illegitimacy and instability long predated the Eighth Dynasty. The first king of the Sixth Dynasty (Teti), for instance, may well have been assassinated, the second (Userkara) a usurper, and the third (Pepy I) plotted against by his own wife (Kanawati 2003, 4). Thus, of Pepy II's dynastic forebearers, his direct predecessor (Merenre) may have been the only king that was neither a conspirator nor one conspired against – at least so far as is known.

Only one possible attempt to unseat Pepy II is known, and this incident is only hinted at in a much later folktale that survived in at least three iterations. Known from the New Kingdom and the Twenty-Fifth Dynasty, the tale may have little bearing on the actual situation in the Sixth Dynasty, but – like many tales – one suspects it was indeed built around a kernel of truth. The story concerns the attempt of an individual, who had gained knowledge of a clandestine affair between Pepy II and one of his generals, to denounce the king in front of the court. Given that Egyptian religious texts condemned such relations – at least for the passive partner – and that the king was, before all else, mankind's primary advocate before the gods, this revelation about Pepy's sexual behaviour would indeed have been alarming. Each time the official attempted to reveal his sovereign's secret, however, he found that the Overseer of the Court thwarted him. According to the text, 'he made the singers sing, the musicians make music, the acclaimers, acclaim, and the whistlers whistle, until the Pleader of Memphis left without them hearing; (then) they stopped booing him' (Parkinson 1991, 55). A humorous tale from a much later time, of course, is hardly a credible historical source, but if Pepi II's proclivities were an open secret, this may also have led to a diminishment of the office of kingship in the eyes of those who might otherwise have held it in awe.

Some have suggested that if the figureheads at Egypt's core were perceived to be increasingly ineffectual, people in positions of power elsewhere in the country might well have felt free to act in their own interests, however illicitly. Certainly, during or in the immediate aftermath of Pepi II's reign, a high official from Elephantine was accused of embezzlement (lit. 'robbery') with respect to state activity in Nubia (Manassa 2006). One must imagine, however, that corruption and graft occurred at all times among officials whose responsibilities placed them in charge of resources and under only loose oversight. To indict an entire reign for corruption on the basis of an accident of preservation, then, appears premature.

In the end, it is unlikely that blame for the death of the Old Kingdom can be squarely attributed to a

failure of management on the part of its rulers or even to a progressive loss of legitimacy. Even if the lengthy rule of Pepi II indeed induced a feeling of stagnation, upwards of ten Memphite viziers are known from his reign (in addition to seven provincial counterparts), and each should have infused a renewed administrative energy to the realm (Strudwick 1985, 301–3). Hereditary monarchies, after all, are designed from the start to withstand a complete absence of governing from the king: whether that individual might be teething, mentally deficient, deemed deviant, or else increasingly infirm. In such cases, it is high officials who make important decisions, courtiers who meticulously stage-manage official appearances, and palace musicians who do their very best to drown out any incoming complaints.

#### *Death by disaffection*

One nearly universal suspect in the demise of the Old Kingdom is a restructuring of the government that ceded an unprecedented degree of power to regional authorities, who were typically members of powerful local families. The radical expansion of Egypt's bureaucracy in the Fifth Dynasty, while no doubt popular among ambitious members of the educated classes, seems from repeated attempts at restructuring later in the dynasty to have placed an increasing strain on the central government. Fifth Dynasty experiments with allowing some provinces a greater degree of administrative autonomy must have been deemed predominantly successful, as by the Sixth Dynasty, the government had introduced the title, 'great chief of the nome' to most Middle and Upper Egyptian provinces. Such men shared power with – or were occasionally functionally equivalent to – other locals who also exercised control over large estates on behalf of the crown and/or who were promoted to positions of authority in the central government as overseers of Upper Egypt or even as viziers (Moreno García 2013a, 124–46).

Prior to the Sixth Dynasty, the profoundly unequal distribution of monumental architecture and other archaeologically visible signifiers of wealth between the government's centre and its provinces suggests that the former's interest in the latter had resided almost solely in what it could requisition. While the crown likely intended its reform to increase efficiency and to lessen the drain on its coffers that the support of an overblown bureaucracy entailed, the advantages of this approach were counterbalanced by risks. In subcontracting oversight of provincial affairs to locals, for instance, the central government lessened its ability both to micromanage revenues and to coopt all significant sources of social power.

Large estates belonging to the king, the gods, or deceased royals formed the backbone of the provincial economy. Depending on their purpose, these estates likely sent varying amounts of produce to Memphite institutions, but much was also stored locally in order to subsidize the travel expenses of court functionaries or underwrite governmental expenses. Such had always been the case. What was different in the late Sixth Dynasty, however, was that the elites who now controlled these stores and increasingly appended titles such as 'overseer of the granary' and/or 'overseer of the treasury' to their vita, stood at the apex of local patronage systems (Kanawati 1980, 129–30; Strudwick 1985, 292; Papazian 2013, 63–6). Such elites thus no doubt found themselves newly empowered to make decisions about how local wealth would be dispensed. Their increasing co-option of offices such as 'overseer of priests' – which might stay in the same family for as many as eight generations – for instance, allowed local potentates to distribute lucrative and prestigious positions to a network of supporters whose fortunes were now directly tied to their own (Moreno García 2013a, 124–7; 2013b, 198–200, 202, 205; Bárta 2013a, 172–3).

Estates yielded soldiers as well as grain, and this too may have played a role in altering the balance of power. Little is known about the responsibility for mustering young men for war or work in the early Old Kingdom, although then, as later, it appears to have fallen to administrators bearing titles such as 'overseer of works of the king', 'overseer of the phyles of Upper Egypt', and 'overseer of the missions of the young men'. By the late Fifth and Sixth Dynasties, however, these men likely lived in the regions from whence they drew labour. Certainly, other officials, such as Weni or Sabni of Elephantine, mustered troops directly from the towns and estates they administered (Eyre 1987, 18–20; Moreno García 2010, 21–3, 25; Spalinger 2013, 466–68). Should a late Old Kingdom ruler have wished to curtail the defacto hereditary authority of a local family and impose his own man from the outside, then, those sent to enact his orders would assuredly have encountered not only a community united against this interference but also a formidable cadre of local militia. Indeed, it is likely no coincidence that the title 'overseer of a troop' is noted with relative frequency at the end of the Old Kingdom (Moreno García 2015, 5).

The likelihood of encountering resistance from local militias no doubt accounted for the pronounced preference of Sixth and Eighth Dynasty rulers for employing enticements rather than brute force to convince local rulers of their relevance. Thus, from the reign of Pepi I on, pharaohs often offered the sons and daughters of provincial families unprecedented power within the core of the kingdom as high officials

and as queens. At the same time, they acted to assert their own presence in important regional temples via the donation of royal statues and the establishment of appended *ka*-chapels (Moreno García 2013a, 122, 137–8; 2013b 199). Royal statues, such as those exhumed from Hierakonpolis, were not, however, likely maintained solely out of an enthusiasm for the cult of the divine king. Royal donations of land and property sweetened the pot for local powerbrokers and – no doubt – further fuelled the centrifugal forces already in motion.

The fact that officials in the late Fifth and Sixth Dynasties took charge of affairs in their own localities to a greater degree than ever before in the history of the pharaonic state, however, need not have occasioned the downfall of the central government. Indeed, the main problem with the disaffection hypothesis is that the state seems to have functioned perfectly well throughout the vast majority of the Sixth Dynasty. Limited local autonomy appears to have been ceded to provinces south of Memphis, yet there is no indication that regional rulers even remotely rivalled the king (Strudwick 1985, 346). In the north, meanwhile, the crown maintained its former hold over property in the fertile regions of the Nile Delta and the Fayum Oasis. Certainly, it is notable that for most of the Sixth Dynasty, kings seem to have had more than enough funds to procure resources from the northern Levant as well as from sub-Saharan Africa (Cooper 2012; Ward 1963, 23–7). So long as the crown possessed unparalleled wealth and a perceived religiopolitical potency – and so long as it shared some of this wealth and continued to refrain from the exploitative and divisive policies of the past – even those located at its margins seem to have been content to support it. What, then, changed at or shortly after the death of Pepy II?

#### *Death by drastic diminishment of spiritual and physical capital*

Toward the end of the Sixth Dynasty, state finances took a turn for the worse. This is perhaps most obviously reflected in the mortuary remains of its functionaries. Pepi II, with his unusually long reign, managed to construct a perfectly respectable pyramid. What is notable, however, is that beginning in the reign of Merenre, the numbers of Memphite officials who could afford a high-status burial shrunk precipitously (Bárta 2013b, 269). Indeed, by the latter portion of Pepi II's reign virtually no one in the capital or the provinces could afford an imposing mastaba tomb, save the governors of Dakhleh Oasis.

The practice of granting of tax exemptions to temples and associated funerary establishments (Abydos and Coptos), pyramid towns (Dahshur and Giza), and royal and private *ka*-chapels (Coptos) has been

repeatedly assigned at least partial blame for this sad state of affairs. These tax exemptions – in evidence already at the beginning of the Sixth Dynasty but better attested towards the end of it – generally forbade crown officials from charging their expenses to the protected estate. In addition, the crown promised not to requisition its property or personnel as part of routine *corvée* labour extractions or on an as-needed basis (Strudwick 2005, 102–15).

While the crown would indeed have reduced its access to revenue by virtue of these decrees, especially if the surviving documents were only the tip of the iceberg, three factors suggest that this practice was more a symptom of weakness than a cause. First, in most cases the estate is exempt from only certain impositions and taxes – not necessarily all. Second, the vast majority of institutions were not exempt. Thus, donkeys that were not requisitioned from the funerary estate of one particular queen mother could presumably be requisitioned from those of all other queen mothers and their noble kin, not to mention the pyramid towns of all but the couple of exempted parties as well as the innumerable royal estates that littered the country and were especially prominent in the Delta (Moreno García 2013b, 190–2; 203–4).

Finally, the crown seems often to have exempted sources of revenue that it could afford to exempt. The governors in Dakhleh, for instance, occupied an oasis hundreds of kilometres deep in the desert, and their mastabas were far grander than any others in Egypt during the reign of Pepi II. Thus, it would appear that if Egyptian armies had tried to requisition revenue by force, they would have failed. At the other extreme, however, the exemption granted to the community tending Menkaure's funerary temple would appear far more impressive if this squalid tenement had never been excavated (Lehner 2002, 7; Kemp 2006, 207–9). Indeed, the exemption granted to this 'sacred slum' was most likely intended primarily to provide the priests with an incentive to stay put and to keep the derelict cult functional.

The gradual impoverishment of elites at the end of the Old Kingdom is not in dispute. The role of an ecological downturn in occasioning this impoverishment, however, is. Recent assessments of the period discount any role of the environment in occasioning the breakdown of the centralized state, although no compelling heuristic alternative is advanced (Moreno García 2015, 5; Gee 2015, 61–2; Contardi 2015, 14–8; Schneider 2017, 319).<sup>5</sup> These authors tend to muster three main arguments. 1. The 28 firsthand narratives of individuals who claimed to successfully protect their people from dangerous food shortages were in fact opportunistically making a mountain out of a mole hill.



Famines were nothing unusual. These local grandees simply took advantage of the lack of a strong king in order to take credit for food distribution. 2. A rash of 'pessimistic literature' set (or reasonably thought to be set) in the First Intermediate Period but penned (certainly or likely) during the Middle Kingdom should be viewed both as warnings regarding the danger of life without a strong king ruling a unified country and also as reflective of an interest in exploring the notion of theodicy. 3. Any ecological downturn that there might have been would have occurred gradually and so the state would have had time to adjust.

In his investigation of the epistemological perspective that has coloured the reconstruction of the end of the Old Kingdom and life during the First Intermediate Period, Thomas Schneider (2017, 319) quotes Ailiezer Tucker's definition of the benchmark for the veracity of historiography: namely that it is important to privilege hypotheses that increase the likelihood of the evidence more than others. I will thus end this essay by arguing that while privileging a monocausal explanation for the end of the First Intermediate Period is undoubtedly naïve and wrongheaded, ignoring testimonies from first-hand accounts, later meditations on trauma, and a rash of scientific studies risks an unnecessarily defeatist approach. That the Old Kingdom monarchy was crippled by its inability to use its privileged position with the deities (on the one hand) and its unparalleled stores of grain (on the other) to help its people in their time of need is indeed a hypothesis that fits Tucker's benchmark for approval.

The hypothesis that deteriorating environmental conditions helped bring about the end of the Old Kingdom is also potentially useful for explaining why it would take almost a century and a half (c. 2118–1980) before another ruler could extend his dominion over the entirety of the country. It has been the aim of this paper thus far, after all, to argue that Egypt affords statehood and that even in the face of politicide, the pharaonic system was remarkably resilient. In all past periods of unrest, societal frustration seems to have been quelled by the installation of a new government and by the righting of perceived wrongs. So the important question with respect to the Sixth Dynasty is perhaps less why it fell than why it took so long (by Egyptian standards) before anyone picked up its pieces and put it back together again.

In order to make my case for bringing climate back into the equation, let me begin by marshalling an assemblage of recent and diverse scientific studies that demonstrate that the ecological downturn that coincided with the end of the Old Kingdom was not business as usual and that the reports of eyewitnesses should not be deemed histrionic. With this point made,

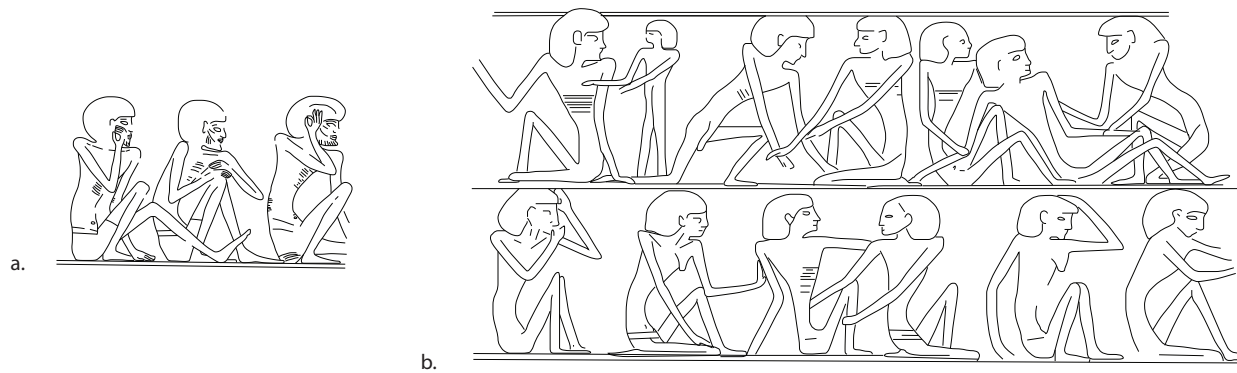
I will draw upon evidence for documented famines in later periods in Egypt's history to highlight certain observations about famines that are not necessarily self-evident but which are crucial for gaining perspective on the scattered sources of information pertinent to the First Intermediate Period.

### **The case for re-considering the role of a climate hostile to the state**

Most of the studies that discount climate as an agent for change in Egypt draw upon an article published by Nadine Moeller in 2005. In this valuable essay, Moeller reviewed all of the available scientific studies that had been used to argue that a series of droughts and low floods had occasioned the collapse of Egypt's Old Kingdom. Some of these studies, she found, were more convincing than others. For example, a study of changing settlement patterns at the island of Elephantine, she concluded 'provides firm evidence for relatively low flood levels during the 6th Dynasty' (Moeller 2005, 156). She cautioned, however, that scientists who took climatic change at the end of the third millennium as a given may well have been inclined to a certain amount of confirmation bias when interpreting their data (Moeller 2005, 158). Such studies, she suggested, might include investigations of Nile sediments from the Delta, dune encroachment into towns and formerly fertile fields, and variation in Fayum lake levels.

After reviewing the various studies, she concluded that climate change in Egypt was no doubt real, but appeared to be 'a long-term, gradual development towards generally drier conditions' (Moller 2005, 167), an assessment that agrees with evidence mustered by Miroslav Barta (2015) and colleagues at Abu Sir, re-evaluations of the dating for the collapse of urbanism in the southern Levant (Höflmayer 2014, 132), evaluations of evidence pertinent specifically to the eastern Mediterranean (Finné, Holmgren, Sundqvist et al. 2011, 3169), and with the view that scenes of starving bedouin carved on the causeways of Fifth Dynasty kings were as relevant as they were self-serving (see Fig. 5.12; Morris 2017, 134–5).

Moeller's caution concerning the dangers of confirmation bias and circular arguments is important and well taken. Since Moeller's article, debates about the so-called 4.2-kiloyear BP aridification event have continued. Given that there is at least as much (if not more) prestige in debunking a controversial theory as there is in confirming it, and given that most of the authors involved in subsequent studies are climate scientists and have no investment one way or another in the veracity of Egyptian texts, let me briefly refer to a selection of studies published after 2005 that have



**Figure 5.12.** *Starving Bedouin from the causeways of Sahure (12a. after Hawass and Verner 1996, 185, fig. 2a) and Unas (12b. after Drioton 1943, fig. 3).*

found additional evidence for adverse climatological events that are posited to have led to an aridification the like of which had not been seen since the dawn of the state and/or to catastrophically low floods. These studies employ a variety of different methods and have examined evidence from numerous locales.

Studies undertaken at the sources of the Nile are particularly important, given that the inundation was far more crucial to Egypt's long-term health than any rain that fell within its borders. At Lake Tana, the source of the Blue Nile in Ethiopia, magnetic and geochemical coring has revealed a drought event at roughly 2200 BC, i.e., during the reign of Pepy II. The effects of this dry spell were aggravated because they coincided with 'a short period when outflow ceased from Lake Victoria, at the source of the White Nile,' convincing the authors to support the position that reduced Nile flow was indeed a contributing factor in the collapse of the Old Kingdom state (Marshall, Lamb, Huws et al. 2011, 147, 159). Even Karl Butzer, who had argued forcefully in the past against climate-driven explanations for the collapse of the Old Kingdom (Butzer 1997, 245, 261) argued in 2012 that the limnological record of Lake Turkana – which indicated that the Omo watershed in western Ethiopia that fed it generated only minimal influx around approximately 2100 BC – suggested that 'Nile failures probably unleashed a severe subsistence crisis that helped trigger an economic breakdown near the end of Pepy II's reign' (Butzer 2012, 3633–4).

With reference to suffering to the north and east of Egypt, Sturt Manning and his colleagues utilized the technique of dendro-<sup>14</sup>C-wiggle-matching to examine the tree-ring sequences of a cedar coffin and funerary boat from the First Intermediate Period and Middle Kingdom respectively (Manning, Dee, Wild et al., 2014, 401, 414). Their conclusion was that an off-set within the period of roughly 2200–1900 BC was consistent with

the climate change postulated by the 4.2 ka BP event that has been argued to have caused widespread suffering throughout the eastern Mediterranean world. A team of scientists examining brine sediments in the northern Red Sea reached a similar conclusion. The results of their study led them to state that the timing and strength of the reconstructed environmental changes around 4200 cal yr BP are suggestive of 'a major drought event' that affected northern Africa as well as Mesopotamia (Arz, Lamy, Pätzold 2006, 432, 439–40).

Within Egypt proper, recent coring at Saqqara has revealed a metre thick layer of dune sands over areas that had previously been arable fields (Hassan, Hamdan, Flower et al. 2017, 62).<sup>6</sup> At this site as well as Abusir, Giza, and Abu Rowash, other geomorphological studies revealed that the deposition of slope and aeolian deposits occurred at the same time as dramatically low floods. These low floods, in combination with unusually intense bursts of rain, triggered catastrophic flash floods that have left ample evidence of their destruction in the Memphite cemeteries and appear even have led to significant archaeological innovations in tomb design<sup>7</sup> (Welc & Marks 2014, 131; Kuraszkiewicz 2016). The effects of low floods and intense rain may also be seen in the fact that Lake Qarun was effectively cut off from the Nile and received a significant input of sand, likely the result of sheet-floods (Marks, Salem, Welc et al. 2018, 76). These two factors, Fabian Welc and Leszek Marks conclude, 'caused a rapid collapse of the Old Kingdom at about 4200 cal BP' (Welc & Marks 2014, 124).

If adding heavy rains to the list of contributory factors leading to the breakdown of the state appears hyperbolic, a brief foray into more recent history may be illustrative. In his book *Nature and Empire in Ottoman Egypt*, Alan Mikhail writes that the torrential downpours of 1757–1758 and of 1790 set off a chain of events

that led to a governmental crisis. These rains wrecked field systems, ruined crops, and destroyed supplies of stored grain. Further, the unexpected floods also sent thousands of rats to seek dry land together with humans, which led to a particularly devastating bout of plague. Not restricted to the poorer districts of Cairo, the pestilence of 1791 slew Egypt's highest official as well as many in his administration (Mikhail 2011, 218, 227–8). As Mikhail writes, 'The plague indeed caused quite a crisis of leadership in Ottoman Egypt, as no appointed leader could stay alive long enough to rule effectively' (Mikhail 2011, 222). It would appear, then, that the causes and effects of the combined calamity of 1790–1791 may provide a gruesome, if fitting parallel to what archaeology has revealed concerning the end of the Old Kingdom. Mikhail concludes, 'The flood of the fall of 1790, therefore, contributed to the ravages of plague in the spring of 1791. The combination of these forces with drought in the fall of 1791 resulted in widespread famine, severe price inflations, and massive death' (Mikhail 2011, 229). Considering the magnitude of the crisis, it was useful to the survival of the Ottoman state that its sultan resided outside Egypt's borders!

#### *Lessons from the longue durée*

Numerous accounts of more modern famines in Egypt's history, particularly those that occurred in the well-documented Mamluk and Ottoman periods, allow for the recognition of a few important patterns. Efficient governments, for example, could generally ameliorate the damage caused by Nile floods that were either dangerously high or dangerously low. In such cases, before inflation caused too much suffering among the poor, rulers and other *grandees* would step in and either sell grain at below the market rate or else simply distribute it. While occasional instances of rioting might occur – as in the famines of AD 1336 and 1394 – the government that acted quickly and efficiently in the face of a short-lived ecological downturn could aid its people and avert disaster (Sabra 2000, 144–5, 148–50; Raphael 2013, 99).

Inadequate floods seem to have occurred at least once a generation. As Fekri Hassan has observed, however, Egypt's most horrific experiences with famine and suffering occurred at much longer intervals – often depriving even the oldest sufferers of a parallel within the living memory of those they'd known. The effects were most acutely felt when inadequate floods persisted over two or more years, occurred within short intervals of one another, and/or coincided with extended region-wide droughts (Hassan 1997, 57–9). From 1294 to 1295, for instance, a serious drought struck the Eastern Mediterranean from Cyrenaica to

Syria, which caused some 30,000–50,000 individuals to immigrate into the Nile Valley in search of sustenance. Two successive insufficient inundations, however, meant that Egypt, too, was in a state of crisis. The price of grain rose to more than 13 times the standard rate, people began resorting to famine foods (including, according to the chroniclers, human flesh), plague spread throughout the country, and at the peak of its devastation it is estimated that as many as 3,000 persons a day perished (al-Maqrīzī 1994, 43–7; Sabra 2000, 141–3).

The fact that most of those that fled to Egypt were pastoralists from Cyrenaica recalls a statement from the record of a campaign that Merneptah undertook c. 1208 BC, right at the beginning of the chaotic half century or so that marked the end of the Late Bronze Age. The report states by way of prologue that Libyan tribesmen had emigrated *en masse* to the Nile Delta in order to 'seek out the necessities (of life) for their mouth[s]' and once there were 'fighting to feed their stomachs daily' (Kitchen 2003, 4). Notably, references to famine abound in contemporary diplomatic correspondence, and Merneptah boasted that he had 'caused grain to be taken in ships, to keep alive this land of Hatti' (Singer 1999, 716–9). Destruction levels and the abandonment of major population centres are evident throughout the Eastern Mediterranean at this time, bearing witness to mass population displacement. While Merneptah kept his throne, Canaan and Nubia attempted to rebel against pharaonic rule, and political chaos soon brought down his dynasty. The succeeding regime (c. 1190–1077) is known for rampant tomb robbery, labour strikes, multiple instances of mob violence, hit and run attacks by desert dwellers, increasing regionalism, and finally for the breakdown of the central state. While the intermittent spikes in grain prices noted in late Nineteenth and Twentieth Dynasty sources may be related more to administrative inefficiency than to famine, it is notable that documents from this period provide more direct and indirect references to hunger and to the extraordinary purchasing power of foodstuffs than those from any period since the advent of the Twelfth Dynasty (O'Connor 1982, 875–6; Kemp 2006, 314; Contardi 2015, 17).

In the late Old Kingdom, evidence for large-scale population movements typical of those catalyzed by drought conditions can be seen in the reoccupation of the Nubian Nile Valley, the Sinai landbridge, and in Egypt's increased confrontations with Bedouin, as the inhabitants of areas dependent on rainfall in North Africa and the southern Levant converged upon the Nile Valley and also threatened Egypt's interests outside of it. Indeed, the pharaonic initiative to colonize Dakhleh Oasis (a region whose water was not



dependent on the Nile) in the Sixth Dynasty may also have been undertaken both to increase Egypt's food supply and to give its traders a means of bypassing the newly reoccupied and politically fractious Lower Nubian Nile Valley. Egypt's emergence from isolationism in the Late Old Kingdom, then, was probably to some degree defensive, and it is notable that once strong leadership re-emerged in the Delta during the late First Intermediate Period or the early Middle Kingdom, border security became a top priority (Jansen-Winkel 2010; Morris 2018, 49–52).

It is possible that an increase in urbanism and in the construction of town walls in the Sixth Dynasty may be taken as the material signatures of an elevated unease that existed within Egypt proper (Moeller 2016, 186). Such a conclusion need not necessarily be drawn. As Juan Carlos Moreno García points out, a burgeoning population might be read as a sign of health, and in the southern Levant, for example, the presence of town walls is often interpreted as an indication of civic pride (Philip 2003, 109–23; Moreno García 2015, 8). Thus, the increased provincial autonomy typical of the Sixth Dynasty could well have motivated local elites to invest in their towns. In the third century AD, for example, Egyptian provincial cities flourished during an extended period of crisis largely because wealthy citizens – newly empowered to act as city councillors – now saw the glory of their city as adding lustre to their own self-worth (Bagnall 1993, 55–9).

Bearing the aforementioned caveats in mind, it may still be safely stated that in pharaonic Egypt nucleation and walls are especially characteristic of unsettled times. Moreover, multiple lines of evidence make it clear that any walls erected were put to good use during the 'long First Intermediate Period', which might be argued to extend up to the point at which Amenemhet I's foes surrendered their arms. Violence – as witnessed in elevated death rates and signs of trauma, biographical inscriptions, and in the unprecedented visibility of soldiers as well as real, model, and depicted weapons – left its scars in the material and epigraphic record (O'Connor 1974; 27–9; Hayes 1978, 277–80; Morris 2006; Duhig 2009, 60–1; Moeller 2016, 244–5).

*Dry climates tend to be incendiary*

When an efficient administration in Egypt's history mitigated the effects of a short famine, the benefits of paying taxes were obvious. Inefficient, inattentive, or avaricious elites, however, could exacerbate (or even cause) crises and served as lightning rods for discontent during ecological downturns. Perceived abuses of the social contract that bound a government to its people occurred during the famines of 952–953,

963–971, 1294–1296, 1694–1695, 1784 and 1790–1796, which provoked widespread anger and demonstrations in response (al-Maqrīzī 1994, 29–30, 47; Mikhail 2011, 217–218, 229–30). Whether the aftermath of mob violence may also be seen in the scorch marks left over from fires that destroyed the late Sixth Dynasty Governor's palace at 'Ain Asil in Dakhleh Oasis or in the disordered corpses of over 35 people recovered beneath burnt heaps of rubble outside a late Old Kingdom temple platform at Mendes is unclear, but 'Let us drive out the strong among us!' was remembered as a rallying cry characteristic of the time (Enmarch 2008, 223, similarly 228–9 Simpson 2003, 153, 155; Soukiasian 1997, 17; Redford 2010, 46–50).

It is worth noting that in order to temper the effects of famine, Mamluk and Ottoman governments awarded tax breaks and fostered an economy of patronage among their highest elites – two tactics, discussed above, that Egypt's late Old Kingdom administration also employed (Sabra 2000, 135–6; Mikhail 2011, 2016–7; Raphael 2013, 99–100). In these latter periods, such economic interventions often staved off disaster – but it helped that Egypt was only one component of a much larger empire. These same strategies, while they may at first have decreased stress and increased the agility of the Old Kingdom government, would not have worked over a period of ever-increasing aridity. Regional granaries, by their very nature, run dry more quickly than centralized stores, and they do not allow the dearth of one region to be as easily complimented by the plenty of another. Thus, at the very end of the Old Kingdom the centre did not hold, and things fell apart.

The Egyptian state had weathered destabilizing adversities before, including serious and systemic abuses of power, as well as regional unrest, and even regicide. While these adversities prompted abrupt changes of regime, they did not stop the state altogether. Some other ruler had always stepped up to right wrongs and assume the reins. The question, then, is why this case was different. Accounts of historically attested famines may, again, aid our understanding of why Egypt – if it had suffered from a prolonged drought and intermittent low Niles – may have had a difficult time recovering. Adequate inundations, it seems, were no panacea unless arable land could be quickly cultivated. In the aftermath of serious famines in Egypt, finding the animal- and manpower to work the soil was difficult. In areas hardest hit by famine, people had generally consumed both unripe crops and draught animals. Moreover, villages were often almost entirely depopulated as peasants who did not die often left for cities so as to be closer to what aid there was and to escape increasingly lawless conditions

(al-Baghdādi 1964, 55l, 60l, 62r, 63r–63l; 64l; al-Maqrīzī 1994, 41–3, 46; Sabra 2000, 160, 167; Mikhail 2011, 217; Raphael 2013, 67, 73, 85).

Over time, droughts ease, and catastrophically low floods – while more frequent in certain eras than others – tend only to last a handful of years at most. During the First Intermediate Period, it is no doubt as erroneous to envision a time of unremitting misery and peril as it is to ignore attestations that life during this period could be particularly challenging. Even the ‘calamitous’ fourteenth century in Europe, after all, saw feasts among its many famines. Moreover, in the aftermath of the blackest plagues it could happen that ‘the poor moved into empty houses, slept on beds, and ate off silver. Peasants acquired unclaimed tools and livestock, even a wine press, forge or mill left without owners, and other possessions they never had before’ (Tuchman 1978, 117). Those who had always been at the bottom of Egypt’s social order, therefore, may have had little desire to reinstate the state, even if life without its security forces and infrastructure was as alarming as it was exhilarating.

#### *Making Egypt great again*

If the breakdown of the central state in Egypt lasted longer than it ever had before during the First Intermediate Period, it was not, in fact, laid low for long (at least by comparison to many other ancient states profiled in this volume). Two dominant theories are often invoked to explain the rise of the state: one coercive and the other managerial (see with regard to Egypt Bard and Carneiro 1989 vs. Hassan 1988). Proponents of the first theory argue that states were won at spear point and maintained by force. By contrast, advocates of the managerial view highlight the state’s scalar advantage in buffering its citizens from the effects of famines, incursions, or other social ills. In light of these two very different perspectives, then, it is important to note that the first individuals who gained power in the aftermath of the state’s collapse were those who boasted of their active involvement in helping the people of their districts survive an extended period of crises (Vandier 1936; Moreno García 1997, 3–92). These boasts, while obviously self-serving, needn’t be untrue. On the other hand, it is equally important to observe that some, like Ankhthify, paired their boasts with tales of aggressive actions against neighbouring polities. Thus, perhaps, the phenomenon of state formation is capacious enough to encompass both paradigms even within a single instance.

After eight hundred years, Egypt had an indelible template for pharaonic rule. As noted at the start of this work, the Nile Valley afforded statehood, and so once the river recovered and steady surpluses were again

in sight, aggrandizers increasingly took up the question of just who should assume the righteous burden of safeguarding the nation’s stores. Within twenty years, strong men, based first at Herakleopolis in the fertile Fayum and slightly later in Thebes, carved out kingdoms that would eventually clash. Like a phoenix rising from the ashes (or like a B-grade horror film, depending on your perspective) the pharaonic state would be reborn. Whether this repeat performance was greeted with relief or depression no doubt depended on individual circumstances. The strength of Egypt’s state lay – almost equally, it seems – in its ability both to help and to harm.

#### References

ASAE = *Annales du Service des Antiquités de L’Égypte*

- Adams, B. and K.M. Ciałowicz, 1997. *Protodynastic Egypt*. Buckinghamshire: Shire Publications.
- al-Maqrīzī, T., 1994 [1405]. *Mamluk Economics. A Study and Translation of al-Maqrīzī’s Ighāthah*, trans. A. Allouche. Salt Lake City: University of Utah Press.
- Arz, H.W., F. Lamy, J. Pätzold, 2006. A pronounced dry event recorded around 4.2 ka in brine sediments from the northern Red Sea. *Quaternary Research* 66: 432–441.
- Bagnall, R.S., 1993. *Egypt in Late Antiquity*. Princeton: Princeton UP.
- al-Baghdādi, ‘A., 1964 [1204]. *The Eastern Key*, trans. K. H. Zand et al. London: George Allen and Unwin Ltd.
- Bard, K.A., 1989. The evolution of social complexity in predynastic Egypt: an analysis of the Naqada Cemeteries. *Journal of Mediterranean Archaeology* 2(2): 223–48.
- Bard, K.A. and R.L. Carneiro, 1989. Patterns of Predynastic settlement location, social evolution and the circumscription theory. *Cahiers de la Recherche de l’Institut de Papyrologie et d’Égyptologie de Lille* 11, 15–23.
- Bárta, M., 2005. Location of the Old Kingdom pyramids in Egypt. *Cambridge Archaeological Journal* 15(2), 177–91.
- Bárta, M., 2013a, Kings, viziers, and courtiers: executive power in the Third Millennium BC, in *Ancient Egyptian Administration*, ed. J.C. Moreno García. Boston: Brill, 153–75.
- Bárta, M., 2013b Egyptian kingship during the Old Kingdom. in *Experiencing Power, Generating Authority: Cosmos, Politics, and the Ideology of Kingship in Ancient Egypt and Mesopotamia*, eds. Hill, J.A., P. Jones, & A.J. Morales. Philadelphia: University of Pennsylvania Press, 257–83.
- Bárta, M., 2015. Long term or short term? Climate change and the demise of the Old Kingdom, in *Climate and Ancient Societies*, eds. S. Kerner, R. J. Dann, and P. Bangsgaard. Copenhagen: Museum Tusulanum Press University of Copenhagen, 177–95.
- Bestock, L., 2009. *The Development of Royal Funerary Cult at Abydos: Two Funerary Enclosures from the Reign of Aha*. Wiesbaden: Otto Harrassowitz.
- Butzer, K.W., 1997. Sociopolitical discontinuity in the Near East c. 2200 BCE: scenarios from Palestine and Egypt,

- in *Third Millennium bc Climate Change and Old World Collapse*, ed. Dalfes, H.N., G. Kukla, H. Weiss. NATO ASI Series I: *Global Environmental Change* 49. Berlin: Springer-Verlag, 245–296.
- Butzer, K.W., 2012. Collapse, environment, and society. *PNAS* 109(10), 3632–9.
- Caminos, R.A., 1997. Peasants, in *The Egyptians*, ed. S. Donadoni. Chicago: University of Chicago Press, 1–30.
- Carneiro, R. L., 1970. A theory of the origin of the state. *Science, New Series* 169, No. 3947, 733–38.
- Chang, K.C., 1974. Urbanism and the king in ancient China. *World Archaeology* 6(1), 1–14.
- Contardi, F., 2015. Disasters connected with the rhythm of the Nile in the textual sources, in *Egyptian Curses 2: A Research on Ancient Catastrophes*, ed. G.C. Vittozzi. Rome: Istituto di Studi sul Mediterraneo Antico, 11–26.
- Cooper, J., 2012. Reconsidering the location of Yam. *Journal of the American Research Center in Egypt* 48, 1–21.
- Creasman, P.P., 2015. Timbers of time: revealing international economics and environment in antiquity, in *There and Back Again – the Crossroads II: Proceedings of an International Conference Held in Prague, September 15–17, 2014*, eds. J. Mynářová, P. Onderka, and P. Pavúk. Prague: Charles University in Prague, 45–58.
- Crowfoot Payne, J., 1993. *Catalogue of the Predynastic Egyptian Collection in the Ashmolean Museum*. Oxford: Oxford UP.
- Darnell, J.C., 2002. *Theban Desert Road Survey in the Egyptian Western Desert, Vol 1: Gebel Tjauti Rock Inscriptions 1–45 and Wadi el-Hôl Inscriptions 1–45*. *Oriental Institute Publications* 119. Chicago: Oriental Institute of the University of Chicago.
- Darnell, J.C., 2009. Iconographic attraction, iconographic syntax, and tableaux of royal ritual power in the Pre- and Proto-dynastic rock inscriptions of the Theban Western Desert. *Archéo-Nil* 9, 83–107.
- David, R., 2017. Illness from afar. Epidemics and their aftermath, in *Pharaoh's Land and Beyond. Ancient Egypt and its Neighbors*, eds. P.P. Creasman and R.H. Wilkinson. New York: Oxford UP, 271–85.
- Dodson, A., 1996. The mysterious 2nd dynasty. *KMT* 7(2), 19–31.
- Dreyer, G., et al., 1996. Umm el-Qaab. Nachuntersuchungen im frühzeitlichen Königsfriedhof 7./8. Vorbericht. *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 52, 11–81.
- Dreyer, G., 1998. Der erste König der 3. Dynastie, in *Stationen: Beiträge zur Kulturgeschichte Ägyptens, Rainer Stadelmann gewidmet*, ed. H. Gusch & D. Polz. Mainz: Philipp von Zabern, 31–4.
- Drioton, E., 1943. Une représentation de la famine sur un bas-relief égyptien de la Ve dynastie. *Bulletin de l'Institut du Désert d'Égypte* (Cairo) 25, 45–54.
- Duhig, C., 2009. They are Eating People Here! Anthropology and the First Intermediate Period. *Beyond the Horizon: Studies in Egyptian Art, Archaeology and History in Honour of Barry J. Kemp Vol I*, ed. S. Ikram and A. Dodson. Cairo: Publications of the Supreme Council of Antiquities, 45–87.
- Eyre, C.J., 1987. Work and the organisation of work in the Old Kingdom, in *Labor in the Ancient Near East*, ed. M.A. Powell. New Haven: American Oriental Society, 5–47.
- Finné, M., K. Holmgren, H.S. Sundqvist et al., 2011. Climate in the eastern Mediterranean, and adjacent regions, during the past 6000 years – a review. *Journal of Archaeological Science* 38, 3153–73.
- Friedman, R., 2008. Cemeteries of Hierakonpolis. *Archéo-Nil* 18, 9–29.
- Friedman, R., W. Van Neer, & V. Linseele, 2011. The elite predynastic cemetery at Hierakonpolis: 2009–2010 update, in *Egypt at Its Origins 3: Proceedings of the Third International Conference "Origin of the State. Predynastic and Early Dynastic Egypt"*, London, 27th July – 1st August 2008, eds. R.F. Friedman and P. N. Fiske. Leuven: Peeters, 157–191.
- Gee, J., 2015. Did the Old Kingdom collapse? A new view of the First Intermediate Period. *Towards a New History for the Egyptian Old Kingdom: Perspectives on the Pyramid Age*, ed. P. Der Manuelian and T. Schneider. Leiden: Brill, 60–75.
- Goedicke, H., 1960. *Die Stellung des Königs im Alten Reich*. Wiesbaden: Otto Harrassowitz.
- Grdseloff, B., 1944. Notes d'épigraphie archaïque. *ASAE* 44, 279–302.
- Griffiths, J.G., 1959. Remarks on the Horian elements in the royal titulary. *ASAE* 56, 63–86.
- Griffiths, J.G., 1960. *The Conflict of Horus and Seth from Egyptian and Classical Sources*. Liverpool: Liverpool UP.
- Hassan, F.A., 1988. The Predynastic of Egypt. *Journal of World Prehistory* 2(2), 135–85.
- Hassan, F.A., 1997. The dynamics of a riverine civilization: a Geoarchaeological Perspective on the Nile Valley, Egypt. *World Archaeology* 29(1), 51–74.
- Hassan, F.A., M.A. Hamdan, R.J. Flower et al., 2017. Holocene alluvial history and archaeological significance of the Nile floodplain in the Saqqara-Memphis region, Egypt. *Quaternary Science Review* 176, 51–70.
- Hassan, F.A., J. van Wetering, & G. Tassie, 2017. Urban development at Nubt, Nagada region, Upper Egypt, during the Predynastic – Protodynastic period, in *Egypt at Its Origins 5. Proceedings of the Fifth International Conference "Origin of the State. Predynastic and Early Dynastic Egypt"*, Cairo, 13th–18th April 2014, ed. B. Midant-Reynes and Y. Tristant. Leuven: Peeters, 81–127.
- Hawass, Z. and M. Verner, 1996. Newly Discovered Blocks form the Causeway of Sahure (Archaeological Report). *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 52, 177–186 with plates 53–56.
- Hayes, W.C., 1978. *The Scepter of Egypt: A Background for the Study of the Egyptian Antiquities in the Metropolitan Museum of Art. Vol 1: From the Earliest Times to the End of the Middle Kingdom*. New York. New York: Metropolitan Museum of Art.
- Hendrickx, S., R. Friedman & M. Eyckerman, 2011. Early falcons, in *Vorspann oder formative Phase? Ägypten und der Vordere Orient 3500–2700 v. Chr.*, ed. L.D. Morenz & R. Kuhn. Wiesbaden: Harrassowitz Verlag, 129–62.
- Hendrickx, S., et al., 2009. Late Predynastic/Early Dynastic rock art scenes of Barbary sheep hunting in Egypt's Western Desert. From capturing wild animals to the



- women of the 'Acacia House', in *Desert animals in the Eastern Sahara: Status, economic significance, and cultural reflection in antiquity. Proceedings of an Interdisciplinary ACACIA Workshop held at the University of Cologne, December 14–15, 2007*, eds. H. Riemer et al. Köln: Heinrich-Barth-Institut, 189–244.
- Höflmayer, F., 2014. Dating catastrophes and collapses in the Ancient Near East: the end of the first urbanization in the Southern Levant and the 4.2 ka BP event, in *Overcoming Catastrophes: Essays on Disastrous Agents Characterization and Resilience Strategies in Pre-Classical Southern Levant*, ed. L. Nigro. Rome: „La Sapienza“ Expedition to Palestine & Jordan, 117–40.
- Hornung, E., R. Krauss, and D. Warburton, 2006. *Ancient Egyptian Chronology*. Leiden: Brill.
- Jansen-Winkel, K., 2010. Der Untergang des Alten Reiches. *Orientalia* 79(3), 273–303.
- Kahn, D. & O. Tammuz, 2008. Egypt is difficult to enter: Invading Egypt – A game plan (seventh-fourth centuries BCE). *Journal for the Society of Egyptian Antiquities* 35, 37–66.
- Kanawati, N., 1980. *Governmental Reforms in Old Kingdom Egypt*. Warminster: Aris & Phillips.
- Kanawati, N., 2003. *Conspiracies in the Egyptian Palace: Unis to Pepy I*. New York: Routledge.
- Kemp, B.J., 2006. *Ancient Egypt. Anatomy of a Civilization*, Second edition. New York: Routledge.
- Kitchen, K.A., 2003. *Ramesside Inscriptions: Translated and Annotated Translations. Vol. IV: Merneptah and the Nineteenth Dynasty*. Malden, MA: Blackwell Publishing.
- Kozloff, A., 2006. Bubonic plague during the reign of Amenhotep III? *KMT* 17(3), 36–46.
- Kuraszkiewicz, K.O., 2016. Architectural innovations influenced by climatic phenomena (4.2 ka event) in the late Old Kingdom (Saqqara, Egypt). *Studia Quaternaria* 33(1), 27–34.
- Lehner, M., 1997. *The Complete Pyramids*. London: Thames & Hudson.
- Lehner, M., 2002. Sacred slum: life and death of a pyramid town. *Aerogram* 5(2), 7.
- Marshall, M.H., H.F. Lamb, D. Huws et al., 2011. Late Pleistocene and Holocene drought events at Lake Tana, the source of the Blue Nile. *Global and Planetary Change* 78, 147–61.
- Mathieson, I, E. Bettles, J. Clarke et al., 1997. The National Museums of Scotland Saqqara Survey Project 1993–1995. *Journal of Egyptian Archaeology* 83, 17–53.
- Manassa, C., 2006. The crimes of Count Sabni reconsidered. *Zeitschrift für ägyptische Sprache und Altertumskunde* 133, 151–63.
- Manning, S.W., M.W. Dee, E.M. Wild et al., 2014. High-precision dendro-<sup>14</sup>C dating of two cedar wood sequences from First Intermediate Period and Middle Kingdom Egypt and a small regional climate-related <sup>14</sup>C divergence. *Journal of Archaeological Science* 46, 401–16.
- Marks, L., A. Salem, F. Welc et al., 2018. Holocene lake sediments from the Faiyum Oasis in Egypt: a record of environmental and climate change. *Boreas: An International Journal of Quaternary Research* 47(1), 62–79.
- Middleton, G.D., 2017. *Understanding Collapse. Ancient History and Modern Myths*. Cambridge: Cambridge UP.
- Mikhail, A., 2011. *Nature and Empire in Ottoman Egypt*. Cambridge: Cambridge UP.
- Moeller, N., 2005. The First Intermediate Period: a time of famine and climate change? *Ägypten und Levante* 15, 153–67.
- Moeller, N., 2016. *The Archaeology of Urbanism in Ancient Egypt from the Predynastic Period to the End of the Middle Kingdom*. Cambridge: Cambridge UP.
- Moreno García, J.C., 1997. *Études sur l'administration, le pouvoir et l'idéologie en Égypte, de l'Ancien au Moyen Empire. Ægyptica Leodiensia* 4. Liège: C.I.P.L.
- Moreno García, J.C., 2007. The state and the organisation of the rural landscape in the 3rd millennium BC pharaonic Egypt, in *Aridity, Change and Conflict in Africa: Proceedings of an International ACACIA Conference held at Königswinter, Germany October 1–3, 2003*, eds. M. Bollig et al. Köln: Heinrich-Barth-Institut, 313–30.
- Moreno García, J.C., 2010. War in Old Kingdom Egypt (2686–2125 BCE), in *Studies on War in the Ancient Near East. Collected Essays on Military History*. Münster: Ugarit Verlag, 5–41.
- Moreno García, J.C., 2013a. The territorial administration of the kingdom in the 3rd Millennium, in *Ancient Egyptian Administration*, ed. J. C. Moreno García. Boston: Brill, 85–151.
- Moreno García, J.C., 2013b. Building the pharaonic state: territory, elite, and power in ancient Egypt in the 3rd millennium BCE, in *Experiencing Power, Generating Authority: Cosmos, Politics, and the Ideology of Kingship in Ancient Egypt and Mesopotamia*, eds. Hill, J.A., P. Jones, & A.J. Morales. Philadelphia: University of Pennsylvania Press, 185–217.
- Moreno García, J.C., 2015. Climatic change or sociopolitical transformation? Reassessing late 3rd millennium BC in Egypt, in *2200 BC – A Climatic Breakdown as a Cause for the Collapse of the Old World?*, eds. H. Meller, H.W. Arz, R. Jung and R. Risch, Tagungen des Landesmuseums für Vorgeschichte Halle 13, 1–16.
- Morris, E., 2014. (Un)Dying loyalty: meditations on retainer sacrifice in Ancient Egypt and elsewhere, in *Violence and Civilization: Studies of Social Violence in History and Prehistory*, ed. Rod Campbell. Oxford: Oxbow Books, 61–93.
- Morris, E., 2017. Prevention through deterrence along Egypt's northeastern border: or the politics of a weaponized desert. *Journal of Eastern Mediterranean Archaeology and Heritage Studies* 5(2), 133–47.
- Morris, E., 2018. *Ancient Egyptian Imperialism*. Hoboken, NJ: Wiley-Blackwell.
- Muhs, B., 2016. *The Ancient Egyptian Economy 3000–30 BCE*. Cambridge: Cambridge UP.
- Müller-Wollermann, R., 2014. End of the Old Kingdom, in *UCLA Encyclopedia of Egyptology*, eds. W. Grajetzki & W. Wendrich. Los Angeles, 1–9. Available at: <http://digital2.library.ucla.edu/viewItem.do?ark=21198/zz002hzfs1>
- Nicholson, P.T. and E. Peltenburg, 2000. Egyptian faience, in *Ancient Egyptian Materials and Technology*, eds. P.T. Nicholson & I. Shaw. Cambridge: Cambridge UP, 177–94.



- O'Connor, D.B., 1974. Political Systems and Archaeological Data in Egypt: 2600–1780 BC. *World Archaeology* 6(1), 15–38.
- O'Connor, D.B., 1982. Egypt, 1552–664 BC, in *The Cambridge History of Africa, vol I: From the Earliest Times to c. 500 BC*, ed. J.D. Clark. Cambridge: Cambridge UP, 830–1087.
- O'Connor, D.B., 2009. *Abydos: Egypt's First Pharaohs and the Cult of Osiris*. New York: Thames & Hudson.
- Papazian, H., 2013. The central administration of the resources in the Old Kingdom: departments, treasuries, granaries and work centers, in *Ancient Egyptian Administration*, ed. J. C. Moreno García. Boston: Brill, 41–83.
- Parkinson, R.B., 1991. *Voices from Ancient Egypt. An Anthology of Middle Kingdom Writings*. Norman: University of Oklahoma Press.
- Petrie, W.M.F., 1900. *Royal Tombs of the First Dynasty 1900–1901*. London: Egypt Exploration Fund.
- Petrie, W.M.F., 1901. *Royal Tombs of the Earliest Dynasties 1901, Part II*. London: Egypt Exploration Fund.
- Philip, G., 2003. The Early Bronze Age of the Southern Levant: A Landscape Approach. *Journal of Mediterranean Archaeology* 16.1, 103–32.
- Quibell, J.E., 1898. Slate palette from Hierakonpolis. *Zeitschrift für Ägyptische Sprache und Altertumskunde* 36, 1: 81–84, taf. 12, 13.
- Quibell, J.E., 1900. *Hierakonpolis, Part I*. London: Bernard Quaritch.
- Raphael, K., 2013. *Climate and Political Climate: Environmental Disasters in the Medieval Levant*. Leiden: Brill.
- Reader, C., 2017. An Early Dynastic ritual landscape at North Saqqara: an inheritance from Abydos? *Journal of Egyptian Archaeology* 103(1), 71–87.
- Redford, D.B., 2010. *City of the Ram-Man. The Story of Ancient Mendes*. Princeton: Princeton UP.
- Regulski, I., 2009. Investigating a new Dynasty 2 necropolis at South Saqqara. *British Museum Studies in Ancient Egypt and Sudan* 13: 221–37.
- Sabra, A., 2000. *Poverty and Charity in Medieval Islam. Mamluk Egypt, 1250–1517*. Cambridge: Cambridge UP.
- Schneider, T., 2017 “What is the past but a once material existence now silenced?”: The First Intermediate Period from an epistemological perspective, in *The Late Third Millennium in the Ancient Near East. Chronology, C14, and Climate Change*, ed. F. Höflmayer. Oriental Institute Seminars 11. Chicago: University of Chicago.
- Scott, J.C., 2017. *Against the Grain: A Deep History of the Earliest States*. New Haven: Yale UP.
- Shaw, I., 2000. *The Oxford History of Ancient Egypt*. New York: Oxford UP.
- Simpson, W.K.S., 2003. *An Anthology of Stories, Instructions, Stelae, Autobiographies, and Poetry*, Third Edition. New Haven: Yale UP.
- Singer, I., 1999. A political history of Ugarit, in *Handbook of Ugaritic Studies*, ed. W.G.E. Watson and N. Wyatt. Leiden: Brill, 603–733.
- Soukiassian, G., 1997. A governors' palace at 'Ayn Asil, Dakhla Oasis. *Egyptian Archaeology* 11, 15–17.
- Spalinger, A., 2013. The organisation of the pharaonic army (Old to New Kingdom), in *Ancient Egyptian Administration*, ed. J.C. Moreno García. Boston: Brill, 393–478.
- Stadelmann, R., 1998. Royal tombs from the Age of the Pyramids, in *Egypt: The World of the Pharaohs*, ed. R. Schulz & M. Seidel. Köln: Könemann, 47–77.
- Strudwick, N., 1985. *The Administration of Egypt in the Old Kingdom: The Highest Titles and their Holders*. Boston: KPI.
- Strudwick, N., 2005. *Texts from the Pyramid Age*. Atlanta: Society of Biblical Literature.
- Taleb, N.N., 2012. *Antifragile: Things That Gain from Disorder*. New York: Random House.
- Tallet, P., 2017. *Les papyrus de la mer Rouge, vol. I: Le “journal de Merer” (papyrus Jarf A et B)*. Cairo: Institut français d'archéologie.
- Tavares, A., 2011. Village, town and barracks: a fourth dynasty settlement at Heit el-Ghurab, Giza, in *Old Kingdom, New Perspectives: Egyptian Art and Archaeology 2750–2150 BC*, eds. N. Strudwick and H. Strudwick. Oxford: Oxbow Books, 270–77.
- Tuchman, B.W., 1978. *A Distant Mirror. The Calamitous 14th Century*. New York: Ballantine Books.
- Turner, P.J., 2013. *Seth – A Misrepresented God in the Ancient Egyptian Pantheon? British Archaeological Report International Series 2473*. Oxford: Archaeopress.
- Vandier, J., 1936. *La famine dans l'Égypte Ancienne*. Cairo: Institut Français d'Archéologie Orientale du Caire.
- van Wetering, J., 2012. Relocating De Morgan's Royal Tomb at Naqada and Identifying Its Occupant, in *Prehistory of Northern Africa. New Ideas and Discoveries*, ed. J. Kabaciński et al. Poznań: Muzeum Archeologiczne w Poznaniu, 91–124.
- Velde, H. te, 1967. *Seth, God of Confusion. A Study of His Role in Egyptian Mythology and Religion*. Leiden: E.J. Brill.
- Ward, W.A., 1963. Egypt and the East Mediterranean from Predynastic times to the end of the Old Kingdom. *Journal of the Economic and Social History of the Orient* 6(1), 1–57.
- Welch, F., and L. Marks, 2014. Climate change at the end of the Old Kingdom in Egypt around 4200 BP: New geoarchaeological evidence. *Quaternary International* 324, 124–33.
- Wilkinson, T.A.H., 1999. *Early Dynastic Egypt*. New York: Routledge.
- Wilkinson, T.A.H., 2000. *Royal Annals of Ancient Egypt: The Palermo Stone and its Associated Fragments*. New York: Kegan Paul International.

## Notes

- 1 All dates for the pharaonic period are taken from the chronological chart in Hornung, Krauss, & Warburton 2006, 490–3.
- 2 These annals may have omitted the reigns of three poorly attested kings, including that of Sened, whose funerary cult at Saqqara was serviced in the Fourth Dynasty by the same priest who also served Peribsen's cult (Grdseloff 1944, 294; Wilkinson 2000, 203).
- 3 The suggestion that Khasekhemwy may have built a mortuary monument for himself under what would become the Western Massif in Netjerikhet's Step Pyramid (Stadelmann 1998, 53) or else constructed a funerary enclosure at Saqqara (Mathieson, Bettles, Clarke et al. 1997, 53) remains unsubstantiated and is perhaps

doubtful (Reader 2017, 80–2). Given that the king was certainly buried at Abydos, it is unlikely that he would have been the sole Early Dynastic king to provide himself with two tombs, though the notion that the Gisir el-Mudir was intended to serve as a heb sed court or as an arena to celebrate his reunification of the country is intriguing (Regulski 2009, 227–8).

4 The fact that Taleb’s area of expertise lies in modern finance rather than ancient Egypt is apparent from his characterization of the pharaonic nation-state as ephemeral (Taleb 2014, 96).

5 The exception to this rule is Karl Jansen-Winkel (2010, 233–9), who argues that the Old Kingdom fell due to

an outside invasion. Given the difficulties organized empires such as the Assyrians, Neo-Babylonians, and the Persians faced in their own efforts to penetrate the Delta with camels and warships, any organized invasion should be ruled out. That Egypt received numerous unwanted refugees in a time of drought, however, is quite likely.

6 As the Egyptians would put it, ‘the desert is throughout the land’ (Ipuwer 3.1; trans. Enmarch 2008, 223).

7 Ipuwer’s observation is perhaps pertinent: ‘O, yet the many dead are buried in the river; the flood is a grave, while the tomb had become a flood’ (Ipuwer 2.6–7, trans. Enmarch 2008, 222).