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Los Angeles

The Economy of Human Resilience:
Exploring Economic Growth During Periods of Political Fragmentation
in Ancient Egypt

A dissertation submitted in partial satisfaction
of the requirements for the degree Doctor
of Philosophy in Archaeology

by

Vera Rondano

2021

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2021

ABSTRACT OF THE DISSERTATION

The Economy of Human Resilience:
Exploring Economic Growth During Periods of Political Fragmentation
in Ancient Egypt

by

Vera Rondano

Doctor of Philosophy in Archaeology

University of California, Los Angeles, 2021

Professor Kathlyn M. Cooney, Chair

This dissertation explores the ways in which an ancient society could improve its economic performance after a time of collapse and political fragmentation, taking the transitional period between the Third Intermediate Period (1070-713 BC) and the Late Period (712-332 BC) in Egypt as a case-study. New Institutional Economics provides the broader theoretical foundations for this study, introducing the idea that the habitual aspects (institutions) of a society can have a profound impact on economic performance. I argue that in Late Period Egypt institutional retention enabled resilience and maintained social cohesion after the collapse of the superstructure embodied in the figure of the king at the end of the New Kingdom (1550-1070 BC). Within this broader framework, the theoretical discourse on craft specialization has informed my exploration of the modes of production of selected types of funerary artifacts and bureaucratic documents through an assessment of standardization and modularity performed with the aid of RStudio data analysis software. This part of my study

has led me to the conclusion that the production of funerary artifacts and bureaucratic documents became more efficient at the end of the Third Intermediate Period, with a shift to the dynamics of producer specialization and organized division of labor. An assessment of the same artifacts through the lens of value theory and complexity theory shows that increased efficiency in the funerary industry and bureaucratic apparatus could be attributed to increased demand generated by expanding elite circles. Lack of correlation between the labor and resources invested in the production of coffins and the titles of the people who were buried in them suggests that political affiliation no longer granted exclusive access to funerary commodities. Likewise, ample use of filiations and the overall detail-oriented layout of documents of private transactions in the Late Period reveals the involvement of third parties in the enforcement of private transactions and the expansion of economic activities on a super-local level. My research shows that more specialized bureaucrats and artisans joined the workforce during the Late Period because more people were engaging in economic enterprises and had acquired enough wealth to afford their own funerary equipment.

Five spreadsheets have been uploaded as supporting materials: the first is a dataset of coffins of the 25th and 26th Dynasties (referred to as Spreadsheet A); the second dataset illustrates the frequency of polychromy in texts on coffins belonging to coffin sets of the 21st Dynasty assessed by Kathlyn M. Cooney (referred to as Spreadsheet B); the third is a dataset of mummy nets of the Late Period (referred to as Spreadsheet C); the fourth is a dataset of Ptah-Sokar-Osiris figures of the Late Period (referred to as Spreadsheet D); the fifth is a dataset of documents recording private transactions from the New Kingdom and the Late Period (referred to as Spreadsheet E). All the variables in each spreadsheet are explained in the relevant chapters and the variables in Spreadsheets A, C, D and E have been used to produce the visualizations presented in this dissertation.

The dissertation of Vera Rondano is approved.

John K. Papadopoulos

William R. Summerhill

Willemina Z. Wendrich

Kathlyn M. Cooney, Committee Chair

University of California, Los Angeles

2021

For Joan Benevelli Bartlett and David Bartlett, my surrogate parents.

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Publications

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Podium and Poster Presentations

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Cologne/Bonn, Germany. May 2018.

Introduction

My research project addresses a number of assumptions and contradictions that currently inform scholarship in the fields of Ancient History and Egyptology, and reconciles ideas of economic development, political fragmentation, and "artistic decline." Few Egyptologists and art historians consider Egypt in the first millennium BC to have been a prosperous land. The beginning of the Iron Age coincides with the Third Intermediate Period in Egypt and the Dark Ages in Greece, which were characterized by a societal collapse, during which the renegotiation of ideology went hand in hand with economic crisis (Kitchen 2004; Taylor 2003a; Broekman *et al.* 2009; Ritner 2009a). However, while the Dark Ages in Greece were setting the scene for the rise of the Greek poleis, I argue that the Third Intermediate Period in Egypt paved the way for social transformation and economic growth. Collapse gave way to resilience, which took different forms that are reflected in the extant archaeological record.

The first millennium BC in Egypt witnessed drastic changes in funerary practices. Funerary spaces became smaller and the burial equipment became simpler in design and limited in the number of artifacts it included (Aston 2009). Egyptologists have generally attributed these developments in funerary art to changes in religion (Taylor 2010b); by contrast, anthropologists have long suggested that changes in funerary practices may be driven by social and economic factors (Metcalf 1981). Traditional approaches associate the elaborate funerary art of the New Kingdom (ca. 1550-1070 BC) and Third Intermediate Period (ca. 1070-664 BC) with high social inequality and concentration of wealth, whereas the less visually appealing work of the Late Period is loosely taken as a sign of societal decline (Myśliwiec 2000: xiv; Otto 1951). I argue that the "artistic decline" of the Late Period marks a decrease in social inequality, increased social mobility, broader distribution of wealth and overall increased production.

Countervailing claims have been made by historians of the economy of the first millennium BC, who have noted an exponential increase in production and consumption throughout the Mediterranean basin (Neal 2007: 8-10; Bresson 2013: 49; Manning 2018: 216-17). These increases have been interpreted as signs of economic growth. But how can there be artistic decline and political instability during a period of economic growth? I argue that the sociopolitical and socioeconomic collapse at the beginning of the Iron Age unleashed the resilient cultural aspects of Mediterranean societies, which led to growth. In Egypt, these aspects of cultural resilience enabled a renegotiation of old values, which used to be defined by a centralized, hierarchical political system, in which status and access to resources relied on political affiliation. In the first half of the first millennium BC, societal values shifted towards personal wealth, individual agency and family lineage, and the depersonalization of economic activities permanently changed the power dynamics of local networks of patronage. My assessment of the material culture and documentary evidence from this period conveys the idea of a highly dynamic society, in which personal wealth was more important than political affiliation, and the fragmentation in the political sphere provided the conditions for social mobility and economic growth. Furthermore, I argue that the renegotiation of societal values triggered a domino effect which altered aesthetic values. Therefore, the "less appealing" funerary art of the Late Period was the expression of a highly efficient funerary industry, which reduced the number of highly elaborate artifacts in favor of prioritizing output.

More broadly, this dissertation aims to contribute to the narrative recently proposed by Scheidel (2018), who has found a correlation between societal collapse and temporary reduction of economic inequality. Scheidel uses this narrative to suggest that our goal of permanently reducing economic inequality may be unrealistic, given that only traumatic historical events seem to have the ability to reduce inequality significantly. Taking his

argument further, Scheidel argues that each traumatic event inevitably triggers societal resilience, whereby people strive to make things better for themselves, which in turn brings growth and, in the long run, broadens the gap between the poor and the rich.¹ I suggest that, perhaps, our concern with inequality might reflect the perspectives of modern western societies, and that these concern may divert our attention from the overall positive effect that societal collapse can have on the economy by enabling long-term economic growth.

Thus, analysis of archaeological material and texts from Egypt using a socio-economic perspective can shed new light on the interpretation of Late Period funerary art. A socio-economic perspective can alter the way scholars and modern audiences perceive historical cycles and societal decline by examining developments in terms of societal transformation through the positive lens of cultural and political resilience (Faulseit 2016). During such periods, what may seem like artistic decline can be a manifestation of complex processes in which reorganization goes hand in hand with a renegotiation of the value of artifacts (Appadurai 1986; Graeber 2001; Papadopoulos and Urton 2012). Since funerary artifacts constitute the most abundant archaeological evidence from Egypt, looking at change in them during this period will help to better inform our interpretation of the socio-economic system that produced them. My research investigates the social changes behind the revaluation process of Egyptian funerary art during the first half of the first millennium BC. By looking at coffins, funerary objects and bureaucratic texts from a perspective that goes beyond the traditional disciplinary boundaries of Art History, History, Archaeology and Philology, this dissertation aims to assess and discuss economic growth in a more holistic manner than has been attempted so far.

¹ As Scheidel puts it, "there is hardly any credible scenario in which economic growth will fail to cause absolute inequality to rise" (2018: 22).

In Chapter 1, I discuss the inadequacy of the court-led narratives and notions of political fragmentation and decentralization in the Third Intermediate Period and the Late Period and integrate them with decentralized perspectives on social mobility and private enterprise. By combining these two approaches, I allow for the agency of the individual communities to improve economic performance during a time of political fragmentation and introduction of new agents following the Kushite invasion of Egypt. I consider the ways in which what we know about funerary practices of the 25th and 26th Dynasties is the manifestation of a dichotomy between the elites and the royal power, with the king no longer the guarantor of individual socioeconomic status. Finally, I explain the ways in which traditional conceptualizations of Egyptian bureaucracy cannot be applied to the Late Period. I argue that changes in bureaucratic practices between the New Kingdom and the 25th and 26th Dynasties were manifestations of the dissolution of local bonds of patronage, and that this suggests that bureaucracy is no longer just tied to mechanisms of state administration and collection of revenues.

In Chapter 2, I use resilience theory as the interpretative framework to understand the social dynamics of Late Period Egypt after the collapse of the royal power at the end of the New Kingdom. I suggest that collapse of old institutions turned into an opportunity for innovation and economic growth, and that collapse of the old societal structure based on a rigid hierarchical system generated social mobility. I suggest that institutional change can be detected in the extant archaeological record of the Late Period through the lens of value theory. I explore the ways in which information about social mobility and connectivity can be extracted from the funerary artifacts and documents of the Late Period through the theoretical discourse of the *chaîne opératoire* and communities of practice. Lastly, I explore the ways in which economic performance in pre-monetary societies can be assessed in a precise manner by exploring patterns of efficiency in the modes of production. I argue that social mobility

combined with connectivity among communities of artisans at the beginning of the Late Period made funerary commodities more accessible and improved economic performance.

In Chapter 3, I argue that patterns of continuity in funerary practices of the New Kingdom, the Third Intermediate Period, and the 25th and 26th Dynasties are manifestations of long-term cultural resilience. Within this framework of continuity, changes in the modes of production reveal institutional changes that created opportunities to improve economic performance by reducing social inequality. My assessment of inner coffins in particular suggests that at the dawn of the Late Period people gave up control over the production of at least part of their funerary equipment and delegated it to professionals who would decorate the inner coffin after the commissioner's death. I also propose that the lids and cases of inner coffins might have been built in a standardized fashion, without having the final product in mind, and were then decorated after being assigned to a particular individual. I conclude that coffins of the 25th and 26th Dynasties reveal highly coordinated specialized activity of professionals working in the funerary industry, which resulted in its depersonalization. This made the production of coffins more efficient and accessible to a broader audience, potentially including emerging new elites.

In Chapter 4, I consider specific aspects of the modes of production of mummy nets and Ptah-Sokar-Osiris statues and reconstruct more specific dynamics of the funerary industry at the beginning of the Late Period. My assessment explores the social dynamics of production through a detailed assessment of the level of specialization and coordination of the communities of artisans by whom the artifacts were assembled and decorated. I combine the story told by the archaeological material with information gathered from the extant documentary evidence produced by the professionals working for the funerary industry. I suggest that high levels of efficiency in the modes of production and potential recommodification of small funerary objects was a response to a growing demand for

funerary objects. This implies that a broader segment of the population had access to funerary objects compared with earlier periods. Increased demand and connectivity among artisans are a manifestation of resilience in the funerary industry at a time when demand for funerary goods no longer relied on a strong centralized power, but on temple organizations which generated trust among old and new elites.

In Chapter 5, I argue that the recession of the centralized royal power enabled the transition from a village-based economy to a more interconnected system, which created demand for more preventive bureaucratic practices and more frequent interventions of third parties. Through an assessment of literacy levels and uniformity of scribal practices, I propose that the beginning of the Late Period saw the creation of a class of specialized bureaucrats, whose literary competence was limited to documents of private transactions. My assessment also suggests that documents of the Late Period show signs of depersonalization of bonds of patronage. This implies that bureaucratic documents became instruments that facilitated the involvement of third parties external to local communities as enforcement agents. I argue that the longevity and efficacy of this system relied in the advantages it bore to both state organizations and private individuals. Bureaucracy at the dawn of the Late Period manifested resilience by providing structure to private enterprise during a time of political fragmentation.

1. Critical overview of the current narratives

1.1 Introduction

In this dissertation I argue that high efficiency in the modes of production of funerary objects during the 25th and 26th Dynasties suggests high levels of productivity, lower social inequality and economic growth. Although this period of Egyptian history was characterized by political fragmentation, growth was driven by a phenomenon of cultural resilience among communities, which enabled an expansion of elite circles in a society where court affiliation was no longer the only way to acquire status and wealth. The terms "organizational" and "corporate" is used to express a phenomenon that was not driven by the royal authority, but which originated from the elites who acquired more agency and found new ways of expressing their identities. I explore how the extant evidence shows that the sociopolitical crisis at the end of the New Kingdom caused loss of trust in the royal power and the emergence of multiple independent organizations that were previously dependent on that central power. These dynamics enhanced social mobility and created new opportunities for private enterprise. This narrative is largely based on a perspective of societal resilience and economic growth measured against a collapse and fragmentation of the political superstructure.

In this chapter, I offer a critical assessment of the current narratives about Late Period Egyptian society based on the work of other scholars. In the first three sections, I discuss the inadequacy of the palace-led narratives and notions of political fragmentation and decentralization in the Third Intermediate Period and the Late Period and integrate them with corporate perspectives on social mobility and private enterprise. By combining these two approaches, I allow for the agency of the individual communities to improve economic performance during a time of political fragmentation. In the following section, I consider the ways in which what we know about funerary practices of the 25th and 26th Dynasties is the

manifestation of a dichotomy between the elites and royal power, with the king no longer the guarantor of individual socioeconomic status. In the last section, I explain why the traditional New Kingdom conceptualizations of Egyptian bureaucracy should not be applied to the Late Period. I argue that changes in bureaucratic practices between the New Kingdom and the 25th and 26th Dynasties were manifestations of the dissolution of local bonds of patronage, and that this suggests that bureaucracy was no longer just tied to mechanisms of state administration and collection of revenues.

1.2 Egypt at the beginning of the first millennium BC: court vs corporate approach

Current narratives describing Egyptian society during the transition between the Third Intermediate Period and the Late Period are based on highly selective and biased approaches to the available material. These approaches largely rely on a centralized perspective, with little or no discussion of theoretical underpinnings and limited integration of evidence from non-royal contexts, assuming much more authoritarian power than was actually evidenced (O'Connor 1983; Lloyd 1983; Fazzini 1988; Morkot 2000; Myśliwiec 2000; Taylor 2003a; Kitchen 2004; Pope 2014; Payraudeau 2020).² The lack of explicit theoretical approaches has led scholars to focus on the aesthetic appeal of monumental architecture instead of parsing out Late Period power structures.³ The wealth of monumental

² The most recent publication by Payraudeau discusses at length issues of chronology and developments of the political superstructure of the 25th and 26th Dynasties (2020:167-226), but only presents a brief survey of broader societal patterns based on limited (mainly prosopographical) evidence from non-royal contexts, the interpretation of which relies on outdated concepts of acculturation (2020: 405-420).

³ Publications discussing the *modus operandi* of Kushite kings in the 25th Dynasty only focus on the archaeological material bearing royal names and limited documentary evidence (Dallibor 2005; Priese 1970; Török 1995:29-52; Gozzoli 2006; Assmann 2002:312-334). This approach naturally favors monumental art that provides only a partial view of the much more nuanced social landscape of the period. Evidence from non-royal

evidence has led scholars to either ignore other types of evidence, or dismiss the "lower quality" of craftsmanship displayed by artifacts from non-royal tombs, as well as archaizing tendencies in statuary as signs of societal decline and economic weakness (Myśliwiec 2000: xiv; Otto 1951). But evidence from non-royal contexts has already shown the development of a rich and innovative artistic production in bronze statuary (Hill 2008). Modern scholars have bought into the illusion of a strong centralized power, which the royal monuments were designed to promote, overlooking the fact that a contextual assessment of the extant evidence tells a rather different story of broadly distributed corporate power often wholly separate from the royal court.

Looking at the evidence from a different perspective, I suggest that monumental architecture and rich royal burials were designed to create the illusion of a stable, centralized government, and that the artistic decline seen on funerary objects of private individuals, in fact, could be an indicator of greater efficiency in the funerary industry, which needed to

contexts is often treated separately, and given interpretations that clash with the evidence from royal context. These discrepancies have never been accounted for and the narratives have never been reconciled. For example, based on an assessment of the monumental evidence from Lower Egyptian sites, Pope (2014:257-258) convincingly argues that the influence of the Kushite kings was well-established in Upper Egypt, but was limited to the Memphite area in Lower Egypt, where the royal residence and the administrative capital were located. Meanwhile, Taylor (2003a: 104) has suggested that innovations in non-royal funerary practices were introduced extensively in Lower Egypt and from there spread into Upper Egypt. Since trends in funerary practices of the elites were traditionally connected to the sphere of influence of the king, I suggest that the inconsistencies between the evidence from royal and non-royal contexts reflect a shift in society. This implies that the Kushite kings had less influence on the elites than their majestic monuments led us to believe and that the elites of Upper and Lower Egypt were more independent and mobile than the royal propaganda implied. This also implies that the non-native Kushite rule was less centralized than its Egyptian counterpart of the New Kingdom.

keep up with an expanding market for funerary commodities. More players in the social system meant more purchasing of funerary goods. Higher demand indicates greater the expansion of the social groups with disposable income for display, able to purchase their own funerary equipment (Chapters 2 and 3).

Similarly, from a centralized perspective, uniformity of bureaucratic practices and the widespread use of dates that included the name of the current king in documents can be interpreted as the manifestation of the far-reaching power of royal authority starting from the 25th Dynasty. But this approach overlooks the facts that most of the documents dated to the 25th and the 26th Dynasties are records of activities involving private individuals such as tax-payments, legal proceedings, private transactions, and that the scribes of Upper and Lower Egypt kept using different scripts until the reign of Amasis in the 26th Dynasty (Martin 2007). Therefore, from an organizational perspective, this evidence implies that a coordinated bureaucratic system began to develop independently from the central administration in order to meet the demand for enforcement of private transactions in a context of political fragmentation and competing patrons, in which individuals needed to secure legal protection for their economic activities. This system was supported by the royal authority and later absorbed by the central administration through the systematization of bureaucratic practices that protected private enterprise, all of which took nearly two centuries to be achieved (Chapter 5). This suggests that the kings of the 25th and 26th Dynasties were not in control of the elites, nor did they set the trends in funerary and bureaucratic practices.

1.3 A court-led perspective: the illusion of political centralization

The biases of court-led narratives are reflected in our current periodization of Egyptian history. There are currently two types of court-led, authoritarian narratives, both of which provide only a partial view of the social dynamics at the end of the Third Intermediate Period,

leaving out important pieces of the story told by all the extant evidence. Some scholars place the 25th Dynasty in the Late Period (712-332 BC) because of the apparent clarity of a single ruler and the evidence of monumental royal architecture and sculpture (Bothmer 1960; Russmann 1973: 33; Grimal 1997). This idea is confirmed by evidence from the library of Ashurbanipal in Assyria, where the 25th Dynasty was acknowledged as a period during which Egypt was under the control of Kushite rulers. The Annals of Sargon II and Prism A, both of which narrate events that are contemporary with the beginning of the 25th Dynasty in Egypt, also refer to Egypt at the end of the eighth century BC as belonging to Kush (Mumford 2007: 146). Therefore, one could argue that a strong, centralized power in Egypt seems to have been perceived and acknowledged by foreign rulers in the eighth century BC. This view is confirmed by the monumental architecture and royal statuary that reemerge at this time, especially in Upper Egypt (Leclant 1965). In fact, the imperial ruling strategy of the Kushite kings fundamentally changed the way in which Egypt was perceived by non-Egyptians during the Late Period.

Considering more evidence from ancient Egypt, the evidence from Assyria and the monumental enterprises undertaken by the Kushites in Egypt can be interpreted very differently. According to the second court-led narrative, the perception of this centralized Kushite authority as "non-Egyptian" could have been perceived as a delegitimizing factor. The fact that Manetho's king list qualifies the Kushite rulers as non-Egyptians (i.e. "Ethiopians") suggests an Egyptian bias against Kushites specifically, given that the Libyan origins of earlier dynasties of the Third Intermediate Period, as well as of the 26th Dynasty rulers were not considered noteworthy.⁴ This bias did not seem to extend to Assyrians either,

⁴ Manetho's *Aegyptiaca* is the only extant list of rulers that covers the Late Period. As a priest, he likely had access to temple archives, which provided a vast array of sources from different periods of Egyptian history and informed his reconstruction of the history of kingship of Ancient Egypt (Van De Mieroop 2011: 16).

given the strong connection between the Saite rulers and the Levant.⁵ Influenced by this ancient attitude, most scholars maintain that the Kushites who invaded Egypt and founded the 25th Dynasty were, in fact, a subgroup of the Third Intermediate Period (1070-713 BC). According to traditional Egyptologists, this Kushite subgroup behaved in ways similar to other factions that had emerged at the end of the New Kingdom and never outweighed their rivals, since the same factions reemerged later during the Assyrian invasion (Fazzini 1988: 3). On the other hand, the Kushite dynasty could also be interpreted as an imperial dynasty that exerted diffuse, instead of centralized power. The traditional perspective would suggest that the royal monumental architecture and statuary of the 25th Dynasty in Egypt was part of a visual narrative designed to create the illusion of a strong central power, while, in fact, it could have been the manifestation of a new way of ruling over a vast territory. From this latter perspective, therefore, the monumental enterprises undertaken by the Kushite Dynasty could be compared to the efforts made by other formally acknowledged imperial powers in the lands they conquered.

I argue that the society of the Third Intermediate Period found means to guarantee its own stability in different ways compared to the society of the 25th and 26th Dynasties, without having to rely on the stability of the central power. Although the 25th and 26th Dynasties have often been assessed separately as part of the Third Intermediate Period and the Late Period respectively, the fragmentation of the political superstructure derived from the second court-led view has recently led scholars to consider the two dynasties together as part of the Third Intermediate Period (Hill 2014). By identifying the 25th and 26th Dynasties as transitional phases, however, scholars have not considered the ways in which Kushite kings have successfully claimed Egypt on an ideological basis, an achievement that was going to remain

⁵ Necho I was one of the vassals who supported Assyrian dominion in Egypt, and his son Psamtek was raised in Assyria (Taylor 2003a: 353).

unparalleled in the following invasions of Egypt. Moreover, scholars have not considered a society's capacity to transform and adapt to new circumstances, including decentralized, imperial forms of rule that encompassed the territory spanning from Kush to the Delta of the Nile. The scholarly debate has not acknowledged the possibility that political fragmentation may have become the new reality for Egyptian society because it was more competitive in the new Iron Age reality of quick-moving imperial armies, a reality that would extend beyond the period considered in this dissertation. All scholars agree that the end of the New Kingdom and the beginning of the Third Intermediate Period did mark a moment of collapse of the political and ideological superstructure based on a centralized government. I suggest that this collapse gave way to a process of transformation, which led to a fragmentation and decentralization of the political superstructure. Before the 25th Dynasty, for example, provincial governors of the late ninth and eighth centuries BC had already embraced the idea of a decentralized state by having their names inscribed in royal cartouches on monumental inscriptions (Taylor 2003a: 325; Jansen-Winkel 2000: 7). Therefore, while at the end of the New Kingdom political fragmentation created instability, arguably already after the 21st Dynasty fragmentation had begun to be embraced as a structural characteristic of Egyptian society. Fragmentation and decentralization had become the *status quo* by the 25th Dynasty—different from Dynasties 21-24, now more imperially centralized, but its power more broadly distributed nonetheless.

The conservatism of some modern scholars prevents them from seeing beyond the archaizing ideological façade created by the Kushite rulers as a way of negotiating their imperial power at local level. This conservatism reflects the narrative inspired by Egyptian rulers until the New Kingdom and projected onto later periods. Thus, scholars like Ritner (2009b: 339-340) and Yoyotte (1961:130) have regarded the Kushite rule as a failed attempt at restoring the centralized state in which most social activities, including the economy,

revolved around the figure of the king—even though such a reality would have been impossible for imperial kings ruling from Gebel Barkal. Kushite rulers were clearly inspired by older narratives, which they reinterpreted in eclectic and opportunistic manners (Taylor 2003a: 351-352). These archaizing tendencies could be interpreted as misleading, given the political fragmentation and decentralization that began to emerge in Egyptian society at the end of the first millennium BC. The sculpture and monumental architecture of the kings of the 25th and 26th Dynasties conveyed an image of unity and stability and stood as visual reminders of the time when Egypt was first united in the Old Kingdom (Kahl 2010). These attempts by the Kushites to legitimize their power over a reunited Egypt are also visible outside of Egypt, where objects bearing the names of Kushite and Saite rulers have been retrieved.⁶ The discrepancy between the image promoted by royal propaganda and the reality of political fragmentation and decentralization is easily explained if one considers the extent of the territory the Kushites were controlling. Pope (2014) has convincingly argued that the only way for the Kushite kings to keep control of a territory spanning for over 3000 km, from the savannah and across the Sahel up to the Delta of the Nile, was delegating power to local vassals.

Only recently have scholars begun to acknowledge the possibility that political fragmentation may have become the new reality for Egyptian society. During the 25th and 26th Dynasties, it

⁶ The name of the first ruler of the 25th Dynasty Piankhy seems to be unattested outside of Egypt. However, the number of objects bearing the name of other kings of the 25th and 26th Dynasties that have been retrieved from sites in the Levant exceeds the number of objects bearing names of kings of the New Kingdom (Mumford 2007: 178). Most recently, Hill and Seymour (forthcoming) have engaged in reconstructing the history of an unprovenanced artifact recently acquired by the Metropolitan Museum of Art (MMA 2019.259), which appears to have been produced in the Levant and displays Necho's name written in hieroglyphic script. This object embodies the close interaction between the two cultures.

could be argued, the royal power became disconnected from the rest of Egyptian society, as people of Egypt had to negotiate their position within a network of competing patrons. Despite their attempts to convey an image of a strong united land, the number of foreign attacks that targeted Egypt during the 25th and 26th Dynasties and Egypt's failure to regain control over foreign territories reveal not only its vulnerability, but the need to rely on organizations external to the court. This need can be detected in texts of royal stelae. While kings of the New Kingdom were immortalizing their prowess in battle against foreign enemies on monumental stelae and in an extensive body of literature (Spalinger 2005; Darnell and Manassa 2007), kings of the Late Period emphasized their deference to Egyptian deities through sacrificial offerings in temples and other expressions of personal devotion.⁷ I suggest that the focus on religious activities on royal stelae of the 25th and 26th Dynasties is a reflection of the internal negotiation between temple organizations and royal authority and a manifestation of the absence of a traditional centralized government.⁸ In particular, recent

⁷ According to Piankhy's victory stela (Cairo Museum 48862), instead of fighting his way through Egypt, Piankhy used his army to intimidate each settlement into submission while making lavish offerings to the local temples (Mariette 1872-1889; translated by Lichtheim 1980: 66-84). In his victory stela at Kalabsha the 26th Dynasty ruler Psamtek II had to interrupt his pious activity of "roaming the marshes" of the lake Neferibre to put down a rebellion in Kush (Bakry 1967; translated by Lichtheim 1980: 84-89). Depauw and Smith (2004: 89) and Jasnow and Smith (2010-2011: 38) have convincingly argued that the phrase "roaming the marshes" identified promiscuous sexual activities in connection with religious rituals specifically related to the Wandering Goddess.

⁸ The power struggle between temples and royal authority shaped Egyptian politics since the New Kingdom, after the female ruler Hatshepsut promoted the cult of Amun to legitimize her rule (Warburton 2011). Since then, the popularity of the cult of Amun grew among the broader population of the Theban area and reached its apex in the Third Intermediate Period, when the Amun priesthood *de facto* acquired control over the Theban area. This marked the decline of Egypt's influence in the international sphere. The fact that kings of the 22nd

scholarly work has shown that corporate and increasingly self-funded temples of the 25th and 26th Dynasties had acquired control over a large segment of the Egyptian economy which also involved semi-local monopolies over the funerary industry, which was tied to the ownership of land estates as well as the importation of expensive raw materials.⁹

The multicultural landscape of Egyptian society at the beginning of the Late Period was in stark contrast with the apparent conservatism in the political sphere. During the Late Period Egyptian, Greek, Kushite and Semitic cultures interacted in ways that current scholarship is just beginning to explore (see § 1.4). Despite the presence of multiple languages and cultures, the extant documentary evidence shows that private bureaucracy and internal official administration were still carried out in the Egyptian language (Chapter 5). Although evidence of interactions between Egypt and the Levant from this period is not as extensive as that from the Late Bronze Age (Mumford 2007: 141, n.2; Mumford 1998: 416-497), the presence of prestigious imported material in the archaeological record shows that

Dynasty were buried in the temple precinct at Tanis suggests that temple organizations may have become the main power players during the Third Intermediate Period (Taylor 2003a).

⁹ Chapter 4 explores the role of temple organizations in the funerary industry of the 25th and 26th Dynasties in more detail. The role of temples as production centers for subsistence goods (specifically meat, bread and beer) on a large scale during this period is currently being investigated by Klara Dietze in her doctoral dissertation at Leipzig University on the industrial precinct within the temenos of the temple of Heliopolis (working title: "Ein Wohn- und Werkstattbezirk des 7.-2. Jahrhunderts vor Christus am Umfassungswall Thutmosis' III. im Tempel von Heliopolis"), which has been recently excavated by the German and Egyptian mission. Klara Dietze generously showed me the plans of the site illustrating its development from the late-Ramesside/early-Third Intermediate Period through the Late Period and the Ptolemaic Period. The plans and the ash layers found in the areas of the bakeries of the industrial site show an intensification of the production activities during the Saite Period, followed by a decline in the Ptolemaic Period. This implies that the reputation of the Saite Period among traditional Egyptologists who look at it as a phase of decline is not supported by the archaeological evidence. Rather, the growth seen at the beginning of the Late Period seems to have been unprecedented.

trade routes were active and that multiple peoples were traveling to and from Egypt.¹⁰ Given the contradictory evidence, I suggest that the conservatism of the bureaucratic and political sphere was part of an attempt to create political stability in order to forge consensus and enable cooperation among the local elites.

1.4 Corporate perspective: the reality of social mobility

Despite the attempts made by the new rulers to manufacture consensus and political unity through monumental enterprises, the reality on the ground was quite different. The power gap created by the divide between the central royal power and religious organizations during the Third Intermediate Period caused ruptures in the hierarchical structure of society at both the state and local levels. The social mobility that emerged from these ruptures is hidden by the extant monuments of the 25th and 26th Dynasty, which continued to project the idea of a monolithic and authoritarian society, but it is revealed by the documentary material and the archaeological evidence preserved from non-royal funerary contexts. The latter type of evidence has been largely ignored by most scholars of political and narrative history, who instead have based their reconstructions of the history of this period on the extant monumental evidence and from a kingly perspective. In fact, non-royal funerary objects embody the transformation undergone by the communities of professionals operating the funerary industry of the 25th and 26th Dynasties. These objects show that the activities of these communities of people no longer relied on royal patronage, but rather on their affiliation with increasingly independent, self-funded, and privatized temple organizations

¹⁰ Agut-Labordère (2013: 994) discusses how the Saite kings actively engaged in the importation of wood from the Levant for the construction of their fleet. Further evidence from non-royal funerary contexts shows that trade routes would also have been open for the importation of raw materials used to produce commodities that were not destined for royal consumption or military enterprises (Chapter 3).

and other corporations. This implies that the beginning of the Late Period marked a transition from a strong centralized government to a system of competing patrons, for whom a king was often an excellent arbiter. According to the current narratives that prioritize royal authoritarian power, the 25th and 26th Dynasties can either be assessed independently as part of the Third Intermediate Period and the Late Period respectively or together as part of the Third Intermediate Period. I argue that the extant material culture from non-royal contexts requires scholars to treat the 25th and 26th Dynasties together as part of the Late Period—even though each dynasty’s ruling strategy was actually quite different—and that is because each dynasty now had to work with this broadly distributed and empowered Egyptian society.

Coffins reflect individuals in society, and that is where we will start. For example, Taylor’s typological study of the iconography of Late Period non-royal coffins does not identify clear differences between coffins of the 25th Dynasty and coffins of the 26th Dynasty (1989: 53-61; 2001b; 2003b). Rather, it clearly shows that the extant coffins dated to these two dynasties are impossible to tell apart and are considerably different than earlier and later examples. This suggests an attempt by the people of Egypt to differentiate their own identity from that of their ancestors. The 25th Dynasty also saw the introduction of new types of funerary objects, which remained part of the funerary equipment through the 26th Dynasty, and variations of them were retained through the Graeco-Roman Period. Therefore, the extant evidence from non-royal contexts suggests that the 25th Dynasty was a time of innovation whose influences are visible in the material record of later periods. This also suggests that there was cultural continuity between the 25th Dynasty and the rest of the Late Period—not because the 25th and 26th Dynasties were similar in makeup or structure, but because they both had to adapt to the same cosmopolitan and empowered, nascent middle class—and that the political power struggles which are at the core of current scholarly debates were probably removed from the reality of a highly integrated, multicultural society.

Given that the earlier history of Egypt was characterized by a strong centralized power, fragmentation and decentralization have been taken by scholars to be characteristics which are not quintessentially Egyptian. Scholars who tend to focus on such conservative views do not consider the possibility that the collapse of the royal power and ideology at the end of the New Kingdom could have led to the dismantling of the hierarchical structure of a society that was always very diverse. This diversity was hiding behind the monolithic imagery of New Kingdom rulers precisely because non-royal organizations had not yet become power players on the social landscape, but diversity came to the fore when the kings of the 25th and 26th Dynasties endorsed a decentralized government. This, in turn, favored the creation of a new social structure that enabled horizontal as well as vertical mobility. Upper Nubian presence in Egypt is attested since the Old Kingdom (Schneider 2010), and a Semitic component has been identified in Egyptian society since the 15th or 18th centuries BC. This interaction with the Egyptian language and script prompted the development of the Western Semitic alphabet (Goldwasser 1991; 2006; 2010; 2012). The cuneiform script and language used in the Amarna letters, for example, was a result of the close interaction between Egypt and the Levant that had started centuries before the Amarna period (Mandell 2015).

The 26th Dynasty was also characterized by interaction between Greeks and Egyptians in Lower Egypt. The earliest attestation of Greek settlers in Egypt dates to the reign of Psamtek I (664-610 BC) (Bresson 2000: 59). Amasis (570-526 BC) later gave Greek settlers rights as residents of the trading port of Naukratis (Bresson 2000: 22). The extent to which different ethnic groups were integrated is still a matter of debate, since most of the extant material from Lower Egyptian sites is still unpublished and reflects the biases of the archaeologists

who have studied it over the past two centuries.¹¹ For this reason, the Greek and Semitic components are less visible in the archaeological record from Upper Egypt, where most of the published archaeological evidence has been retrieved. Despite the long-term interactions with the Levant and Kush, specific expressions of non-Egyptian identities in Egypt became visible in funerary contexts only during the New Kingdom and in the first millennium BC (Schneider 2010: 154-155), probably because an empowered immigrant elite demanded its inclusion. This suggests that Egyptian society of the late second millennium and first millennium BC was becoming more dynamic and open to expressions of individual and cultural identity, probably as a consequence of the incipient political fragmentation and collapse of traditional royal ideology and a new patronage

¹¹ According to Herodotus (*Hist.* 2.178-179), Naukratis was the only trading port in Egypt in the Late Period. All trading ships from the Mediterranean had to enter Egypt through its harbor. The first excavation campaigns on this site were undertaken by Petrie (Petrie 1886; Gardner 1888) and by Hogarth (Hogarth, Edgar and Gutch 1899; Hogarth, Lorimer and Edgar 1905). However, our understanding of the site remains patchy and controversial for two reasons. First, the more than 17000 finds from the site are today scattered over more than 70 collections worldwide, the majority of which are unpublished and unstudied. Second, since Greek painted pottery constitutes 43 percent of the total finds from this site, the site has attracted the attention of classical archaeologists and historians, who have focused on the Greek component of the local community. A group of scholars affiliated with the British Museum is conducting a project that aims to reconstruct the archaeological context of Naukratis, explore the interaction among various ethnic groups at the site, and integrate the Greek evidence with the available Egyptian archaeological material (Thomas and Villing 2013; Villing and Thomas 2016; Villing 2019; Masson-Berghoff 2019). According to the most recent research, the infrastructure of the settlement had the capacity to host more than 13,000 people and was a “melting-pot” of the ancient world, including Hellenistic temple structures, as well as major temples dedicated to Egyptian deities. The other harbor city in Lower Egypt that has received a great deal of attention in recent years is Thonis Heracleion, which was one of the entry points connecting the Mediterranean to Naukratis further inland (Masson-Berghoff and Goddio 2016; Robinson and Goddio 2015).

system within privatized organizations alongside the king. At the same time, individuals also contributed to the creation of a system that emulated centralization in order to enable social cooperation.

Although traditional scholars see supply and demand in Egyptian society as driven by royal affiliation, the emergence of multiple competing patrons during the Third Intermediate Period marks a shift toward social dynamism and individual agency within the context of ever more powerful organizations. The former view is based on the extant evidence from the Old Kingdom and Middle Kingdom (Lesko 1994; Bianchi 1998; Kemp 2006: 181-182, 192, 317) and is supported by evidence of the activities of the workmen's village at Deir el-Medina in the New Kingdom.¹² This community of workmen in Upper Egypt was in charge of building royal tombs in the Valley of the Kings. As a side business, the artisans also produced funerary equipment for non-royal burials (Cooney 2007). The fact that this community was state-sponsored but that it apparently was producing many of the funerary assemblages of the elites indeed suggests that the demand for funerary commodities was driven by the central power. Therefore, it is reasonable to assume that its dismantling during the Third Intermediate Period disrupted the chain of supply and demand that had driven the funerary industry in earlier periods. Although it is improbable that the collapse of state-sponsored communities such as Deir el-Medina affected other communities in equal measure,

¹² Warburton (2007; 2016: 8) argues that all trade (including the trade of funerary commodities) followed market allocation in ancient Egypt since the New Kingdom. Kemp, however, suggests that Egypt during the New Kingdom had a mixed economy with market and non-market allocations (2006: 326-334). Indeed, the facts that only office-holders had their own tombs and that office-holders received their appointments from the king shows that the demand for funerary commodities was driven by royal ideology since the Old Kingdom (Carsten 2004). I argue that practices of market allocation started to be more common in the funerary industry already at the end of the New Kingdom, as the practice of recording private transactions became more widespread (Haring 2018: 146).

the people who left these communities during the Third Intermediate Period had to join other communities, thus triggering a domino effect of social reorganization.¹³ For example, most Egyptologists believe that the artisans from Deir el-Medina joined the community in Medinet Habu during the Third Intermediate Period (Davies 2018:1-3), thus implying that communities of artisans started to be absorbed by temple organizations already during the Third Intermediate Period.

The dissolution of local ties after the New Kingdom created the conditions for the dissolution of old social networks and power structures that had generated demand in earlier periods. This marks a shift away from the restrictions imposed by authoritarian centralization and royal ideology on private enterprise in the Middle Kingdom and New Kingdom, when position in society depended on affiliation with the king and display of one's connection thereto (Parkinson 1997: 235-245; Kemp 2006: 302; Baines 2007: 52). This implies that the king would allow a number of selected people to put their wealth at the service of the royal agenda by commissioning artifacts that were placed in tombs and temples and to perform that display according to prescribed, though largely unwritten rules (Baines 1987; Baines and Frood 2011). This only left space for expressions of individual agency among the highest elites with court affiliation to commission individualized and innovative pieces, such as the astronomical ceiling of Senenmut (Dorman 1991). The fact that the royal power generated most of the demand for valuable commodities limited private entrepreneurship before the Third Intermediate Period. The collapse of the hierarchical system generated by the power gap between king and temple after the end of the New Kingdom promoted individual agency, but only within the collective of the given organization, whether that be the High Priesthood of Amun, the army, or others. These new dynamics created new opportunities for private

¹³The relocation of the villagers has become a matter of debate (Haring 2018: 148).

economic enterprise and long-distance trade within newly empowered corporations (Moreno García 2016; Jursa and Moreno García 2015: 147-149).

Scholars tend to take for granted the rigidity of the hierarchical social structure conveyed by royal monuments until the New Kingdom and then apply it to all periods of Egyptian history. Evidence from non-royal contexts, however, can reveal high levels of social mobility. Moreno García (2014:1039) argues for the existence of a more fluid system throughout Egyptian history, one in which kings needed the support of powerful families in order to guarantee stability. The eligible families were probably in conflict with one another, however, making it impossible for the king to keep all parties content all the time. These internal conflicts seem to lie behind the sudden turnover of the elites in the New Kingdom (Shirley 2010; Shirley 2013: 570-606), because the whims of a leader could dissolve one great man's power. The dissolution of the authoritarian hierarchical superstructure after the New Kingdom created new opportunities for social mobility and private economic enterprise thanks to the expansion of existing corporate networks and the creation of new ones, ruled by different organizations.¹⁴ The Kushite invasion overturned the existing structure again by

¹⁴ O'Connor (1983: 191-194) divides the elites of the New Kingdom into three groups based on titles: mid-status, high-mid status and high status. On the basis of an assessment of burial equipment in non-royal tombs of the 18th Dynasty, Smith (1992) has shown that this division corresponded to different distribution of economic assets. This implies that in the New Kingdom wealth was correlated with royal affiliation. More recently, Agut-Labordère (2013: 1020-1027) has argued that the Saite period (the 26th Dynasty) saw the rise of a middle class of independent entrepreneurs. Based on the increase of demand for funerary goods at the beginning of the Late Period, I suggest that already in the 25th Dynasty wealth was no longer acquired through affiliation with the royal power and that there was an expansion of the elite circles at this time. This expansion does not seem to be a consequence of demographic growth, as the population estimates for the Late Period are the same as those of the Ramesside period (Baines 2007: 65). I connect this rise of a middle class to the social mobility generated by the collapse of the hierarchical system at the end of the New Kingdom.

creating (some) new elites and more competitors to the struggle for royal favor (Bierbrier 1975). But royal favor was known to only get one so far under these circumstances; the organizations were where the power resided. That the king was no longer the primary power player in Egyptian society after the New Kingdom, however, made royal favor less important. Members of the elites could now seek the support of other patrons, especially temple, military and craft organizations.

From a corporate perspective, therefore, the archaeological record from non-royal contexts shows that social competition after the New Kingdom no longer relied exclusively on royal support. Things were privatizing, so to speak. The academic debate about "personal piety" suggests that the focus of ideological discourse after the Amarna Period gradually shifted away from royal patronage, emphasizing instead the relationship between individuals and the gods they worshiped (Vernus 1979; Baines 1987, 1990; Assmann 2001, 2004; Dunand and Zivie-Coche 2002; Baines and Froot 2011). But this could indeed be a cipher for how social display worked in the context of corporate temple power. Moreover, the literature of this period conveys the idea of easier access to religious texts that had previously been hidden, again suggesting that individuals were working upon and within larger corporations in which information was systematized and bureaucratized, not within mercurial and authoritarian courts in which information was accessible only to a small circle of elected individuals.¹⁵ This implies that religious knowledge and affiliation to temple organizations

¹⁵ The stories of Setne and Khamwas (P. Cairo Museum 30646 and P. Cairo Museum 30692; Lichtheim 1980: 125-151) reveal the perception that people in Ptolemaic Egypt had of religion in earlier periods. For example, *Setne I* alludes to the idea that religious knowledge in the written form was largely inaccessible before the Ramesside period, as the book of magic written by the god Thoth himself is described as being closely guarded by scorpions and immortal serpents. This idea of inaccessibility of sacred knowledge is further conveyed by the fact that the prince Naneferkaptah and his family lost their lives for having come into possession of the book

was becoming less exclusive. Moreover, Payraudeau (2020: 406-407) suggests that the importance genealogies acquired during the Third Intermediate Period and up to the 25th Dynasty indicates an attempt to establish social standing on the basis of family lineage and role in society, rather than having it rely on bonds of patronage largely based on court affiliation—because tribal networks were now highly functional alongside and within corporations.¹⁶ Likewise, the scarcity of explicit references to bonds of patronage on funerary commodities of private individuals indicates that obtaining these commodities no longer required the support of a patron (see Chapter 3 and Chapter 4), but connections within an organization. This implies that social competition was based less on traditional bonds of patronage and more on family lineage, individual agency, and wealth.

I suggest that individual agency made private wealth and social access to certain organizations a key element of the expression of status. The fact that funerary commodities were produced in exchange for land donations to temple organizations suggests that obtaining funerary equipment no longer depended on royal patronage, but on personal wealth (see Chapter 4). Muhs (2016: 7-11) argues that temples of the Late Period acted as firms that mobilized skilled labor and developed a bureaucratic apparatus that protected private property rights in exchange for taxes by encouraging written documentation through temple

written by the god. In *Setne II*, which is set in the Ramesside period, Setne is allowed to access the netherworld while still alive and come back to the living despite being uninitiated to religious knowledge. During his journey, he discovers that the treatment people received in the netherworld tended to be inversely proportional to the offices they held during their lifetime. The narratives of *Setne I* and *Setne II*, therefore, seem to allude to a shift in the conceptualization of religious knowledge, which went from being exclusive in the New Kingdom to gradually becoming more inclusive in the Third Intermediate Period and Late Period.

¹⁶ In her discussion of titularies from the Middle Kingdom and New Kingdom, Kotháy (2013: 515-517) argues that titles including an institutional affiliation to the king or the temple were associated to the highest sociopolitical status.

notaries. In addition to the activity of temples as fiscal organizations, the widespread introduction of a bureaucratic apparatus depersonalized the enforcement of private transactions by making it less reliant on local bonds of patronage, otherwise stated, on the whims of one man's decision making. These changes mark a major shift in the bureaucratic system, the function of which went from being primarily corrective to including a preventive aspect, but which now demanded expected systems of follow-through, gradually becoming more popular after the New Kingdom.¹⁷ This implies that the bureaucratic apparatus adjusted to the increase in corporate power and its concomitant social mobility which protected private property and favored private enterprise. Personal and corporate wealth became the primary means of social competition. While in the New Kingdom wealth was generated through affiliation, in the Late Period affiliation was created through wealth.

1.5 Corporate perspective: funerary practices in Late Period Egypt

Since the religious beliefs at the core of funerary rituals seems to have remained unchanged for two millennia, I argue that changes in the materiality of funerary practices signaled changes in society.¹⁸ Funerary objects constitute the majority of the extant evidence from

¹⁷ Kemp (2006: 305-306) sees Egyptian bureaucracy until the New Kingdom as being essentially corrective when applied to private matters. In Kemp's view, ancient Egyptian bureaucracy was an instrument for the organization of labor and the redistribution of resources through food rations in large-scale projects commissioned by the state (2006: 163-192). According to Kemp, therefore, bureaucracy enabled state-run organizations to monitor the activity of the workforce and make sure that the laborers kept up with the state's demand. While this may have been the case until the New Kingdom, in Chapter 5 I argue that the Late Period saw a shift in the function and purpose of bureaucratic practices, which retained some of their earlier aspects while introducing new functions directed at safeguarding private property rights.

¹⁸ Taylor's overview of the practices related to the treatment of the body and the supplies for the afterlife from the Old Kingdom through the Graeco-Roman Period provides a survey of changes in the funerary practices

non-royal contexts. In all cultures, these objects embody religious beliefs and are used to negotiate individual identities within the community (Parker Pearson 1999). Since the Old Kingdom, Egyptian funerary objects emphasized the regenerative aspects of the Osirian cult, according to which the deceased joined the god Osiris in his journey through the underworld in order to achieve revivification (Smith 2017). These same beliefs permeated funerary practices through the 25th and 26th Dynasties (Aston 2009: 399; Taylor 2018: 355). At the same time, funerary objects in Ancient Egypt were also used to establish the status of tomb owners while they were still alive, with members of the elites making arrangements for their own funerary cult during their lifetime (Ikram 2003:189). The archaeological record shows that major social changes occurred during the transition between the New Kingdom and the Third Intermediate Period and between the Third Intermediate Period and the 25th Dynasty. These social changes are materialized in the funerary objects and spaces of the period. Purchasing scarce materials and displaying individualized funerary objects acquired different meaning within the more competitive context of Late Period society, in which agents had the options of joining different corporations, all of which could grant them a "perfect burial."

The prevailing social narratives built upon Egyptian funerary practices until the New Kingdom are based on a court-led approach. This approach is based on the wrong assumption that the social hierarchy of Egyptian society remained in effect in the netherworld, thus granting privileged access to the afterlife for those who occupied the top of the hierarchy during their lifetime. In his critique of the concept of "democratization of the afterlife," Smith (2017:94-104, 170-172) convincingly argues that the Egyptian afterlife was always more

across three millennia (2001). Taylor's mostly descriptive approach reflects the attitudes traditional Egyptologists have had towards ancient Egyptian funerary practices, whose changes are often implicitly or explicitly ascribed to non-specified changes in religious beliefs imposed from above, giving little space to their societal implications.

democratic than its earthly counterpart. In the same book, Smith also debunks the assumption that all funerary practices and beliefs from the Old Kingdom until the New Kingdom originated in the royal sphere and then trickled down into non-royal context. The royal power during the New Kingdom might have driven the demand for funerary commodities by controlling the people and facilities that produced these objects.¹⁹ The fact that access to these facilities may have relied upon royal support, however, does not imply that the king

¹⁹ Evidence shows that artisans who were sponsored by the state still engaged in the production of goods for private individuals on the side. Cooney (2007) has shown that artisans from Deir el-Medina were running their own business producing funerary objects for the elite families of the Theban area when they were not working on the royal tomb. Building on some of the extant textual evidence from non-royal context, Warburton (2007) suggests that funerary commodities were assigned to non-royal individuals through market allocations, without any involvement of the royal authorities. However, evidence from Deir el-Medina also shows that the supply of raw materials relied upon the central administration and was subjected to close scrutiny of the royal authorities, thus limiting the number of private commissions the artisans could take on. For example, O. Hermitage 2973, among others, shows that the provisioning of raw materials and paint used for the decoration of the tomb of Ramses IX was monitored through detailed reports (Kitchen 1983b: 659-660; Helck 2002: 506). More specifically, HO 69.1 states that paint which had been left over from the decoration of the tomb of Ramses VII was going to be employed for the decoration of the tomb of Ramses IX (Demarée 2002: 20; Helck 2002: 507). This suggests that the artisans were not allowed to use the leftover materials for their side-projects and had to procure their own resources through informal trade networks. Additionally, copper tools in Deir el-Medina were also closely monitored by the central administration (Haring 1997: 263-265; Gabler 2018: 369-373). In my opinion, royal control of raw materials and essential tools implies control of the whole industry, which suggests that the activity of the central administration probably impacted more or less directly the supply of funerary commodities to non-royal individuals. It is then reasonable to infer that access to funerary commodities was indeed limited to those who enjoyed a high socioeconomic status, which, at the time, also corresponded to high sociopolitical status. Therefore, even though the procurement of funerary commodities may have followed market allocations, royal monopoly of raw materials implies that the market was not as "free" as the modern reader might envision it.

decided what elite tombs should look like and the kind of funerary equipment people were allowed to have in them. It implies instead that whoever had access to these facilities through royal support had relative freedom in designing their own tombs and funerary equipment. Limitations to individual choices were imposed by local traditions, habitual actions and internal competition among the members of the elites. In the New Kingdom, therefore, the king did not impose limitations on the activities of the funerary industry, as long as these activities did not interfere with the progression of the work on the royal tomb.

Given the absence of a strong centralized government in the 21st Dynasty, some scholars have instinctively looked at this period from a decentralized perspective. Major changes in funerary practices become clearly visible in the archaeological record at the end of the New Kingdom, when lavishly decorated tombs were replaced by lavishly decorated coffins (the so-called "yellow coffins") placed in group burials instead of individual tomb chapels.²⁰ Most of the investment of resources went into the mummification process, which has been interpreted as a defensive practice that, from a religious point of view, would secure the transfiguration of the deceased in case the funerary equipment went missing (Cooney 2012: 148-156). From a social point of view, this practice created a new arena for competition and display of the socioeconomic status of the deceased and their families (Cooney 2012: 156-159). Cooney (2012) has interpreted this contraction of the funerary equipment as a response to economic distress during a time when there was shortage of raw materials and frequent tomb robberies following the collapse of the political superstructure that had previously driven demand in the funerary industry. Therefore, these changes have been considered as a corporate reaction to the collapse of the royal authority and an attempt by the elites to maintain their identity and socioeconomic status.

²⁰ For a survey of non-royal tomb types of the Third Intermediate Period, including the 25th Dynasty, see Aston (2009: 408-416).

I suggest that following the collapse of the centralized political superstructure and patronage system the initial exclusivity of the elites of the 21st Dynasty eventually gave way to social mobility, which caused an expansion of the elite circles. I argue that the retention of contracted funerary assemblages through the 25th and 26th Dynasties indicates that these practices became an efficient way to meet the demand of the growing elites within the contexts of changing and decentralized social contexts. Reduced funerary assemblages and simplified designs made the production of funerary objects highly efficient. The condensed funerary spaces of the 25th and 26th Dynasties often took the form of narrow pits in temple precincts, such as the burials of the Singer of the Interior of Amun Ankhshepenwepet and of the Priest of Montu Tabakenkhonsu in the temple of Deir el-Bahari, some of whose funerary objects are assessed in Chapter 3 and Chapter 4. This period also saw a brief revival of private tomb chapels in the 25th Dynasty, but an increase in communal family burials, usually located inside older tombs, and sometimes inside former royal tombs.²¹ The simplified designs of the funerary objects and tombs of this period, as well as the reuse of older tombs could be interpreted as examples of artistic decline, but I suggest that these are manifestations of the increasing efficiency of the production process, as well as demands for display created by more people in increasingly crowded necropolis spaces.

Another manifestation of the level of efficiency and growth of the funerary industry during the 25th and 26th Dynasties is the depersonalization of the production process, which ceased to rely on royal patronage. While elite individuals of the New Kingdom and the Third Intermediate Period were personally involved in the choices made by the artisans who were in charge of producing their funerary equipment, the elites of the 25th and 26th Dynasties gave up control over the production of the focal piece of their funerary equipment. In my

²¹ Communal burials and reuse of older tombs were already a feature of the Third Intermediate Period (Aston 2009: 408-416; Bács 2015).

assessment of coffins dated to the 25th and 26th Dynasties, I show that many of the inner coffins of this period had their exterior decoration applied after the mummy of its owner was placed inside it (Chapter 3). This suggests that individuals might have given up control over the production of all the objects of the funerary equipment, which were probably produced after the death of their commissioners. This marks a new trend in ancient Egyptian funerary practices, which indicates that the organization of people in charge of assembling the funerary equipment guaranteed its quality and effectiveness, thus limiting individual choices in favor of relative uniformity provided by corporations of the funerary industry. I argue that the absence of titularies on many funerary objects of this period shows that the funerary industry no longer depended on the support of a specific patron, traditionally the king (Chapter 3 and Chapter 4). Additionally, I argue that fluctuations in the quality of the funerary objects reflect the amount of wealth individuals invested in the commission of their funerary equipment before their death. This suggests that the sociopolitical status of the deceased was no longer relevant for the acquisition of funerary commodities and that the funerary equipment became representative of the socioeconomic status of the deceased. The depersonalization of the funerary industry, therefore, made it more accessible to a broader market. Anyone could have their own funerary equipment, as long as they could pay for it.

While in earlier periods funerary practices were an important arena of social competition among elite families, the modes of operation of the funerary industry of the 25th and 26th Dynasties show that funerary objects expressed social competition at a family and individual level. The characteristics of non-royal burials at the beginning of the Late Period mentioned earlier imply that, unlike the tombs of the New Kingdom and much like the burials of the 21st Dynasty, most of the funerary spaces were inaccessible both before and after the funeral.²²

²² Cooney (forthcoming a) provides an interesting social explanation for the changes in funerary practices between the New Kingdom and the Third Intermediate Period. She argues that the limited extent of the

This indicates that the architectural structures of private tombs were no longer expressions of social competition and that the body and its trappings, including the coffins, had become the primary medium of display within the embalmer's workshops and during the funerary procession (Cooney 2012; Cooney, forthcoming a). Cooney's investigation of 21st Dynasty coffins has also revealed that coffins of that period were often reused by members of the same family (2017: 104). This implies that at the beginning of the Third Intermediate Period coffins were the material expressions of social competition among exclusive and inward-looking elite families within a closed organizational framework. On the other hand, my assessment of coffins and other funerary objects of the 25th and 26th Dynasties shows a wide range of variations and fluctuations in the quality of manufacture among the assemblages belonging to different members of the same families (Chapter 3). This implies that Egyptian

decoration of non-royal coffins of New Kingdom and its conservative nature shows that these objects were not the primary medium of display of social status and prestige. On the other hand, the innovative aspects of the decorative program of non-royal burial chambers of the New Kingdom suggest that these were the spaces in which social competition among the restricted group of family members and members of the highest elites was enacted. Following the socio-economic crisis at the end of the New Kingdom, tomb spaces became unsafe and thus lost their capacity as exclusive medium of display of prestige. This capacity was transferred to the coffin, which became the canvas for decorative innovations and display of exclusive religious knowledge. The undecorated tombs of the 21st Dynasty, therefore, became hidden caches for the deceased bodies that were inaccessible both before and after deposition. According to Cooney, at this point in Egyptian history coffins acquired the role of status markers, acting as contracted versions of tomb spaces during a time of social unrest and limited access to raw materials. In this dissertation, I argue that during the 25th and 26th Dynasties the body of the deceased remained the focus of funerary expenditure and social competition through the use of nested coffins, whose decorative program shows various degrees of complexity, and the addition of new paraphernalia adorning the mummy. These interpretations are supported by the extant evidence, since mummified bodies after the New Kingdom contained many more amulets than in earlier periods (Taylor 2001: 202-203).

society of the first millennium BC was more individualistic than in earlier periods, or that more choice was given amongst a wider variety of craft venues.

From a traditional authoritarian perspective, one might then wonder whether these innovations in funerary practices were introduced through the Kushite invasion of Egypt. The funerary assemblage of a non-royal person in the 25th and 26th Dynasties would have been composed of a coffin or coffin set, a stela, shabtis, papyri, a Ptah-Sokar-Osiris statue, a mummy net and in some cases a coffin made of dark stone (Aston 2009). Among these objects, the stone coffin, Ptah-Sokar-Osiris statue, and mummy net were innovations introduced during the 25th Dynasty (Buhl 1959; Taylor 2010b; Silvano 1980). On the basis of the political influence the royal court had exercised from Lower Egypt into Upper Egypt since the 22nd Dynasty, Taylor (2003b: 104) has suggested that changes in the iconography on coffins of the Third Intermediate Period may reflect a shift of focus in mortuary practices, which originated in the Delta and then spread into Upper Egypt. Leahy (1985) has ascribed these changes to the re-elaboration of traditional Egyptian practices under the Libyan rulers of the Third Intermediate Period. Following these authoritarian narratives, therefore, one could argue that these 25th Dynasty innovations could have been introduced by the new Kushite elites (Taylor 2010b: 237; Bosse-Griffith 1978: 106). But this is questionable.

The extent to which the Kushite invaders were responsible for the introduction of innovations in funerary practices is unclear. Based on recent surveys of the extant evidence for mortuary practices of the New Kingdom and the first millennium in Lower and Upper Nubia (Spence 2019; Helmbold-Doyé 2019), there seems to be no direct Kushite influence on Egyptian funerary practices of the 25th and 26th Dynasties.²³ The fact that Kushite kings and

²³ Most scholarship so far has focused on an analysis of the Egyptian colonial presence in Kush and the re-negotiation of Kushite identity through selective assimilation of and resistance to Egyptian culture from the New Kingdom through the Napatan period (Buzon and Simonetti 2013; Smith 1996; 1998; 2013; Buzon *et al.* 2016).

elites revived Old Kingdom and Middle Kingdom iconography in the monumental art of the 25th Dynasty indicates an effort to promote a political agenda that focused on Egyptian traditions. The conservatism of the royal sphere would have made the agency of the new rulers in the introduction of innovations in the non-royal sphere improbable. While not dismissing the idea that the Kushite invasion may have had some influence on non-royal Egyptian funerary art, I argue that the changes seen in the burial equipment of this period should instead be ascribed to more complex social dynamics. I suggest that these dynamics were at work among the lower elites well before the Late Period and allowed for the development of funerary practices that became dissociated from the royal power and linked to temple organizations, thus reflective of the renegotiation of social networks and expansion of elite circles.

I suggest that the process of condensation of funerary equipment that started during the economic crisis at the end of the New Kingdom made funerary practices permeable to change and innovation, which organically developed from the emergence of a new market for funerary commodities. The funerary practices during the 25th and 26th Dynasties can be interpreted as an extension of the changes already occurred between the New Kingdom and the Third Intermediate Period. Valbelle (1985: 302) points out a progressive reduction of objects of daily life between the 19th and 20th Dynasties, which then disappeared in the Third Intermediate Period. Expanding on Valbelle's argument, Smith (1992: 220) suggests that "the old concept of surrounding yourself with the necessities of daily life has been abandoned in favor of an elaborate system of magical aids and protections." Practices that were introduced out of necessity could have eventually been integrated into the culture and elaborated to adapt to an expanded audience that had emerged because of increased social mobility. The fact that

Scholars, however, have not yet investigated possible Kushite influences on Egyptian culture, especially during the period of Kushite rule over Egypt.

burials remained contracted even after raw materials became accessible again in Egypt during the 22nd Dynasty suggests that more complex social dynamics were at play.²⁴ The production of some of the objects of the funerary equipment also began to show signs of standardization.²⁵ I argue that contraction of the funerary equipment and the systematization of the production of some funerary objects indicated new demand in the funerary industry. Furthermore, my assessment of the mummy nets introduced during the 25th Dynasty shows that one object could embody multiple religious narratives which used to be conveyed by multiple objects in earlier times (Chapter 4). The condensation of multiple religious functions into one object made the production system of each funerary assemblage very efficient and able to meet the demand of a broader audience. From a communal perspective, therefore, I argue that the innovations introduced at the beginning of the Late Period could have been designed to meet a growing demand for funerary commodities.

1.6 Corporate perspective: bureaucracy in ancient Egypt

While bureaucracy is traditionally regarded as an instrument of state control, I suggest that the documentary evidence of private transactions from the 25th and 26th Dynasties shows that the bureaucratic apparatus of the Late Period was supported by the state, but was also designed to protect private enterprise within the context of large private organizations. The two current interpretations of the ancient Egyptian bureaucratic system are complimentary to

²⁴ There are fewer extant examples of 22nd Dynasty coffins, and these are either unpublished or poorly published. Among the unpublished material, for example, all three coffins of the Doorkeeper of the Domain of Amun (*iry-ꜥ3 n pr-Imn*), Kharushere (MMA 86.1.33a, b; MMA 86.1.32a, b; MMA 86.1.31a, b), were left undecorated in many areas so as to display the very high quality wood used to assemble them.

²⁵ Taylor (2010: 236) has already pointed out that shabtis began to be mass produced during the Third Intermediate Period.

one another and both link bureaucracy to the activity of the state. Kemp (2006: 305-306) identifies bureaucracy with state administration, which had an essentially corrective role carried out in an organized but inefficient manner. Eyre (2011: 703) also considers the ultimate function of bureaucracy to be that of assessing and extracting revenues for the state.²⁶ More recently, Eyre (2013) has discussed the legal aspects of documentary evidence and its preventive function, but still considers bureaucracy as an instrument of the central administration. I argue that the trend of bureaucracy during the 25th and 26th Dynasty was not unidirectional and that the preventive nature of most documents from this period had two purposes. First, the fact that these documents record data that prevented legal disputes from arising implies that they contributed to the enforcement of private transactions within a highly mobile and competitive society, in which private property was more likely to be threatened than in the New Kingdom. Second, the precision and formality of these records imply that they could be used by the state for taxation purposes, as both corporations and the state were trying to create revenue. Therefore, I argue that bureaucratic practices at the beginning of the Late Period served the purpose of collecting revenues, but also of protecting the activity of individual entrepreneurs.

Most scholars agree that Ancient Egypt remained an oral culture throughout its history and that the people of Ancient Egypt relied mainly on oral agreements in economic transactions (Kemp 2006: 178; Haring 2003: 252; Eyre 2013:127). I argue that before the Late Period the widespread use of informal documents to settle private transactions suggests that the enforcement of most transactions occurred informally through bonds of patronage within local communities. In his discussion of a case study from the New Kingdom, Eyre (2013: 155-162) convincingly argues that the production of preventive documents recording

²⁶ In the same article Eyre argues that the patronage system was meant to fill in the gaps left by the bureaucratic state.

private transactions relied on the individual initiative of the parties involved. Eyre also shows that copies of some of these documents were kept in state archives and identified witnesses whose testimony and socio-economic status could determine the outcome of legal disputes. This suggests that written documents on their own had little evidentiary value in private transactions. Their preventive function lay in the information they provided, which would facilitate the intervention of enforcement agents. According to Eyre, this implies that recourse to formal bureaucratic practices was exceptional because it was expensive and time-consuming and the documents on their own did not guarantee the enforcement of transactions. The settlement of a dispute ultimately depended upon the testimony of patrons within the rigid, hierarchical society of the New Kingdom.

The same argument cannot be applied to the evidence from the Late Period. I argue that the formality and relative abundance of preventive documents at the beginning of the Late Period indicates that private entrepreneurs were seeking new ways of protecting their activities within a system that included multiple competing patrons. The interaction between bureaucracy and patronage in ancient Egypt has already been discussed by Eyre (2011) and indirectly by Moreno García (2014). Both show convincingly that patronage was an integral part of Egyptian society complimentary to state administration. They differ, however, in their view of the role played by written bureaucratic practices in this interaction. Eyre sees bureaucracy exclusively as an instrument of the central administration, the limitations of which triggered the development of the local patronage system independent from and complementary to the central administration. Moreno García takes a more dynamic approach to bureaucracy as a tool of both the central administration and the patronage system, which he regards as two highly integrated organizations. Following Moreno García's view, I interpret bureaucracy as a potentially independent, depersonalizing tool which could be used to the advantage of patrons, state officials, and private individuals. I suggest that a new class of

bureaucrats enabled individuals to navigate the complex system of competing patrons at the beginning of the Late Period, creating trust in the bureaucratic apparatus itself, compensating for the loss of trust in the central power.

1.7 Conclusion

In this chapter I explored the ways in which traditional Egyptology has been largely dominated by an authoritarian perspective. This authoritarian perspective on the monolithic image conveyed by royal monumental architecture and has led scholars to assume that the royal power was the origin of and had control over all religious practices and beliefs, as well as over bureaucracy and economy throughout the pharaonic period. A closer assessment of the material from non-royal context, however, reveals that this may have been the case in the New Kingdom, but not in later periods. The agency of the New Kingdom elites is hardly visible in the archaeological record because the royal administration had control over a large part of the economy through the monopoly of the production of funerary commodities, which constitute most of the extant evidence from ancient Egypt, and were seemingly accessible only to those affiliated with the royal administration. The monumental architecture of the Kushite kings of the 25th Dynasty gives the illusion of continuity with earlier periods of Egyptian history. But it would have been impossible for the central administration to monitor the vast territory that was under Kushite rule at the time. For this reason, Pope suggests that Egypt of the 25th Dynasty had reached a state of stable political fragmentation, in which the king was relying upon local vassals to govern his territory.

I argued that the agency of the elites from the Third Intermediate Period onward is more visible because of the collapse of the central power and the patronage system that relied upon it. This required the elites to operate independently from the central administration and find their own voices. Thus funerary practices show that the elites of the 21st Dynasty reacted to

the collapse of the traditional patronage system by being exclusive and focusing on perpetuating family prestige in funerary practices. This inward-looking attitude changed at the beginning of the Late Period, when the elites gave up control over the production of their own funerary equipment. The funerary industry revolved around temple organizations and professionals whose task was specifically that of making arrangements for the funeral and the upkeep of the funerary cult of the deceased. The funerary objects then became representative of individual prestige and identity and their quality probably reflected the amount of wealth the owners had agreed to donate to the temple in exchange for funerary services. This implies that the funerary industry no longer relied on close-knit social circles based on royal affiliation. Instead, I suggest that the funerary industry at the beginning of the Late Period followed market allocations.

While elite burials were granted by royal support and bureaucracy was mostly an instrument of state administration before the Third Intermediate Period, the funerary objects and private documents of the 25th and 26th Dynasties reveal the new dynamics of a system that relied on multiple competing patrons. The abundance of preventive documents of private transactions dated to the Late Period shows that people were attempting to protect their assets after the collapse of the traditional patronage system. The bureaucrats who were entrusted with these records protected private economic enterprises, which in the New Kingdom had been under the influence of local patrons and local communities and were seldom recorded on official documents. By entrusting one organization with the provisions for their afterlife and a different organization with the enforcement of their economic transactions, individuals were coerced to pledge their allegiance to more than one patron at once. This made the patronage system of the Late Period more impersonal. The depersonalizing aspect of the funerary industry and the bureaucratic apparatus at the beginning of the Late Period enabled individuals to navigate the complex reality of multiple competing patrons.

2. Theory and methods

2.1 Introduction

In Chapter 1, I offered a critical assessment of current narratives of the Late Period and argued that these are driven largely by a socially centralized, or authoritative view of the available evidence. While the monumental evidence may favor this centralized approach, a closer look at the extant evidence from non-royal contexts fits better with more complex narratives that would benefit from a decentralized, negotiative perspective.²⁷ I have shown that the extant funerary and documentary evidence from non-royal contexts can be interpreted in different ways and that, instead of dismissing one approach in favor of the other, the centralized and decentralized perspectives can inform one another. For example, while some of the evidence reveals an attempt by the Kushite kings to convey an image of a united land under one ruler, other evidence suggests that this authoritative imposition is just an illusion. A closer assessment of the extant evidence reveals that the size and multiculturalism of the Kushite empire demanded that the king delegate power to local elites whose first-hand knowledge and direct influence in their own territories, promoted political stability. I also argued that the 26th Dynasty followed a similar course of action when assessed in terms of corporate involvement in the management of a vast territory. In Chapter 1, I argued that most of the evidence from non-royal context suggests that political fragmentation had become the *status quo* by the end of the Third Intermediate Period, when society was characterized by a conglomerate of stable local political realities and social mobility within a multicultural society that demanded that authority figures adapt contextually to a fragmented political landscape.

²⁷ This decentralized perspective has recently been adopted by several scholars, including Moreno García (2014), Pope (2014), Hill (2016) and Cooney (forthcoming b).

In this chapter, I explain the conceptual approaches and methods I have used to address the question of how economic performance could improve during times of political fragmentation. In traditional Egyptology, the Late Period is rarely defined as a time of prosperity, since it is assumed that economic growth and political fragmentation are incompatible. Multiple assumptions drive these dismissive attitudes toward the Late Period. First, political fragmentation has always been considered by Egyptologists to be equivalent to political instability. This assumption, combined with the intuitive notion that political stability, or even authoritarianism, is a necessary condition for economic growth in northeast Africa, led to the belief that political fragmentation at the beginning of the Late Period could not have led to economic growth.²⁸ But in Chapter 1 I showed that fragmentation was, in fact, a necessary condition for political stability in the 25th Dynasty. Second, the modern aesthetic appeal of New Kingdom art has led scholars to identify this more authoritarian period, in which power was rarely delegated to non-royal figures, as the Golden Age of Egyptian history. This implicitly led to the assumption that only this type of centralized government found in the New Kingdom could provide the stability necessary for economic growth. These two assumptions have influenced the modern interpretation of the 25th and 26th Dynasties as a time of instability. These same assumptions have also prompted scholars to interpret changes in the modes of production of funerary objects as manifestations of artistic and societal decline. In Chapters 3 and 4, I show that this "artistic decline" of funerary art is, in fact, an expression of a complex combination of adaptive mechanisms and local autonomies that evolved in reaction to the collapse of a centralized authoritarian government at the end of the New Kingdom and the cultural resilience that enabled local communities to survive shifts in patronage.

²⁸ The correlation between political stability and economic growth has been endorsed by modern historians (North *et al.* 2002).

In the following sections, I discuss the several complimentary theoretical approaches that I apply to my assessment of non-royal funerary objects and written documents from the Late Period. The theoretical frameworks of resilience, complexity, and connectivity have so far been applied only to datasets that exclude written documents. This selective approach to the available material is a manifestation of the current intellectual divide that separates the study of texts from the study of other material evidence from ancient Egypt. Philologists rarely make use of theoretical frameworks, focusing instead on deciphering the scripts. Archaeologists and art historians do not often focus their skills onto close analysis of textual sources. Only relatively recently have scholars who study ancient texts developed a theoretical framework that enables a contextual assessment of scribal practices in the ancient world.²⁹ I argue that literacy in ancient Egypt was regarded as a social tool. Scribes can be

²⁹ Scholars operating in the field of New Literacy Studies have challenged current views of literacy in the ancient world as projections of modern western notions of civilization, especially in post-colonial contexts (Woolf 1994: 84). These projections assume that sociopolitical and socioeconomic status and literacy have been correlated throughout history. This assumption does not take into account different cultural attitudes toward literacy and the variety of forms that literacy can take within a particular culture. Recently scholars have explored the ways in which past societies developed and used literacy, which varied contextually according to one's role in the community (Thomas 2009; Woolf 2009; Allon 2019). In particular, Scott (2018) points out that, in the ancient world, writing was developed first and foremost as a tool for state administration, and it became a medium of expression for culture only much later. Some of the earliest extant evidence from Ancient Egypt indeed suggests that writing was first developed as an administrative tool (Kemp 2006: 163 ; Eyre 2013: 3). Moreover, scholars have shown that the extant evidence refutes the idea that literary skills were always exclusively correlated with high-ranking political or religious titles. Iconographic and literary evidence suggests that members of the royal family, including the king, could be illiterate. Iconographic evidence from early periods of Egyptian history shows that high-ranking individuals were portrayed while having texts read to them because the act of reading may not have been regarded as appropriate (or necessary) for individuals of the highest ranks (Baines 2007: 151-152). Iconographic evidence also shows that the act of writing was regarded as

considered craftsmen, and documents as artifacts. Unlike what Kemp (2006: 163) has argued, the fact that the *Satire of the Trades* (2030-1640 BC) is a panegyric on the superiority of scribal practice with respect to other types of manual labor suggests that scribes were, in fact, regarded as craft specialists in the common imagery. This implies that the same broad theoretical frameworks that apply to an assessment of funerary artifacts can also be applied to the assessment of documents. This holistic approach enables a more accurate and nuanced assessment of economic performance in pre-monetary societies through the identification of those institutions that predisposed a society to growth.

Theoretical approaches to the concepts of resilience, complexity, and connectivity operate within the broader framework of New Institutional Economics and enable us to identify in the archaeological record the forces that fostered resilience and drove economic growth during a time of political fragmentation. This methodological section addresses two main questions about how we can assess economic performance in pre-monetary societies and how institutions in these societies can be identified in the archaeological record. In this section, I discuss my methodological approach to the examination of the value of objects and

burdensome or unbecoming by the highest elites and was therefore delegated to lower ranking individuals (Piacentini 2002; Baines 2007: 44). In the mythological sphere of the *Tale of Horus and Seth*, moreover, the highest ranking god Re is being teased for his inability to read (Lichtheim 1976: 215). Studies of scribal hands and titles from all periods of Egyptian history suggest that the ability to compile administrative records was restricted to bureaucrats who belonged to the central administration, but were not necessarily high-status individuals. According to Martinet (2017: 266-267), individuals holding the highest titles in the Old Kingdom did so on account of their connection to the royal family rather than their role in the administration of the state. Ragazzoli (2019: 441) has argued that scribes of the Middle Kingdom belonged to the lower elites. The unpublished work of Stefan Polis on the scribes from Deir el-Medina has shown that the extant written record from the village was produced by a few scribes. The fact that literary skills tended to be limited to a select number of people does not imply that these people were necessarily of high status.

documents through an assessment of energy expenditure and craft specialization. Each of these approaches provides a different lens through which I examine the institutional framework at both a community and an inter-communal level. This institutional framework, embedded in the archaeological record, enabled resilience and growth even after the collapse of a centralized, authoritarian political power. The specific methods applied and variables assessed vary widely according to the type of material, provenance, archaeological context, and conditions of preservation of the selected objects. Specific details about methods and variables, as well as background knowledge of the symbolic meaning of these objects, are presented in the relevant chapters.

2.2 Theory

2.2.1 Economic Theory

2.2.1.1 *New Institutional Economics: the role of culture in economic performance*

In order to assess the dynamics of economic growth during a time of political fragmentation we must consider variables that have been dismissed or misinterpreted in traditional approaches to the study of ancient economies.³⁰ New Institutional Economics emphasizes the

³⁰ Formalism and substantivism have dominated the study of ancient economies for decades. But they provide an inadequate framework for understanding the complex dynamics of ancient economies. The formalist approach assumes that humans have an innate tendency to barter and exchange (Smith 2013). This approach allows for the application of concepts that relate to modern market economy in the interpretation of ancient economic systems. Few Egyptologists have taken this approach (Menu 2004a: 210-212, 2004b: 217-220; Warburton 2003, 2016). On the other hand, substantivists have argued that economic systems are culture-specific and rely on a system of social constructs (Polanyi *et al.* 1957; Finley 1999; Weber 2013). They argue that centralized, redistributive economic structures dominated the ancient world, with very limited long distance trade, high information, transaction and transportation costs, and prominence of barter exchange and gift-giving practices. This view has been more widely embraced within the Egyptological discourse, either explicitly or

impact of culture on a society's economic performance, without dismissing the role of market forces in shaping both ancient and modern economies.³¹ This relatively recent theoretical approach identifies ideology as one of these cultural factors, along with economic institutions, technology, and demography (North 1981: 3). Given the limited availability of demographic data and the lack of evidence for technological innovation in Egypt at the beginning of the Late Period, my approach focuses instead on the impact of ideology and institutions on economic performance in the 25th and 26th Dynasties. In particular, I consider the positive impact that institutions had on transaction costs at the beginning of the Late Period and argue that the institutional changes brought about by the collapse of the New Kingdom eventually created the conditions for a more dynamic and growing economy.

Ideology and institutions are closely related and partly overlapping concepts. Ideology provides a narrative and a set of explicit rules that guide a range of actions in everyday life (North 1991). In addition to these explicit rules, other implicit rules guide daily social activities at an unconscious level. Both sets of rules are important for establishing the impact of social and cultural factors on economic performance. Both explicit and implicit rules governing social interactions fall into the category of institutions and are key variables in

implicitly (Bleiberg 1988, 1996; Černý 1973: 93-97; Janssen 1975, 1982). Both approaches, however, offer overly simplistic and polarizing views of ancient economies. While substantivism takes into account the sociocultural aspects of ancient economies, it underestimates the ability of ancient people to engage in complex economic activities, such as recurrent long distance exchanges and interactions. Formalism, on the other hand, acknowledges these abilities and argues that they are innate to the human species, but uses them to explain economic dynamics cross-culturally, without considering culturally specific variabilities.

³¹ New Institutional Economics combines the contributions made by formalism and substantivism and argues that nonmarket and market allocation systems have always operated in tandem, and that the choice between the two has always been determined by transaction costs (North 1977).

determining transaction costs and enabling or hindering economic growth.³² For example, in a forthcoming paper delivered at the 19th International Congress of Classical Archaeology in 2018, Barbara Kowalzig suggested that the religious ritualization of economic interactions visible in the archaeological record from Naukratis were a manifestation of important institutional changes during the Saite Period. The association between temple organizations and trading activities, as well as the affiliation of merchants with religious organizations, generated trust among the people. This, in turn, lowered transaction costs.³³ According to Kowalzig's model, the institutional framework at the beginning of the Late Period relied on temple organizations. Merchants tapped into this loosely and locally organized institutional framework in order to establish an efficient system of exchange and lower transactions costs.

The data from Late Period Egypt show that institutions which initially seemed averse to innovation became more dynamic and adaptive after the political collapse of the Third Intermediate Period. According to North (1991: 97), institutions are "the humanly devised constraints that structure political, economic, and social interactions. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal constraints (constitutions, law, property rights)."³⁴ Institutions with such a profound

³²North (1991) suggests that the flexibility of institutions in western societies enabled the development of systems of exchange that lowered transaction costs and built an efficient market economy. On the other hand, North (1991: 102-104) argues that the Suq, a form of exchange with very high transaction and information costs, still survives in North Africa and the Middle East because of the inflexibility of the local institutional framework resulting from political instability.

³³ Kowalzig's argument is based on the theoretical model built by Gelderblom (2013) and applied to late medieval and early modern Europe, whose political fragmentation provided an incentive to replace existing institutions with new ones favoring trade.

³⁴ The formal and informal constraints characterizing institutions are consistent with the theoretical tenets developed around the concept of habitus in anthropological theory (Bourdieu 1977).

impact on behavior predispose a society to economic growth, stagnation, or decline (Greif 2006). When institutions are not flexible enough to give people an incentive "to invest their time, resources, and energy in knowledge and skills that will improve their material status" (North 1991: 102), the economic environment tends toward stagnation rather than growth. This was probably more the situation in Egypt during the New Kingdom. With the expansion of markets following the collapse of the central power at the end of the New Kingdom, however, institutions became more dynamic, enabling society to reduce transaction costs and achieve higher levels of productivity. The loss of trust in the royal figure and court authoritarianism after the collapse of the central power at the end of the New Kingdom and the institutional changes that followed enabled Egyptian society not only to survive but actually improved economic performance.

According to North (1981), the institutions that influence economic performance in a given society can be revealed only through a diachronic account of the structure of any given economic system. In order to identify the institutional aspects of changes seen in the funerary industry and bureaucratic apparatus at the beginning of the Late Period, most of the following chapters will include a diachronic assessment of the modes of production of funerary artifacts and bureaucratic documents. Only in Chapter 4 is a diachronic study of the production of Ptah-Sokar-Osiris statues and mummy nets not possible, since these were innovations introduced in the 25th Dynasty. However, an assessment of the religious significance of these objects does allow for the identification of some institutional continuity with earlier periods. A technical assessment shows how efficiently the funerary industry adjusted to the renegotiation of old institutions by introducing these new elements of funerary equipment on a large scale. Chapter 3 illustrates the ways in which the institutional framework changed in order to ensure that coffins would be available to the current members of a growing elite during times of resource scarcity in the Third Intermediate Period. On the other hand, coffins

of the 25th and 26th Dynasties reveal shifts in the institutional framework that undercut the value of the quality of craftsmanship and created the conditions necessary for the production of brand new coffins on a large scale when elite circles began to expand and new raw material began to circulate again. In Chapter 5, I argue that the extant documents from the New Kingdom and the beginning of the Late Period suggest that ongoing institutional collapses and adaptations at the end of the New Kingdom made space for expanded and more efficient trade networks. These expanded networks ceased to rely exclusively on local networks and bonds of patronage but were instead based on "more complex and more impersonal forms of exchange" (North 1991: 100).

My research found that during the Late Period, institutions largely existed independently from the political superstructure, although they could be influenced by it. Given that institutions provide the behavioral framework upon which trust in the political system is based, the collapse of the Third Intermediate Period created a dichotomy between the institutional and political frameworks. While much of the New Kingdom was characterized by trust in the royal power, so that demand was driven by royal support, the collapse of the Third Intermediate Period shattered that trust and made existing institutions susceptible to change. This phenomenon triggered a chain reaction that led to a shift in institutional focus away from the royal power and toward temple organizations. Political fragmentation had an immediate impact on economic performance after the collapse of the central power at the end of the New Kingdom. By the end of the Third Intermediate Period, however, Egyptian society had adjusted to the new equilibrium based on political fragmentation by renegotiating a loosely connected pool of institutions independent from court control, if not also royal ideology. The ways in which this renegotiation occurred can be explored through both anthropological and archaeological theories.

2.2.2 Anthropological and archaeological theories: exploring the behavioral aspects of ancient economies

While preindustrial societies did not have the technology necessary to support the sustained economic growth seen in modern economies, their lack of technological advancement brings into focus the influence that institutions can have on economic performance. Given the emphasis placed by New Institutional Economics on the behavioral aspects of ancient and modern economies, the study of institutional impact on ancient economic systems requires the support of both anthropological and archaeological theories. In anthropology, institutions can be regarded as the shared habits that form cultural identities and generate a sense of security and hope for group survival (Bourdieu 1977). In archaeology, value theory enables the identification in the extant material evidence of the institutions that generated demand for commodities in ancient societies (Appadurai 1986; Graeber 2001; Papadopoulos and Urton 2012; see §2.2.3.2). These two approaches are very closely related, since the value of an object lies in its capacity to embody some key institutional aspects of group identity. Reliance on institutions for group survival inevitably impacts economic performance, since limited flexibility of institutions can pose obstacles to the kind of changes that lead to sustained, long-term economic growth. My assessment of the data from the 25th and 26th Dynasties suggests that a lack of flexibility in ancient Egyptian institutions was overcome during times of social transformation and collapse. Collapse triggered mechanisms of resilience, reorganization, and transformation, which, in turn, led to innovation and growth. While these institutions enabled cultural resilience by retaining some key aspects of cultural identity during the crisis at the end of the New Kingdom, that crisis also rendered them more permeable to change, thereby creating opportunities for economic growth.

2.2.2.1 Resilience theory: collapse as an opportunity for growth

In the introduction to this dissertation, I explain how my work fits with Scheidel's theoretical model, according to which traumatic events in history, such as plagues, wars, and revolutions, cause a temporary narrowing of the gap between the poor and the rich in a given society (2018). Scheidel concludes that perhaps the price to pay for reducing economic inequality may be too great. Throughout history this inequality gap has always widened again over time. Scheidel suggests that we should temper our expectations and redefine our goals, since inequality may never be permanently reduced, let alone eliminated. I take Scheidel's argument a step further and argue that, regardless of the temporary fluctuations of inequality they may cause, societal crises can drive economic growth. The extant evidence from Late Period Egypt shows that the innovations that have enabled the upward trajectory of economic growth in all societies across history were a product of the complex dynamics of human resilience and institutional change.

Resilience theory provides a framework to explore the role of institutions in the reorganization of social networks after collapse, enabling survival and growth. Collapse is understood to be "the fragmentation or disarticulation of a particular political apparatus" (Faulstich 2016: 5). Societal resilience is the human response to collapse and can take different forms. D'Alfonso (2020) conceptualizes resilience as one of three ways, along with reorganization and transformation, by which a society can react to collapse. He sees resilience as "the most conservative outcome of a collapse, the one in which actors aim at restoring the social, political and/or cultural conditions preceding collapse by predicating the least possible effort in change" (d'Alfonso 2020: 99). He defines reorganization as the renegotiation and adaptation of old institutions to accommodate the new environment created by the collapse. He defines transformation as the abandonment of old institutions in order to embrace new worldviews. Since d'Alfonso acknowledges that these three outcomes can

occur at the same time, I use his theoretical framework to explore the different ways by which Egyptian society renegotiated institutions in order to survive and thrive after the crisis of the 21st Dynasty. Retention of some existing institutions enabled cultural resilience and the preservation of group identity. The renegotiation and transformation of other institutions encouraged social cohesion and greater social mobility. These three developments combined to enable sustained economic growth during a time of political fragmentation.

During its recoveries from collapse, Egyptian society generally retained some institutional aspects in order to survive. This process of retention allowed for the reorganization and transformation of other institutional aspects without the loss of group identity. For instance, retention of old institutions is revealed by the retention of specific practices in the modes of production of funerary objects, such as the emphasis placed on the decoration of inner coffins from the New Kingdom through the 25th and 26th Dynasties (Chapter 3). Changes in the techniques of execution of coffin decoration, however, suggest patterns of institutional reorganization and transformation. Resilience and reorganization are revealed by religious conservatism and systematic changes in the modes of production embodied in some of the innovations introduced in funerary assemblages of the Late Period, such as mummy nets and Ptah-Sokar-Osiris statues (Chapter 4). Documents from this period reveal institutional transformation through the development of a new, coordinated bureaucratic apparatus that protected private enterprise by depersonalizing the enforcement of private transactions (Chapter 5). Objects can embody retention, reorganization, and transformation occurring together as a reaction to societal collapse. These three aspects combined enabled society not only to survive but also to generate more demand. This new demand, in turn, encouraged increased production of funerary commodities, which artisans innovated to make them more efficiently.

Data from Late Period Egypt show that activity in the political sphere actually had little impact on the society's long-term resilience. Scholars have already theorized that resilience can take the form of political resilience in the short term and cultural resilience in the long term (Faulseit 2016: 7; Holling and Gunderson 2002). The conservatism exhibited by the archaism of royal statuary and monuments during the 25th and 26th Dynasties is an example of political resilience. It shows an attempt to fabricate trust and build consensus among the elites using forms of visual propaganda that presented images of the king that referred back to what was considered the Golden Age of Egyptian history almost two thousand years earlier (see §1.3.1). This trend, however, did not extend much beyond the Saite Period. On the other hand, the innovations introduced in non-royal funerary and scribal practices of the 25th Dynasty were instead manifestations of the renegotiation of the institutional framework, which shaped funerary rituals and the bureaucratic apparatus through the end of the Late Period (see § 1.4). Changes in funerary practices and private bureaucratic records were the materialization of long-term cultural resilience, as well as institutional reorganization and transformation. Political resilience reflected a temporary state among the highest circles of society, which were not wholly representative of the myriad ways in which people were renegotiating institutions within their local communities.

Using resilience theory, it is also possible to identify how instruments of royal propaganda lost their original ideological charge and became instead expressions of institutional reorganization. The fragmentation of the central authoritarian power that occurred at the end of the New Kingdom undermined trust in royal authority. The Kushite rulers of the 25th Dynasty responded by trying to create the illusion of political centralization through delegation imperial mechanisms. In addition to the adoption of archaism in monumental art, the names of kings of the 25th and 26th Dynasties began to appear more often

in dates on documents of private transactions.³⁵ This "routinization of charisma" could have been a way of enabling royal propaganda to permeate multiple aspects of Egyptian life, thus creating an illusion of resilient political centralization.³⁶ The fact that archaism in royal art was relatively short-lived, however, suggests that the practice of using royal names in dates may have soon lost its original propagandistic and/or institutional effect. Since the name of the king had become less ideologically charged already during the Third Intermediate Period, bureaucrats were able to appropriate this instrument of royal propaganda in order to build a new depersonalized system for the enforcement of private transactions.³⁷ The king had become the organizational tool of decentralized systems. Therefore, modes of top-down institutional retention through political resilience originally designed to create an illusion of a strong centralized power combined with the bottom-up dynamics of reorganization and transformation to enable economic growth.

The connection between economic growth and resilience relies on a set of theories which enable the reconstruction of a more sophisticated narrative that accounts for dynamics of social cohesion and mobility embodied in the extant archaeological evidence from Late

³⁵ Since the Old Kingdom dates in Egypt had been calculated in terms of regnal years. But, as I explain in Chapter 5, records of private transactions rarely exhibit a full date that includes the royal titulary. Full dates appear more frequently on private documents of the 25th and 26th Dynasties.

³⁶ The concept of "routinization of charisma" was first developed by Weber (1968) and then further discussed and adapted to various contexts in different historical periods, including Medieval England, which I use as a comparative case-study in Chapter 5 (Clanchy 1993).

³⁷ Since Egyptian ideology revolved around the royal figure during the New Kingdom, it is probable that the name of the king was so ritually charged that only specific kinds of documents were considered worthy of bearing the royal name. Clanchy (1993: 301) built a similar argument regarding the use of Christ's name in private documents from Medieval England: "Perhaps it was thought presumptuous or even blasphemous to associate worldly business with the time of Christ's incarnation."

Period Egypt. Resilience theory draws attention to the retention of some institutional aspects. I use complexity theory to explore the ways in which other institutions became permeable to change at both the community and intercommunal level, thereby promoting social mobility (Crumley 1995; Chapman 2003; Kohring & Wynne-Jones 2007; Kohring 2011). With the support of connectivity theories, I explore the extent of societal cohesion by linking uniformity in patterns of institutional retention, reorganization, and transformation in Upper and Lower Egypt. The data show that broader, long-term cultural resilience went hand in hand with increased social mobility and cohesion, thus encouraging innovation and improved economic performance. Finally, since the assessment of social connectivity, complexity, and resilience must rely exclusively on archaeological material and texts, the theoretical discourse on value, ³⁸ chaîne opératoire,³⁹

³⁸ The theoretical discourse on value reveals that the valuation process has been a social phenomenon in all cultures and throughout history. According to Appadurai (1986: 13), all things have the potential for commodification or, in other words, for being exchanged for other things. Appadurai builds on the theoretical work of Simmel (1978), who argued that the value of a commodity is, by definition, subjective, and the product of a social agreement between seller and buyer. Building on Simmel's work, Graeber (2001) defines object value as "dynamic" and "social" (Graeber 2001: 77). This implies that a commodity can acquire a different value depending on the social context in which it is produced and exchanged and the social agreements that regulate the exchange. More recently, Papadopoulos and Urton (2012: 3-5) have emphasized the interdependence of moral, ethical, cultural and economic value, which blended together in ancient societies. This implies that the value of an object changes along with its surrounding social context across time and space. The exploration of the value of objects inevitably leads to an exploration of the complexity of the social context in which the valuation process occurred.

³⁹ The chaîne opératoire approach enables the reconstruction of the sequence of choices and actions that occurred during the production process (Lemonnier 1993). This method identifies patterns of variability and uniformity which, in turn, speak to specific dynamics of social complexity. Patterns of variability are a manifestation of the artisan's agency within the local community from which the individual acquired technical

communities of practice,⁴⁰ and modes of production⁴¹ provide the conceptual linkages between the static archaeological record and the social dynamics of complexity and connectivity that produced it. These same objects reveal the motivations that led ancient Egyptians to retain some institutional aspects and renegotiate others, as well as the ways in which their choices positively impacted economic performance.

knowledge. Patterns of uniformity, on the other hand, are a reflection of the integration of the individual and the local community within the broader social structure in which both shared an understanding of the world (Kohring 2011: 148). Through the lens of complexity theory, patterns of variability and uniformity in the choices made by the artisans of the funerary industry and by the scribes of the New Kingdom, Third Intermediate Period, and Late Period Egypt reveal dynamics of social mobility and an expansion of the communities of artisans and scribes in the Late Period.

⁴⁰ This approach allows us to situate the choices made by individual artisans within the broader institutional context of the communities in which these artisans were raised and trained. The community is an environment where knowledge is acquired and exchanged. This includes practical knowledge of the ways in which the individual is supposed to interact with other people and with material culture. A discussion of communities of practice inevitably includes dynamics of apprenticeship and crafts production as part of identity formation and articulation of social complexities at the micro-scale. Following Wenger's (1999) theoretical discussion of learning activities as collective and social processes (situated learning), archaeologists have already used his concepts to investigate the relational aspects of ancient technology and craftsmanship (Wendrich 2013; Sassaman and Rudolphi 2001).

⁴¹ This approach provides the theoretical underpinnings connecting specialized technological practices with the modes and organization of social interactions in communities of artisans. Peacock (1982) first theorized modes of production in his study of ancient Roman pottery, and his models have subsequently been used by archaeologists to study pottery-making in Ancient Greece (Gero and Conkey 1991; Nordquist 1995; Papadopoulos 1997).

2.2.2.2 Complexity and connectivity theories: exploring institutional reorganization and transformation at the micro-scale

The evidence from ancient Egypt shows that complexity and connectivity are two sides of the same coin. Complexity theory enables an exploration of the ways in which communities dealt with societal collapse at the micro-scale. From a cross cultural perspective, social complexity is constructed through a network of social relations in which communities and individuals enter into a dialogue that enables them to negotiate their own identities with respect to the larger institutional superstructure (Crumley 1995; Chapman 2003; Kohring & Wynne-Jones 2007; Kohring 2011). For example, regional variations of Egyptian funerary objects of the 25th and 26th Dynasty and their iconography could reveal different ways in which the institutional superstructure was negotiated at a community level through a network of micro-scalar social relations in which the macro-scalar structure was embedded.⁴² Material culture of Late Period Egypt embodied multiple sets of meanings, which related to different levels of social complexity within communities of artisans and society at large, and the interaction among them, "from the individual's enactment of culture, to the community in which practices are engrained and, finally, to the broadly held societal structure" (Kohring 2011: 147).⁴³ Funerary objects of the Late Period express conservative religious beliefs, but also

⁴² Studies of regional variations are limited by the available evidence and have been undertaken only relatively recently on selected types of artifacts, notably coffins through the unpublished doctoral dissertation of Katharina Stövesand (2018; 2019). Stövesand's work discusses different aspects of regional variability, but it does not include an in-depth theoretical discussion of the social significance of the variations she investigates.

⁴³ Kohring (2011: 147) argues that the connection between the different scales of social complexity (i.e. individual, community and societal) can be explained by three theoretical approaches. First, Bourdieu's (1977) practice theory and his concept of *habitus* highlights the constant presence of the overarching cultural structure in an individual's action. The agency of the individual expressed in daily activities is in constant dialogue with and a reflection of this structure. In this sense, the act of an individual can be representative of the worldview of

reveal new ways in which people expressed those beliefs in relation to their individual identities, revealing greater social mobility than in the New Kingdom and the Third Intermediate Period. Institutions were negotiated through individual (Dobres and Robb 2000; Joyce 2010; Joyce *et al.* 2001), as well as collective agency (Olson 1965, 1982; Blanton and Fargher 2008; Carballo 2013), resulting in complex patterns of retention, reorganization, and transformation, which, in turn, enabled economic growth in Late Period Egypt.

If complexity theories focus on relational patterns of social interactions between the individual and the community and between the community and society at large, connectivity provides the necessary conditions for these interactions to occur. When viewed through the lens of connectivity theory, patterns of institutional retention, reorganization, and transformation reveal a highly cohesive society, which was able to thrive without the support of a centralized sociopolitical superstructure.⁴⁴ The role of communities was key to

an entire society. The habitual aspect of individual action is an expression of the institutions that regulate the interaction between the individual and the community. Second, Goffman's (1966) concept of encounter emphasizes the connection between the individual and the community through durable or iterative social interactions which secure the integration within the social network. These iterative social interactions are responsible for the creation of an institutional apparatus that regulates social interactions within the community. Finally, Giddens (1984) draws a connection between the iterative aspect of social interactions within a community and their contribution to maintaining the overarching ideological and institutional superstructure of the broader society in which the interactions occur. An archaeological object is the materialization of individual agency, as well as the manifestation of a negotiation between individual agency, communal practices and the ideological superstructure of the broader society in which the community is situated (Kohring 2011: 148).

⁴⁴ The concept of connectivity has been mostly used in the exploration of macro-scalar social dynamics across the Mediterranean. Braudel (1995) first applied this concept in his analysis of the political, economic, and social landscape of the Mediterranean during the second half of the sixteenth century AD. Building on Braudel's model, Horden and Purcell (2000) created a new image of the ancient Mediterranean, which acted as a bridge, rather than an obstacle, in a highly interconnected social network. This new model saw the Mediterranean as a

promoting connectivity in society during a time of political fragmentation. Communities have the important role of building and maintaining a common identity through shared ways of doing things and relating to the wider world (Wolf 1956; Yaeger 2000). The fact that similar choices were made by artisans and scribes in different communities in Late Period Egypt reveals a highly connected society in terms of ideology and craft traditions, despite the fragmented sociopolitical situation. For instance, retention of old craft traditions from the New Kingdom suggests cohesive cultural resilience across different communities, while uniform and extensive changes in modes of production of funerary objects and bureaucratic documents suggest that the same communities remained cohesive in processes of institutional reorganization and transformation. The role of the community in consolidating a shared identity through shared techniques of production and contexts of use was essential for societal resilience, as well as institutional reorganization and transformation during a time of political fragmentation. Communities provided the framework for living and acting in the world, consistent with the overarching ideology, but operated independently from the sociopolitical superstructure. The cohesive role of the community as an integrated but independent entity made it a fertile environment for cultivating the kind of institutional change that enabled economic growth in Late Period Egypt.

fluid and well-connected environment characterized by a high degree of mobility and decentralization. More recent scholarship has continued to use connectivity theories to discuss the constant reconfiguration of and interaction between different microregions across the Mediterranean basin (Shaw 2003; Stone 2014). This conceptualization of connectivity in the ancient world makes it a necessary condition for economic growth. I adapt the concept of connectivity to the more limited geographic area of Egypt and use it to explore the interaction and coordination within individual communities and among different communities during the 25th and 26th Dynasties.

2.2.3 Linking theory to objects: identifying efficiency, resilience, reorganization and transformation in the archaeological record

Material evidence is all we have left of the agents of the past and the institutions that they enacted and negotiated. Archaeological theories establish conceptual linkages that enable us to explore the institutional apparatus using the extant archaeological evidence and see the ways in which people interacted with this apparatus so as to affect economic performance. Although economic growth in Late Period Egypt may have been negligible compared with that seen in other preindustrial societies, a closer look at fluctuations of economic performance in Egypt across time reveals patterns of growth that went hand in hand with significant institutional change. North (1981: 14) saw "little or no productivity increase" in ancient Egypt, with the potential exception of the Persian period. But I found an increase in productivity of the funerary industry to be visible already at the beginning of the Late Period. In the following section, I present the model that I used to identify economic growth on the basis of relative efficiency in modes of production. The rest of this chapter outlines the theoretical framework I used to extrapolate patterns of institutional retention, reorganization, and transformation from the extant archaeological record, linking institutional changes at the beginning of the Third Intermediate Period to increased cohesion and lower inequality at the beginning of the Late Period. I use multiple theoretical frameworks that are complementary to one another and necessary to build a narrative that includes multiple agents at multiple levels of society, and accounts for the economic growth seen in Egypt during a time of political fragmentation.

2.2.3.1 Evaluating economic performance by assessing efficiency in production

While historians often refer to the first millennium BC as a time of growth in production and consumption throughout the Mediterranean basin (Neal 2007: 8-10; Bresson 2013: 49;

Manning 2018: 216-17), assessing economic performance in a pre-monetary society in a concrete and precise manner remains a challenge. Only a few scholars have provided an extensive, though still inadequate, methodological discussion of the ways in which economic growth can be measured in pre-monetary societies.⁴⁵ Current scholarship tends to rely excessively on accidents of preservation, and this can lead to logical pitfalls. My analysis relies less on accidents of preservation, instead measuring economic performance on the basis of a comparative assessment of efficiency of the techniques used to produce the extant objects and documents from the New Kingdom until the 25th and 26th Dynasties. This method infers comparative semi-quantitative information about economic performance from a qualitative analysis.

Scholars often treat the extant evidence as representative of an entire population. In Egyptology, for example, Muhs (2016) has made claims about Egyptian economy based on the extant documentary evidence, assuming that the available sample is representative of the entire population. But Muhs fails to acknowledge the limitations of his approach. The vast majority of the documentary evidence from the New Kingdom comes from Deir el-Medina, a

⁴⁵ Economic growth has been inferred from changes in house sizes in Greece (Morris 2005) and by combining data on patterns of consumption of luxury goods and population estimates based on settlement archaeology and surveys of ancient Roman sites, as well as environmental archaeology (Jongman 2007). The former approach assumes that a reduction in house sizes indicates economic decline, without considering the possibility that domestic structures and sizes can change regardless of the economic situation. It is difficult to tell whether ideology or economy was the main driver of structural change in a domestic context. The latter approach makes up for the problem of focusing on one type of evidence by looking at different types. This approach mitigates the problem of the circumstantial nature of archaeological surveys by including different types of evidence from different sites. Given the insufficient data from settlement archaeology in Egypt and environmental archaeology of the Late Period, I took the latter approach by performing a diachronic study of selected funerary objects and bureaucratic documents.

small, isolated, state-sponsored village in Upper Egypt. Very few New Kingdom documents from Lower Egypt have been preserved. Likewise, the vast majority of documents from the Late Period come from Upper Egypt. The extant documents from the Late Period and from Deir el-Medina are nowhere close to representative of the ways in which economic transactions were taking place across the whole of ancient Egypt.⁴⁶ While Muhs's conclusion that the Late Period was a time of intensive economic growth enabled by widespread adoption of written records of private transactions is correct, the methods by which he reached this conclusion are flawed. Treating the production of documents in the same way as one treats the production of funerary objects, however, would enable scholars to expand the pool of available evidence and evaluate efficiency levels based on a wider range of material from different parts of Egypt.

Since economic growth in the ancient world can only be assessed by looking at a broad spectrum of evidence combining archaeological, iconographic, and textual material, I propose an alternative, non-quantitative method of assessing economic growth in Egypt in a comparative manner. This assessment is based on the assumption that production in the ancient world was driven by demand (Warburton 2016: 4), and that the level of efficiency in the modes of production of funerary objects and bureaucratic documents was directly proportional to economic performance. High efficiency in the production system reflects a high demand for and increased production of commodities. This allowed the supply of funerary goods and bureaucratic documents to a broader range of customers at the beginning of the Late Period. For example, efficiency is manifested in the reorganization of the communities of artisans and scribes in the Late Period. Increased specialization favored the

⁴⁶ This is particularly true given the fact that most economic transactions in ancient Egypt took place orally (Kemp 2006: 178; Haring 2003: 252; Eyre 2013: 127). I discuss the importance of orality in economic transactions more extensively in Chapter 5.

production of large numbers of documents and artifacts in a limited amount of time. The effort shown by scribes and artisans to depersonalize the records of private transactions and the production of funerary artifacts made the enforcement of those recorded transactions and the procurement of funerary assemblages more efficient and less reliant on the personal nature of the patronage networks. Reconstructing the dynamics of institutional retention, reorganization, and transformation in Egyptian society enables us to see fluctuations in the demand for funerary objects and bureaucratic documents, which led to more efficient production and economic growth.

2.2.3.2 Reconstructing patterns of institutional change: value theory

The funerary objects and private documents assessed in this dissertation embody the institutional dynamics which created new demand and improved economic performance at the beginning of the Late Period. Value theory provides the conceptual tools that enable an exploration of the institutions that created demand during a time of political fragmentation. Since institutions can be expressed through the process of valuation, it is by reconstructing the valuation process of funerary objects and documents that one can identify the institutional principles that guided it. Several aspects of an object's life are instrumental in reconstructing this process. Flad (2012: 310) suggests that the value of an object is established by three basic processes: production, use, and discard. The fact that most of the objects assessed in this dissertation do not have a secure provenance, and that most of the known archaeological sites were already plundered in antiquity, severely limits our ability to reconstruct their valuation process. The limited evidence of production sites of commodities in general, and lack of evidence for production sites of funerary commodities in the Late Period in particular, further limit this type of assessment.

The objects themselves, along with the extant documentary evidence, however, do

provide enough evidence to support a discussion of value based on production. According to Flad (2012), at least four different aspects of the production process assign value to the final product. First, the scarcity and inherent properties of the raw materials, as well as the labor invested in the production process (Helms 1993; Carter 2007). Second, the social status of the people who produced the objects, as well as the identity of the people for whom they were produced (Inomata 2001). Third, the fact that objects could be recommodified through time implies that an object could undergo a process of reevaluation, which would have followed socially-specific rules different from those guiding the valuation process at the time of production. Fourth, the production of multiple objects that look alike but bear noticeable differences in size and aesthetics implies that different production choices were made for objects that were produced within social contexts that shared the same ideology. The fact that people chose to make some objects more distinguishable than others created a "hierarchy of value" (Flad 2012: 311). By conceptualizing the variables that made some objects more valuable than others, these four aspects of the valuation process enable an exploration of the institutions that generated greater demand for funerary commodities and bureaucratic documents, thereby encouraging an increase in the efficiency of their production at the beginning of the Late Period.

2.2.3.3 Raw materials and labor invested: energy expenditure

In the sections above, I imply that the value of funerary objects is correlated with the quality of the techniques and the materials used for their assemblage and decoration. This assumption requires a more precise definition of "quality."⁴⁷ I approach this issue with a reinterpretation

⁴⁷ An economic assessment of funerary objects must also address modern biases concerning the relationship between ideas of beauty and economic value. Traditional approaches associate the elaborate coffins of the Third Intermediate Period with higher social inequality and concentration of wealth, whereas the less visually

of the concept of energy expenditure, first developed by Tainter (1975; 1978), who used it to draw inferences about social organization on the basis of the energy expended in funerary rituals of native American societies. According to Tainter (1975: 2), energy expenditure can be assessed on the basis of "features of burial as size and elaborateness of the interment facility, method of handling and disposal of the corpse, and the nature of grave associations." These variables are directly proportional to "the amount of corporate involvement and the degree of activity disruption" in the community, which in turn are correlated to the status of the deceased within that community. Tainter's basic premise, based on the correlation between investment of resources and social inequality, still informs modern approaches to mortuary archaeology.⁴⁸ In addition to adopting Tainter's method for my assessment of funerary objects, I also adapt and apply it to my assessment of bureaucratic documents.

appealing work of the Late Period is taken as a sign of economic decline (Chapter 1). Cooney (2007: 258) has recently criticized the way in which Egyptologists insist on looking at ancient Egyptian funerary art through the lens of modern (Western) notions of artistic "quality," a term that is often mistakenly used interchangeably with "value." It is indeed difficult to ascertain whether a coffin was worth more or less during the Late Period than in the Third Intermediate Period. One can only examine the value of an object relative to the specific time period and social context in which the object in question was produced. In this chapter, I explore the extent to which the poor visual appeal of most funerary objects of the 25th and 26th Dynasties can be ascribed to more efficient modes of production developed to meet higher demand. I argue that the increased demand was a consequence of institutional changes that favored social mobility and the expansion of the elite circles. Following this expansion, compromises had to be made in order to make the production process sustainable under new conditions. "Quality," therefore, was sacrificed in favor of efficiency.

⁴⁸ Tainter's conceptualization of energy expenditure has been further complicated and contextualized more recently by Carr (1995), who sees mortuary practices as the outcome of a complex interaction of religious beliefs and other social factors. For example, Metcalf's ethnographic studies have revealed the impact that economic factors can have on funerary practices of modern indigenous populations in Borneo (Metcalf 1981). Cooney (2012; 2017) has already shown that in Egypt during the Third Intermediate Period scarcity of raw

I assess energy expenditure by focusing on the modes of production of a selected group of extant objects which can be dated with relative precision.⁴⁹ In the case of wooden objects such as coffins and Ptah-Sokar-Osiris statues, I focus on the use of underdrawings in the decoration, the use of polychromy in hieroglyphic inscriptions, and the use of an “expensive” synthetic pigment called Egyptian blue.⁵⁰ The use of polychromy and underdrawings suggests a relatively high labor investment, either in terms of time or skills. The use of prestigious

materials caused a modification of funerary practices. Since different aspects of society can materialize in different ways at different times, the multifaceted nature of funerary practices requires a precise definition of the variables used to assess energy expenditure and their contextual evaluation.

⁴⁹ Aside from coffins and shabti boxes, the funerary objects assessed in this dissertation are innovations introduced during the 25th Dynasty, namely Ptah-Sokar-Osiris statues and mummy nets (Aston 2009: 290-293; 302-308). Although coffins and shabti boxes are not innovations in themselves, they display distinctive features that are typical of the 25th and 26th Dynasties (Taylor 2003b; Aston 2009: 269-290, 356-374). The documents assessed in this dissertation can be dated even more precisely, since most of them bear a date which includes the day, month and regnal year during which the document was compiled.

⁵⁰ Egyptian blue is a copper-based synthetic pigment which was first produced in Predynastic Egypt, and whose physical characteristics made it particularly valuable throughout Egyptian history. Since it was a byproduct of faience and glass, the crystals it contains make it reflect light, thus making it particularly suitable for conveying ideas of prestige and status through a symbolic connection with solar regenerative properties. Ample use of Egyptian blue was made on artifacts belonging to royal context, such as the crown of the famous bust of queen Nefertiti in Berlin (ÄM 21300, Wiedemann and Bayer 1982), or the blue starry skies in royal tombs and temple of the 19th and 20th Dynasties (Hatton *et al.* 2008: 1603). In private tombs dated to the New Kingdom, Egyptian blue is seldom found, with rare exceptions among tombs belonging to individuals of particularly high status (Lee and Quirke 2000: 110). In the Late Period, mass production of bronze and faience artifacts implied that copper and lead had to be imported from areas outside of Egypt, such as Laurion, Cyprus and Iran (Masson-Berghoff *et al.* 2018). This increased demand for bronze and faience objects could also be translated into increased demand for Egyptian blue pigment used for the decoration of funerary objects of this period.

materials such as Egyptian blue suggests high investment of resources. Widespread use of underdrawings and polychrome inscriptions suggests that more energy was expended on that coffin compared with one that shows monochrome inscriptions and only limited use of underdrawings in its decoration. In the case of mummy nets, I assess energy expenditure on the basis of the complexity of the decorative pieces of each net. For example, decorations made of beadwork required comparatively more energy expenditure compared with decorations made of molded faience amulets. These variables have been selected because they reflect the quality and amount of labor and resources invested in the decoration of funerary artifacts.

My assessment of the energy expended in the production of bureaucratic documents is based on the details these documents include. The inclusion of information as specific as the full date, including the day, month, and regnal year in which the recorded transaction took place, as well as the names and filiations of all parties involved are taken as indicators of greater energy expenditure. The presence of preventive formulas in a document signals the potential for it to forestall potential legal disputes. The inclusion of a witness list and scribal signature implies that the parties involved did not record the transaction themselves, but instead hired a scribe and required the presence of witnesses who would be able to testify in case of a dispute. One assumes that the addition of witnesses, in particular, would have caused some degree of what Tainter would define as "activity disruption" within the community. Therefore, my assessment of the energy expended on bureaucratic documents is based on the level of detail provided by the scribe, as well as the number of people who were involved in the process of recording the transaction.

A diachronic, comparative assessment of the energy expended on the decoration of funerary objects provides the tools needed to explore patterns of institutional retention on the basis of the choices made by the artisans who produced them. More specifically, an

assessment of energy expenditure provides a framework for comparing similar types of funerary objects from different periods and establishing continuity of institutions. For example, the use of more prestigious pigments and more refined techniques of execution of the decorative program on inner coffins from the New Kingdom through the 25th and 26th Dynasties suggests that inner coffins remained the most valued pieces of the funerary equipment (Chapter 3). The addition of mummy nets made of faience beads and the inclusion of copious amulets during the mummification process at the beginning of the Late Period illustrates another trend of continuity with the Third Intermediate Period, when most of the investment of resources went into the treatment of the wrapped mummy (Chapter 4). These patterns reveal the retention of part of the former institutional framework through which people manufactured trust while allowing institutions to be permeable to change.

Once a baseline of institutional continuity is established, patterns of reorganization and transformation can be identified more precisely and interpreted more accurately in light of contextual data. An assessment of energy expenditure as revealed in technological traditions embedded in funerary objects reveals trends that are specific to each period. For example, from a diachronic perspective, the broad variability in the quality of the wood and decoration of coffins of the 25th and 26th Dynasties suggests a hierarchy of value that is not expressed in Theban coffins of the 21st Dynasty, which instead display relative uniformity in types of materials and the quality of the techniques of execution (Chapter 3). Likewise, patterns of standardization of funerary commodities and bureaucratic documents of the 25th and 26th Dynasties suggest that between the Third Intermediate Period and the Late Period changes in the level of energy expended on these objects had occurred. These changes were a manifestation of the attempt to make the funerary industry and the bureaucratic apparatus more efficient in order to meet increasing demand from new agents.

The presence of these new agents in Late Period Egyptian society is revealed by my

diachronic assessment of energy expenditure. In Chapter 3, I argue that differences between the energy expended on the decoration of coffins of the 21st Dynasty and those of the 25th and 26th Dynasties could have been caused by the economic crisis of the Third Intermediate Period rather than the prosperity of the 25th and 26th Dynasties. While 21st Dynasty coffins received more energy expenditure, the techniques used to decorate them suggest that these objects were produced by and for an exclusive, inward-looking social group. The generally lower level of energy expended on the decoration of coffins dated to the 25th and 26th Dynasties reflects an expansion of elite circles, possibly following the Kushite invasion and the introduction of new members to the elites, followed by a corresponding increase in the demand for funerary commodities. This forced the communities of artisans to devise ways to make the production system more efficient in order to serve a growing market.

Depersonalization of the funerary industry caused the religious effectiveness and value of funerary artifacts to be guaranteed by the organization that produced them, rather than by individual artisans. This reduced considerably the influence of the commissioners on the choices made by the artisans and left space for the development of standardized modes of production.

An assessment of the energy expended in the production of documents recording private transactions reveals similar patterns of reevaluation between the New Kingdom and the Late Period. In Chapter 5, I argue that the value of bureaucratic documents in the Late Period depended on their legal effectiveness in enforcing private transactions. During the New Kingdom documents recording private transactions were rare, and the limited resources that went into their preparation suggest that they bore little legal value. The same type of documents dated to the 25th and 26th Dynasties, however, display a level of detail which would have made them accessible to third parties external to the community. The energy that went into their production made these documents more suitable as evidence during legal

procedures. The acquisition of legal validity of documents recording private transactions at the beginning of the Late Period suggests that local patronage networks were no longer reliable as enforcement agents. This failure of the old patronage system created demand for new ways of enforcing private transactions, resulting in the depersonalization and bureaucratization of private economic enterprise, with the consequent reevaluation of the written record. An exploration of the *longue durée* of the energy expended on funerary objects and bureaucratic documents enables the identification of changes in the valuation process of these objects and reveals institutional changes that enabled the funerary industry and bureaucratic apparatus to keep up with the increasing demand generated by the new elites.

Awareness of the dynamics of production embodied in funerary objects and bureaucratic documents enables an assessment of energy expenditure that does not rely on deposition. The quality of funerary objects and bureaucratic documents is proportional to the energy expended during the production process. Energy expenditure is determined by a number of factors, including the time and material available and the skills of the artisans or scribes involved. A comprehensive assessment of all the materials employed to assemble these ancient artifacts would require expensive archaeometric analyses, many of which are invasive (Zakrzewski *et al.* 2016). Therefore, I base my assessment of energy expenditure on the information that can be gathered by visual inspection of the decorative program on funerary objects and the layout of bureaucratic documents. Moreover, this comparative analysis does not require an exact quantification of the energy expended. My analysis was undertaken using visualizations produced in the software RStudio. These visualizations illustrate the correlation between different variables, such as the type of object and the energy expended on its decoration or composition across time. The same visualizations are also employed to illustrate trends of standardization found in funerary objects from different locations in

Egypt. The nature and conditions of preservation do not always guarantee full access to that object and sometimes make it impossible to collect all the data required by this assessment. Therefore, NA values are included in the visualizations in order to give a sense of the extent to which the sample size varies according to the type of data that are being analyzed.

2.2.3.4 Identity of the artisans: chaîne opératoire, communities of practice, craft specialization and modes of production

The identification of the socioeconomic status of the artisans who produced funerary objects during the Late Period can be inferred partly from the extant documentary evidence, which has been extensively studied by Donker van Heel (1992; 1995; 1997; 1998; 1999; 2014; 2019; 2021; Forthcoming).⁵¹ The available documents from the 25th and 26th Dynasties show that the funerary industry revolved around temple organizations (Donker van Heel 2017-2018). People paid for their funerary equipment by donating land to a temple. The temple personnel would then assign the preparation of the funeral to professional undertakers affiliated with that temple. This suggests that the artisans who were in charge of the production of the funerary objects must have been affiliated, either permanently or temporarily, with a temple (Chapter 4). The value of funerary objects was determined by the organization which commissioned their production, rather than the skill or status of the individual artisans who produced them through direct interaction with the customer. This depersonalization of the funerary industry through temple organizations guaranteed the ritual effectiveness of the funerary objects. This implies that the social value of funerary objects did not have to be reflected in the quality of the craftsmanship. This opened up new opportunities that produced significant changes, enabling an expansion of the communities of artisans and

⁵¹ See also Van Gompel and Hogenboom (2018), Donker van Heel and Martin (2021) and Archidona Ramirez (Forthcoming).

more efficient modes of production.

Finding patterns that expressed and renegotiated individual identities on the basis of the extant funerary artifacts and documentary evidence requires approaches that enable the identification of individual agency and collective actions embedded in the objects. The theoretical discourse concerning communities of practice provides the link between technological choices as expressions of individual identity and the social relationships that influenced these choices. According to this theoretical framework, changes in the "modes of coparticipation" within a community affected the chaîne opératoire (Sassman and Rudolphi 2001: 408). These changes in the ways individuals engaged with technology and material culture were, in turn, reflected in physical changes in the objects produced. For example, evidence from the New Kingdom and the Third Intermediate Period shows that funerary objects were produced on commission by tomb owners during their lifetime, and that artisans were working under the supervision of their customers to produce individualized objects (Cooney 2007; Ikram 2003:189). This, in turn, implies that the customers were directly involved in the choices made by the artisans. On the other hand, funerary objects of the Late Period show modularity and standardization, as well as further evidence suggesting that the production process of funerary commodities was streamlined, with no involvement of the tomb owner (Chapters 3 and 4). As a result, patterns of variation shown by the funerary objects of the New Kingdom reveal the complexity of an elitist system, which relied on the personal relationship between each artisan and his customer. Patterns of uniformity displayed by funerary commodities of the Late Period express organized division of labor, connectivity among the communities of artisans, and the depersonalization of the funerary industry, which created another arena of competition for the nascent middle class, alongside individual commissions which were still reserved for the highest elites.

An analysis of patterns of craft specialization reveals specific ways in which artisans of

the Late Period renegotiated their identities as compared with their predecessors of the New Kingdom and the Third Intermediate Period. This approach also shows the ways in which this renegotiation predisposed communities of artisans in the Late Period to economic growth. I distinguish patterns of "producer specialization" from patterns of "product specialization" embedded in funerary artifacts and documents from the New Kingdom through the Late Period. These two complementary concepts have been discussed by Flad and Hruba (2007: 3). A producer specialist is someone dedicated to a specific task which most other people in the community are unable to perform. Product specialization relies on the idea that specialized products are meant for exchange with people outside the producer's household and that their production is intended to support the producer. The customization of funerary commodities and documents of private transactions from the New Kingdom and Third Intermediate Period reveal patterns of product specialization, whereas the streamlined production of the same type of objects during the Late Period suggests patterns of producer specialization. This shift from product specialization to producer specialization implies a change in the roles of artisans and scribes, which reflect institutional changes that led to higher levels of efficiency and greater economic growth.

While patterns of product specialization during the New Kingdom and Third Intermediate Period reveal dynamics of social stagnation within the communities of artisans, patterns of producer specialization during the Late Period reflect the dynamics of social mobility. In Chapter 3, I argue that the energy expended in the customization of 21st Dynasty coffins shows the conservative attitudes of the society of the Third Intermediate Period, in which the elites tried to preserve their status by monopolizing the funerary industry. This suggests continuity in the structure of the funerary industry from the New Kingdom, when one artisan was in charge of delivering the finished product, and thus needed to be well-versed in different tasks. The limited demand generated by exclusive groups of elites in the

New Kingdom and Third Intermediate Period perpetuated dynamics of product specialization, keeping the communities of artisans relatively small, the socioeconomic status of each individual artisan relatively high, and the production process relatively inefficient. On the other hand, patterns of standardization, as well as broader fluctuations of and overall decrease in the energy expended on funerary objects of the 25th and 26th Dynasties show that artisans with varying skill levels were added to the workforce of the funerary industry in order to make the production process more efficient. An expansion of communities of artisans suggests higher demand coming from expanding elites, as well as new opportunities for social mobility for less skilled, highly specialized artisans.

Dynamics of producer specialization made the funerary industry of the Late Period highly efficient and created new opportunities for social mobility among artisans, reflecting increased social demand. In Chapters 3 and 4, for example, I argue that standardization of the wooden structure of coffins and Ptah-Sokar-Osiris statues suggests that these objects could have been assembled initially without having the final product in mind. This implies that they could have been produced before receiving a specific commission, and that some of them were individualized only when the decoration was applied, while others received standardized treatment throughout the process. Coffins and Ptah-Sokar-Osiris statues reveal patterns of producer specialization, whereby the assemblage and decoration of an object probably were performed by different artisans. The standardized dimensions and consistent modular structure shown by Ptah-Sokar-Osiris statues suggest a further division of tasks, since different standardized modules could have been produced by different artisans. Different levels of standardization and energy expenditure reveal the potential for a division of tasks based on skill level. The less skilled artisans focused on the production of standardized pieces, while more skilled artisans worked exclusively on individualized pieces. This enabled a more efficient use of an expanded workforce, which could better meet

growing demand.

Division of specialized tasks implies a high degree of coordination within communities at multiple levels. Following the analogy of scribal practice as craft, scribal practices also accommodated various degrees of expertise and specialization throughout Egyptian history, particularly during the Late Period. For example, one should not assume that people who could write in one script were necessarily proficient in all scripts (Baines 2007: 46).⁵² The coexistence of different scripts in ancient Egypt suggests that the system lent itself to a complex differential access to literacy.⁵³ Within this system some people had full access to all

⁵² Nor one should assume that in the ancient world in general, and in Ancient Egypt in particular, people who could read could also write, or that everyone who could write did so with the same degree of skill and expertise. Although the extant evidence makes it difficult to detect all the nuances, some can be accessed by observing scribal practice in written documents. The nature of the extant documents makes it possible to investigate the relationship between socioeconomic status and level of literacy among some of the people whose handwriting is preserved in the records. In Ancient Egypt, for example, the “legibility” of handwriting seems to be correlated with the social milieu of the scribes of the Late Period and their family ties (Helck 1984: 73; Donker van Heel 2019). Alternatively, it has been suggested that quality of the handwriting may be correlated to frequency of practice of scribal skills (Verhoeven 2001: 59-60). This latter possibility seems improbable, however, given that one’s handwriting tends to become sloppier, not nicer, as one makes more frequent use of it. Among the people who could write, therefore, those with the most “legible” handwriting are assumed to have occupied a higher position in the community. This accounts for a small percentage of literate people, leaving those with more limited access to literacy unaccounted for. I focus on an assessment of the economic implications of less skilled, though highly specialized scribes in Late Period Egypt.

⁵³ Little is known about the ancient Egyptian conceptualization of the different scripts. For example, *mdw-ntr* has been traditionally interpreted by scholars as the ancient Egyptian term that identifies the hieroglyphic script. If this was the case, the Egyptian phrase could then provide a glimpse into ancient perspectives on scribal practices. However, the link between *mdw-ntr* and the hieroglyphic script has long been disproved (Saleh 1968: 23). Therefore, one can only infer ancient views of scribal practices from circumstantial evidence, on the basis of the contexts in which different scripts are found.

scripts. Others may have had access to one script only. The vast majority may have had access to a very limited range of signs in one or more scripts. Given the essentially utilitarian nature of literacy in ancient Egyptian society, one can infer that people acquired different levels of literacy on the basis of their role in the community. This differential access to literacy provided the opportunity for training different scribes in different ways. In Chapter 5, I argue that in the 25th Dynasty more scribes were trained to acquire the essential skills to produce specific types of standardized documents that were in high demand. Meanwhile, other scribes were proficient in other scripts, which were employed for the production of types of texts that were specifically commissioned. This specialization of scribal practices marked a departure from the lack of uniformity and limited information provided by the documents of the New Kingdom. The dynamics of scribal communities seem to emulate those of the funerary industry, in which every artisan acquired very specific skills that had to be combined with those of other artisans in order to obtain the finished product. In a similar fashion, people who needed their transactions to be recorded had to go to a scribe that specialized in recording these transactions, but the local scribe probably had to ask for the intervention of higher authorities in case of legal disputes regarding the transactions he recorded.

While limited access to scribal practices in the New Kingdom suggests limited involvement of the bureaucratic apparatus in private economic enterprise, broader access to limited expressions of literacy during the Late Period shows that bureaucrats and state authorities had acquired a role in the enforcement of private transactions. Recent paleographic assessments of the extant bureaucratic documents from the New Kingdom show that the vast majority of these documents seem to have been produced by a few highly skilled scribes. More specifically, the lack of consistency and detailed information on documents recording private transactions shows that documenting these transactions was not a routine

practice. This suggests that most economic transactions took the form of oral agreements and that professional scribes were almost exclusively dedicated to the production of documents for the central administration. The introduction of a new script and the standardization of the layout of the same type of documents during the 25th and 26th Dynasties reveals an expansion of scribal communities and the involvement of less skilled, highly specialized scribes. This enabled a division of labor and greater efficiency within the bureaucratic apparatus, which, after the collapse of the patronage system of the New Kingdom, began to take on the legal burden of enforcing private transactions.

By training specialized artisans and scribes, this system of division of labor contributed to the creation of new groups of elites. This correlation between producer specialization and efficiency implies that the division of specialized tasks was a means of improving economic performance by creating interdependence in society (Evans 1978: 126). Dependence on others for the production and procurement of specific commodities enabled an expansion of the range of possible social roles within a community. Patterns of producer specialization in Late Period Egypt suggest that the creation of more opportunities for specialized work in a community not only improved performance, but also enabled more people within that community to advance their socioeconomic status. Interdependence and organization are aspects of the discussion of modes of production, which provides the theoretical underpinnings connecting specialized technological practices with the modes and organization of social interactions in communities of artisans. Among the eight modes of production Peacock (1982: 9-10, 43-46) has identified, the manufactory accounts for most of the funerary evidence from Egypt during the 25th and 26th Dynasties. This involves the collaboration of different specialized artisans in different phases of the production process. A version of this model can also be applied to scribal communities in which different scribes acquired different levels of specialization, which enabled the bureaucratic apparatus to meet

an increasing demand for documents recording private transactions in the Late Period. Specialization of tasks and division of labor implies that the communities of artisans and scribes expanded to create new groups of "middle" elites.

2.2.3.5 Identity of the customer: the "middle" elites

Patterns of variation among funerary objects can also be interpreted in terms of renegotiation of individual identities among the elites within a new institutional framework. Through the lens of complexity theory, it is possible to see institutional transformation embedded in the objects in terms of increased social mobility in Egypt following the collapse of the old patronage system. More specifically, lack of correlation between one's titles and the energy expended on one's funerary equipment is reflective of a highly diverse society, in which purchasing power was no longer tied to royal affiliation (Chapters 3 and 4). Differences among funerary objects produced in a streamlined fashion suggest an attempt to negotiate individual identities within an institutional framework that was no longer based on the commissioner's sociopolitical status, but rather on their socioeconomic status. This system enabled less wealthy people to purchase their own funerary equipment, while leaving space for the production of customized funerary commodities for the wealthier. This unprecedented level of social mobility generated higher demand for funerary commodities and drove increased efficiency in the funerary industry.

By extension, the changing dynamics seen in scribal communities also introduced new opportunities for socioeconomic advancement within the broader society by encouraging private enterprise. In Chapter 5, I argue that the development of a depersonalized, efficient bureaucratic apparatus compensated for the collapse of the earlier institutional system based on local bonds of patronage. The specialized scribes of the Late Period were not as skilled as their counterparts in the New Kingdom or their better trained colleagues in the Late Period,

but their role in the growing bureaucratic workforce of the Late Period created a safer environment for private enterprise. The division of bureaucratic tasks introduced in the Late Period reflected a more active involvement of authorities external to local communities in the enforcement of private transactions. More broadly, this reflected institutional changes that encouraged agents from different sociocultural and socioeconomic environments to trust the new system and undertake more economic activities under the protective umbrella of this new bureaucratic apparatus. This, in turn, created opportunities for the expansion of elite circles, since social advancement was no longer tied to political affiliation and because trust in the new bureaucratic apparatus enabled a wider distribution of wealth. In turn, this made the political sphere and state administration more reliant on private wealth, thus laying the groundwork for the importance of private wealth in public administration later in the first millennium BC (Tacoma 2006). These dynamics of social mobility created the conditions for growth during a time of political fragmentation and competition. As governance brought in more competing agents, so too did society at large.

2.2.3.6 Recommodification

Changing practices of recommodification of funerary objects from the Third Intermediate Period until the 26th Dynasty reflect changes in the valuation process of these objects and the institutional transformation that created the conditions for economic growth. The institutionalization of the practice of coffin reuse during the 21st Dynasty triggered a process of reevaluation which made reused coffins more prestigious than brand new ones (Chapter 3). On the other hand, artisans of the 25th and 26th Dynasties actively tried to show that inner coffins of this period were not recommodified (Chapter 3). The impossibility of recommodifying inner coffins in the Late Period suggests that they had become the ultimate conveyers of the identity and status of the individual buried in them. While in the 21st

Dynasty recommodification of coffins was integrated within the institutional framework, by the end of the Third Intermediate Period this practice was abandoned in favor of the production of brand new coffins. This emphasis on production of new coffins at the beginning of the Late Period generated greater demand.

Changing attitudes toward recommodification of small funerary objects also reflected changing institutions, which made reuse within family units unnecessary and no longer valuable. On the other hand, small funerary objects display a broader potential for reuse outside of family units. While until the New Kingdom all funerary objects tended to be individualized, some funerary commodities of the Third Intermediate Period started to show high potential for recommodification by a lack of individualization. For example, the extant evidence shows that shabtis were already being mass produced in the 21st Dynasty, initiating a trend that arguably extended to a wider range of funerary objects during the 22nd Dynasty, and that led to the development and widespread use of standardization and modularity in the funerary industry of the 25th and 26th Dynasties (Chapter 4). Although there is no direct evidence for the recommodification of small funerary objects at the beginning of the Late Period, their modular structure and, in many instances, the absence of individualized inscriptions suggests that the same object could have been employed in multiple funerary rituals (Chapter 4). Furthermore, small funerary objects and coffins of the 25th and 26th Dynasties did not receive an equal investment of resources. The comparatively lower quality of craftsmanship displayed by the smaller objects of the funerary equipment imply that these were not considered important expressions of individual status in the same way that inner coffins were.⁵⁴ The potential for recommodification displayed by small funerary objects created an opportunity to increase the efficiency of their production, use and reuse, and

⁵⁴ In Chapter 4, I argue that the value of the smaller artifacts lies in their similarity, which acts as a visual statement of social cohesion and belonging to the expanding elite circles.

reveals the importance of the organizations that coordinated these activities.

The corporate system embodied in the funerary objects of the Late Period can be found in other arenas, too. Lack of family reliance and dissolution of local networks of patronage changed the ways in which private transactions were enforced. This is reflected in the limited potential for reuse displayed by the papyri of the Late Period, which suggests that these records were meant to be kept for longer than the ostraca of the New Kingdom. This made reliance on personal memory of local witnesses in the enforcement of transactions unnecessary. Moreover, the ease with which papyri can be stored and transported for long distances suggests that these records were meant to be available to enforcement agents outside of local communities. This enabled people to purchase from and sell goods to different communities in Egypt under the protective umbrella of this new bureaucratic system. The systematic involvement of external organizations in the enforcement of private transactions marked the dissolution of local family ties and network of patronage, and reflects the individualism of Late Period Egyptian society, which became more mobile and competitive.

2.2.3.7 Hierarchy of value

The hierarchy of value displayed by coffins dated to the 25th and 26th Dynasties suggests that the funerary industry developed modes of production which supported demand based on what a customer was able to afford or was willing to invest. The broad variability in the quality of their decorative programs suggests that these objects were designed to convey the socioeconomic status of specific individuals. This trend is in stark contrast with the trend shown by earlier coffins of the 21st Dynasty, whose reuse implies that their decorative programs were designed to convey the prestige of the family to which the deceased belonged (Chapter 3). The extensive use of high quality techniques of execution on 21st Dynasty

coffins suggests that these objects were designed to preserve the group identity of close-knit, exclusive social circles which demanded internal reliance (Chapter 3). This uniformity showed an effort to preserve class status and family prestige, since the arena of competition was quite narrow among elites that were initiated to the same knowledge of restricted texts and images. On the other hand, the variability seen on coffins of the 25th and 26th Dynasties expressed a more obvious hierarchy of value, which I suggest reflected the socioeconomic status of the deceased, which, in turn, reflected a more individualistic society in which funerary commodities became accessible to anyone who could afford them. This institutional change increased the demand for funerary commodities by significantly expanding their market.

Assessing the hierarchy of value of bureaucratic documents requires consideration of these documents as part of a broader range of expression of scribal practices, which changed their relationship to one another from the New Kingdom to the Late Period. These expressions included administrative documents, private documents and religious texts written on papyrus scrolls. In the New Kingdom, the same type of script was used in all three kinds of texts, all of which were produced by the same small group of highly skilled scribes. This suggests that, like coffins before the Late Period, the texts of the New Kingdom revealed the absence of a hierarchy of value between legal and religious texts, since these texts were produced by and for only the high elites.⁵⁵ On the other hand, the extant evidence from the Late Period not only shows that documents recording private transactions acquired legal value, but also places them within a broader hierarchy of value with respect to other types of texts. The fact that documentary texts were produced using a simplified cursive script rather than that used for texts found in funerary contexts shows a dichotomy between legal value

⁵⁵ An incipient diversification between functional and formal scripts has already been identified by Haring in 20th Dynasty Deir el-Medina (2018).

and religious/symbolic value and the specialists who could manufacture that value. The introduction of this new type of hierarchy of value of documents in the Late Period suggests a growing separation between the religious and legal spheres, which was likely an expression of different scribal training, not to mention different social circles. The introduction of a hierarchy of value in funerary objects and texts of the Late Period suggests that specialized labor was employed to make the production of these objects more efficient in order to meet the demand generated by the new elites.

3. Exploring economic growth through a technical assessment of coffins

3.1 Introduction

In Chapter 2, I use resilience theory as the interpretative framework to understand the social dynamics that led to economic growth in Late Period Egypt, after the collapse of the royal power at the end of the New Kingdom. From a socioeconomic perspective, the theoretical framework provided by New Institutional Economics makes it possible to understand cultural resilience and economic growth in terms of extensive and uniform patterns of institutional retention and change. The evidence from the Late Period shows that extensive and uniform retention of some institutions guaranteed a baseline of cultural continuity, which provided the foundations for new opportunities created by the reorganization or transformation of other institutions. The collapse of the old societal structure based on a rigid hierarchical system, for instance, generated social mobility and new opportunities for innovation and growth. I suggest that institutional retention and change can be detected in the extant archaeological record of the Late Period through the lens of value theory and complexity theory. Diachronic patterns of institutional retention caused the preservation of some old aspects of the valuation system, which ensured long-term cultural resilience. On the other hand, institutional change affected aspects of valuation that reveal changes in the ways in which the identities of the artisans, the scribes, as well as those of their customers were constructed, providing opportunities for social mobility. I argue that synchronic institutional uniformity indicates connectivity among the communities of artisans, and that this connectivity enabled high levels of efficiency in the modes of production through craft specialization. A comparative assessment of efficiency levels with respect to earlier periods can shed new light onto economic performance in Egypt at the beginning of the Late Period. Long-term cultural resilience, combined with social mobility and connectivity among communities of artisans

and scribes made funerary commodities more accessible to a broader audience and improved economic performance at the beginning of the Late Period.

This chapter challenges the traditional assumptions that ancient Egyptian coffins were always custom-made, and that they were the prerogative of individuals whose socioeconomic status relied upon connection with the royal power (Chapter 1). Egyptologists have traditionally looked at Egyptian coffins as reflections of religious practices and beliefs that were imposed from the top-down. This approach, however, does not take into account the broader social dynamics that created the demand for funerary objects after the New Kingdom. Only recently, Stövesand (2018; 2019) has begun to explore the nuances of regional variations in iconographic patterns on coffins of the Late Period in any detail, but without explicitly connecting them to expressions of bottom-up phenomena of local negotiations of the overarching ideology. Moreover, Taylor (2018: 382) has introduced the possibility that synchronic variations of the iconography on coffins of this period may not be correlated to the political or religious offices held by their owners. Instead, these variations may be manifestations of the purchasing power of those who commissioned them, who may have had means of acquiring wealth that were unrelated to their "job titles." In other words, at the beginning of the Late Period wealth and status did not seem to be correlated, and the quality of one's funerary equipment depended on the amount of wealth that was invested in its production.

Cooney's work has shown that coffins can reveal economic trends that were driven from the top-down during the New Kingdom and shifted during the Third Intermediate Period. Her work on Ramesside coffins has shown that each coffin was specifically commissioned by its owner during his/her lifetime, and that the demand for funerary commodities in the New Kingdom was driven by the royal authority, which sponsored the funerary industry (Cooney 2007). More recently, Cooney (2017; 2018a; 2019) has shown that scarcity of raw materials

at the end of the New Kingdom prompted the elites of the 21st Dynasty to reuse coffins. I argue that these elites reused coffins in such a way as to preclude access to funerary commodities to potential new members and preserve the existing close-knit elite circles. By contrast, my investigation of the modes of production of coffins directly after the Third Intermediate Period reveals that customized coffins at the beginning of the Late Period were rare. This means that the production of coffins was standardized and made more efficient in order to meet the demand of the expanding circles of elites. The 25th and 26th Dynasty coffins assessed in this chapter reveal lower social inequality that is specific to this period and predisposed the society to growth.

3.2 Methods

3.2.1 Selection of the material: the problem of elite bias

An assessment of the ancient Egyptian economy based on coffins has to take into account the fact that funerary commodities were the prerogatives of the elites. On the basis of the principles of functional materialism, Cooney (2007: 265) argues that every burial ideally had to include a coffin set, composed of an inner, middle and outer coffin, each of which would be decorated with costly material and skilled craftsmanship. The reality of social inequality, however, imposed some degree of adjustment to the available resources, which varied according to the status and wealth of the individual and their family. In a survey of the extant Theban non-royal tombs of the 17th and 18th Dynasty, Smith (1992) considers the variability of the quality and range of the funerary equipment and concludes that all the extant burials are based on the same standardized funerary practice, and that differences were dictated by status and wealth. Moreover, because most people in ancient Egypt were buried without a coffin or funerary equipment all data collected on ancient Egyptian burials is necessarily skewed. Since most burials are not visible to us, Egyptologists have had to focus their work

on the elite whose burial equipment is at least partly extant. An economic assessment of coffins, therefore, is bound to focus on the portion of the economy that revolved around the elites.

For the purposes of this dissertation, however, a diachronic assessment of the extant funerary material can be used to make inferences about social mobility within, as well as outside of the highest elite circles. I suggest that the changes undergone by coffins between the New Kingdom and the Third Intermediate Period are manifestations of broader societal trends of stagnation until the 21st Dynasty. On the other hand, the higher levels of efficiency seen in the coffins of the Late Period indicate an expansion of the elite circles during the 25th and 26th Dynasties. My assessment shows that the new dynamics in the elite circles had repercussions on the dynamics within the communities of artisans, whose social role changed with respect to that of their counterparts of the New Kingdom. While the elite circles expanded, the artisans of the funerary industry seem to have lost the high sociopolitical and socioeconomic status they enjoyed during the New Kingdom. Within the *caveat* that absence of evidence cannot be taken as evidence of absence, the fact that no tombs of artisans of the Late Period survive implies that a conceptual shift may have taken place between the New Kingdom and the Late Period, which was expressed in a reconfiguration of mortuary practices in which artisans are no longer represented at the beginning of the Late Period. This could mean that some artisans might have still received a "perfect burial," but their elite status derived from other types of occupations expressed by the titles written on their coffins, not by their activities as artisans. In other words, coffins of the 25th and 26th Dynasties show that serving as an artisan of the funerary industry may have no longer been a source of prestige at the beginning of the Late Period. This hypothesis is supported by evidence of depersonalization of the funerary industry and bureaucratic apparatus, as well as evidence of

an emerging new pocket of "middle" elites in the Late Period, of whom probably few had the purchasing power to commission their own coffin.

3.2.2 Selection of the material: the problem of the coffin set

Another challenge is the identification of coffins that originally belonged to coffin sets. Although most of the extant coffins were part of a set, recent archaeological excavations have shown that burials with only one coffin also occurred in the Late Period (Gosford 2014). On the basis of the extant evidence, a burial could include a minimum of one coffin and a maximum of three nested coffins. The fact that the vast majority of the coffins whose archaeological context is known come from disturbed burials makes it difficult to identify the coffins that originally belonged to a coffin set. To this, one must consider the possibility that for each burial many coffins were probably displayed during the funerary ritual, but only one of them may have been buried. Egyptologists tend to identify inner, middle and outer coffins on the basis of dimensions and iconography. My assessment below shows that dimensions only help to identify coffins that were produced without a specific commission, as if they were going to be part of a set. Since the dimensions of most coffins of the 25th and 26th Dynasties seem to have been standardized, evidence suggests that looking at dimensions does not help to distinguish the coffins that were part of a set from those that were used individually. An assessment of iconography is equally unhelpful, since the extant evidence shows that coffins bearing the iconography and dimensions of "middle" coffins were in fact used as the primary containers of the mummy.⁵⁶

In some cases, the identification of coffin sets is made difficult by the complete loss of information on the archaeological context of some of the artifacts that are now stored in

⁵⁶ The inner coffin of Harwa (Turin S.5226) has the dimensions and features of a middle or outer coffin, but was used as an inner coffin because the length of the mummy of its owner was above average (180 cm).

museums. Since it was common for merchants during the Eighteenth and Nineteenth centuries to create fake assemblages, sometimes by combining artifacts from different periods, unprovenanced artifacts can only provide limited information about coffin sets. Thanks to the texts inscribed on the coffins, however, which often include the name and title(s) of the deceased, it is sometimes possible to determine whether a coffin belonged to a set of nested coffins built for the same person. Therefore, in Spreadsheet A I include the name of the owner of each coffin and his/her title(s) as variables that have enabled scholars to determine whether those coffins belonged to a set. Sometimes, coffins that do not belong to a set have still been identified in publications or the online catalogues of museums as inner, middle or outer coffins on the basis of dimensions or iconography. This is reflected in the dataset by adding the variable "Coffin_type," as well as a variable indicating whether the coffin belongs to a set.

The variables I selected are designed to convey known contextual information about the coffins assessed, as well as the difficulties encountered during the process of data collection. Variability of materials and shapes of coffins is reflected in the dataset, which signals the occurrence of rectangular coffins instead of wooden anthropoid outer coffins, or cartonnage cases instead of wooden anthropoid inner coffins. This chapter focuses on wooden inner, middle, and outer anthropoid coffins, with the addition of limited data available on rectangular coffins and cartonnage cases. Furthermore, due to the bad state of preservation of some coffins and lack of access to others, not all coffins provide the same quantity of data. The blank spaces in Spreadsheet A indicate that the extant evidence and documentation do not provide sufficient information regarding the object or the assemblage of which it was part. In some cases, for example, it was impossible to take the measurements or assess the decoration of the interior surface because the lid could not be removed without damaging the object. In other cases, I was unable to inspect the object personally, but could gather some

data from the photos published online or made available to me by the museum staff. For this reason, the sample size for each visualization may vary according to the number of objects that provide the type of information assessed in that visualization. For transparency, therefore, each visualization includes NA values.

3.2.3 Terminology

The terminology I use to refer to different parts of a coffin follows the protocol established by the research team at the Fitzwilliam Museum in Cambridge (UK), with some additions and revisions applied by the team at the Metropolitan Museum of Art.⁵⁷ According to the terminology adopted at the Fitzwilliam, the basic components of an ancient Egyptian coffin are the following:

- The coffin box⁵⁸ is "the part of the coffin in which the body was placed" (Strudwick *et al.* 2016: 247).
 - The coffin base is "the bottom (long axis) of the coffin box" (*ibid.*).
 - The footboard is "the short panel at the foot end of the coffin box and lid" (*ibid.*).
 - Cartonnage is "a laminated material constructed of layers of linen or papyrus soaked in glue, with a layer of paste on the internal and on the external surface" (*ibid.*).
- Sometimes cartonnage was used to make coffins (Dawson *et al.* 2016: 92-94).

⁵⁷ The Cambridge team is led by Helen Strudwick and Julie Dawson, who have collaborated with other scholars from international research institutions to devise a protocol for assessing techniques of production and decoration of ancient Egyptian coffins of the Third Intermediate and Late Periods. More recently, I was part of the team at the Metropolitan Museum of Art led by Janice Kamrin and Anna Serotta, who have undertaken a similar task, focusing on coffins of the Late Period.

⁵⁸ The latter is often referred to as "case" or "trough."

- The term "paste" is used to identify the material used for the preparation layer and as filler, regardless of its composition.
- The preparation layer is "a layer of paste applied across the coffin to provide a smooth, neutral surface to which paint can be applied" (Strudwick *et al.* 2016: 247).

To the terminology established by the team at the Fitzwilliam, the research team at the Metropolitan Museum of Art has added more terms that identify specific areas of the coffin lid and box and the materials used to decorate them. The following list only includes the terms that will be used in this chapter:

- The lip is the ledge of the box and the lid.
- The seam is the area where the lips of box and lid join.
- The head end is the area of the coffin lid and box that is occupied by the face and the headdress.
- The top of the head is the area that extends across the lid and the box where one can often see the continuation of the bands of the headdress, or a circular white area containing a figurative scene.

The above definitions will help the reader follow the analytical process undertaken in this chapter, as well as the discussion of the variables I include in my dataset.

3.2.4 Assessing energy expenditure through materials and labor invested

Materials and labor invested in coffin decoration are evaluated in terms of precision of execution and complexity of the decoration, including the presence or absence of inlays, gilding, or reliefs. The level of precision and complexity of the decorative program on the coffins reflects the speed at which the decoration was executed, as well as the resources invested in its execution, in terms of materials, time and skill. Precision is assessed on the basis of the meticulousness with which the artisans drew the hieroglyphs and made the text fit

within the register lines. On coffins of the 21st Dynasty, for example, hieroglyphs are carefully drawn and those inscriptions tend to be designed to fit perfectly within the register lines (Fig. 3.1). Such high levels of precision are rarely found on coffins of the Late Period, most of which show cursive hieroglyphs, which were drawn quickly and often overlap with the register lines (Fig. 3.2). These differences in precision between coffins of the Third Intermediate Period and coffins of the Late Period reveal a trend that is reflected in other aspects of the decorative program.

If the assessment of precision is relatively straightforward, the assessment of complexity is based on multiple variables. While inlays and gilding are assessed across the entire surface of each coffin, carving is only recorded when it is used for hieroglyphs. The variable labelled "Relief" excludes the area of the face, which is always in relief, but includes both reliefs produced using the physical properties of paint, which was common practice during the 21st Dynasty, or by carving details into the wood (Fig. 3.3). The other variables I have selected in Spreadsheet A enable an estimation of complexity based on an assessment of the use of polychromy in the decorative program and inscriptions on the interior and the exterior surface of box and lid.⁵⁹ In the assessment of both texts and decoration, it is assumed that the use of one color takes the least amount of time, material, and skill. The use of more than one color

⁵⁹ Isolating different areas of the same coffin was necessary because of insufficient documentation available for coffins that could not be examined closely. This documentation often includes photographs of the exterior surface of the lid, but does not always include photographs of the exterior of the box and the interior of lid and box. Sometimes, photographs of the interior surface of either the box or the lid are available, but since the interior decoration of a box may not reflect the interior decoration of the lid, variables have been identified that make this dataset transparent and representative of the available data. The assessment of text only considers extensive texts, excluding isolated sign groups, such as those that identify figures in the decorative program. For example, sign groups that identify the figure of Nut on the interior surface of a coffin are not considered text but part of the decorative program (Fig. 3.4).

for texts and decoration can reflect more or less energy expenditure depending on the number of colors used and the ways in which they were applied. The highest level of energy expenditure identifies hieroglyphic inscriptions and images where two or more colors were used as fillers of hieroglyphs and images outlined in black (labelled "Polychrome" in Spreadsheet A). Another, less labor-intensive way of using paint on texts is identified as "Black & Filling." An example of this technique can be found on the coffin of Kek (AMM 4-c), where the hieroglyphs of the inscriptions were all outlined with black paint, while the filling was highly diluted Egyptian blue, the color of which is not always easily identifiable, thus creating the visual effect of a dark stain (Fig. 3.5). This technique required less energy expenditure compared to polychromy, and it was frequently applied on inscriptions, the majority of which are monochrome (Fig. 3.6). Since texts applied using the "Black & Filling" technique are often indistinguishable from monochrome texts to the naked eye, and given that both these techniques required less energy expenditure than polychromy, I am going to treat them as equivalent in terms of complexity level.

The assessment of the decorative program of the selected coffins was performed by means of multispectral imaging, which provided a starting point that subsequently enabled an assessment of the level of complexity by visual inspection. The use of VIL (Visible Induced Luminescence) enabled the identification of the areas of application of Egyptian blue, which, due to decay or earlier conservation treatments, now appears of a different color, often black, to the naked eye.⁶⁰ Although this type of analysis was not performed on all the coffins assessed in this dissertation, in some cases the pigment could be identified through visual

⁶⁰ VIL is an imaging technique recently developed by Giovanni Verri (Verri and Saunders 2014). The variable "VIL" in Spreadsheet A shows the objects that have been photographed using Visible Induced Luminescence.

inspection. Spreadsheet A shows the number of objects on which the pigment was identified through VIL, and the objects on which this pigment has been identified through visual inspection. All the coffins on which VIL was performed display the use of Egyptian blue. But the methods used to apply Egyptian blue on coffins of the Third Intermediate Period are very different compared to the ways in which the same pigment was used on coffins of the Late Period. Below I suggest that these differences in the application of colors between coffins of the 21st Dynasty and coffins of the 25th and 26th Dynasties reveal changes in the organization of labor of the funerary industry.

Different levels of precision in coffin inscriptions are correlated with different levels of complexity. Hieroglyphs displaying high levels of precision also tend to show more complex use of paint. For example, the hieroglyphs on the inner coffin of the Lady of the House Nestawedjat (EA22812,a) are drawn very precisely throughout the surface, but the treatment of their color varies in complexity on the basis of the color of the ground layer. When the ground layer is yellow, the hieroglyphic signs were drawn and filled entirely with black paint. In areas with a white ground layer, hieroglyphs were applied using the "Black & Filling" technique (Fig. 3.7). The alternate use of these two techniques is probably connected with the visual effect that was intended by the artisans, who were experimenting with the reflective properties of these two types of paint.⁶¹ In a limited number of cases, high levels of precision were combined with complex polychrome patterns in the texts. Polychromy is rarely found in texts of the Late Period, with the exception of customized coffins and of short standardized

⁶¹ The yellow paint probably contains orpiment, whose golden flakes bear reflective properties similar to the crystals of Egyptian blue. By alternating these two pigments, therefore, the artisans made the texts "shine" in two different ways: the black texts on the yellow ground layer appeared as "backlit," while the hieroglyphs filled with Egyptian blue on the white ground layer appeared as if they shone in their own light. These effects are no longer visible because both pigments have decayed in time and the surface layer is covered with dust.

formulas, the signs of which are big enough to be considered as part of the decorative program (Fig. 3.8). Overall, precision and complexity are directly proportional, and high precision in monochrome texts occur in combination with complex use of pigments to create effects that are indicative of high energy expenditure.

Although artisans made more use of polychromy on the decorative program than on the inscriptions, the decorative program displays broad fluctuations of complexity on the basis of the ways in which colors were applied (Fig. 3.9). The label "Linedrawing" in Spreadsheet A identifies areas of lower energy expenditure, where one or two colors were used to draw the outlines of the figures with minimal or no addition of a filler (Fig. 3.10). A similarly low level of energy expenditure is seen on objects where different colors were employed to draw and fill the figures without the aid of an outline ("Polychrome_without_outline," Fig. 3.11). The label "Polychrome registers" identifies the surfaces that only show texts, with registers outlined in black and filled with paint of different colors, usually yellow and white (Fig. 3.12). The same label also identifies areas where the register lines were outlined in black and filled with multiple colors (Fig. 3.13). The label "Monochrome_registers" identifies cases where the register lines were outlined in black and filled with one color. "None" indicates that the wood is left bare, whereas "White_ground" indicates that the bare wood is covered by the preparation layer of white paste without the addition of texts or images. Since it would be difficult to evaluate the relative level of energy expenditure among the techniques that were less complex, my assessment focuses on the frequency of use of the highest levels of complexity on images and texts. Therefore, "Polychrome" texts and images are considered instances of high complexity, while "Monochrome" texts, as well as texts applied using the "Black & Filling" technique, "Linedrawings," "Polychrome_without_outline," "Monochrome_registers" and "Polychrome_registers" required relatively lower energy expenditure and are considered instances of low complexity.

Underneath the decorative layer on the surface, inconsistencies in specific structural features can reveal further differences in energy expenditure. Most of the coffins are assembled using multiple pieces of wood, the number of which is not always consistent and cannot always be determined precisely, because the wooden planks are often covered by the preparatory layer and CT scans are rarely performed on ancient Egyptian coffins. For the purposes of this dissertation, it is sufficient to determine whether a coffin box and lid were carved out of a single tree trunk, although sometimes the preparation layer is too thick and uniform to allow even this basic assessment. The underlying assumption is that procuring two whole tree trunks in order to produce a lid and a box required a considerable amount of resources and manpower, which would make the finished product inherently more valuable. The available data suggest that the energy expended on the production of the infrastructure of a coffin was proportional to the energy expended on the technique of execution of its decorative program. Thus, a coffin like that of Irteru (BM EA6695) shows clear evidence that at least its box was carved out of a single tree trunk, its decorative program is polychrome throughout and the texts were applied using the "Black & Filling" technique with high precision. The interior was left undecorated probably in order to display the quality of the wood during the funerary ritual (Fig. 3.14). Similarly, thicker wood planks were used to assemble the coffin of Paeftjauneith (Leiden AMM 5-e), whose decorative program displays the highest levels of energy expenditure, with high precision, polychrome texts and polychrome decorations. Thus, the energy expended on the decorative program appears to reflect the energy expended in the production of the whole coffin.

3.2.4.1 A diachronic assessment of energy expenditure reveals patterns of institutional retention

An assessment of different levels of energy expenditure in different areas of the same coffin shows patterns of institutional retention. Given that the areas that received the most energy expenditure were the focal points of the funerary ritual, the fact that the same high levels of energy expenditure were consistently applied to the lid on all the coffins of the dataset reveal institutions that remained consistent across time since at least the New Kingdom (Fig. 3.9). In general, consistently higher levels of energy expenditure on the head end of the exterior of coffin lids suggests that this was a focal point for the activation of the coffins. A careful assessment of both the interior and exterior of coffins shows that different areas of the interior surface and different areas of the exterior surface were treated differently. For example, the interior surface of the outer box Turin S. 5221 from the Valley of the Queens shows polychromy on the base and along the sides (Fig. 3.15), but the decoration of the footboard was applied directly with paint without the aid of underdrawings (Fig. 3.16). Similarly, an assessment of the exterior of the inner coffin of Ankhshepenwepet (MMA 25.3.202a,b) has shown that most of the decoration of the lid includes underdrawings, but the decoration of the head end, the footboard and the base has no underdrawings. Unlike the decoration on the footboard and the base, however, on the head end the paint is applied evenly and precisely, with extensive use of Egyptian blue on the wig (Fig. 3.17). This is also the case on other coffins which exhibit a low degree of precision everywhere else on the interior and the exterior surface. For example, many middle and outer coffins display polychrome decoration only on the head end, while the rest of the decoration consists of one line of text with monochrome register lines along the sides of the box and in the center of the lid (Fig. 3.18-3.19). The high level of energy expenditure on the head end of coffins of the 25th and 26th Dynasty in general suggests that this area could have had a special role in the

activation of the coffin, as was the case already with coffins of the Ramesside Period (Cooney 2007: 251). This diachronic assessment of the energy expended on different parts of a coffin reveals patterns of institutional retention from the New Kingdom through the Late Period, which enabled cultural resilience during a time of collapse, and laid the foundations for growth.

3.2.4.2 Fluctuations of energy expenditure reveal efficiency

Although artisans of the Third Intermediate Period and the Late Period concentrated most of the energy expenditure on the focal points that would enable the activation of the coffin during the funerary ritual, coffins from the Late Period display broader fluctuations of energy expenditure across their surface compared to earlier coffins. These changes reflect patterns of institutional reorganization and transformation that made the production system more efficient. Fig. 3.20 and 3.21 show the distribution of Egyptian blue in coffin Leiden AMM 18-h dated to the Third Intermediate Period and coffin Leiden AMM 4-c dated to the Late Period. Although it was not possible to photograph the interior of the lid and the case, nor the back of the case of any of the coffins, an assessment of the exterior of the lid was sufficient to establish a trend which applies to all the coffins that have been examined in this dissertation. On the coffin from the Late Period, the distribution of Egyptian blue is limited to the register lines, some details of the figures in the iconography, the wig, and details of the collar and plinth. On the other hand, on 21st Dynasty coffins the same pigment is used in more complex ways, ranging from reliefs, to highlighting minute details of figures and of individual hieroglyphic signs, adding to the complexity of the polychromy of the decoration.

The overall higher complexity of the decorative program of Third Intermediate Period coffins is immediately visible in the relief work they often display, which reflects the time and labor invested in their decoration. These coffins show that the artisans who decorated

them were skilled in creating complex relief figures by taking advantage of the physical properties of pigments. For example, Egyptian blue and green were often employed to create this effect (Dawson *et al.* 2016: Fig. 79), which was probably designed to imitate inlays of expensive hard stones (Niwinski 1988: 12). This kind of technique was never employed on coffins of the Late Period, which only show limited use of actual inlays in glass and bronze, only in few cases, mostly from Lower Egypt (BM EA 27735; BM EA 22812,a; BM EA 22813,b; Liverpool M.13992; Florence 10503; Florence 10507b; Florence 10508; Florence 10511; Florence 10512; Florence 10513a; Florence 10514; Florence 10514b; Florence 10514c; Florence 10514d; Berlin ÄM 51; Berlin ÄM 52). The scarcity of reliefs on coffins dated to the Late Period shows that artisans no longer spent time and resources producing elaborate decorations. This does not imply that artisans of the Late Period were less skilled than those of the Third Intermediate Period. This rather implies that the artisans of the Late Period used techniques that were more efficient because they had to keep up with high demand for funerary commodities.

From a diachronic perspective, the different ways in which color was applied to the decorative program reveal changes in the *modus operandi* of the funerary industry between the Third Intermediate Period and the Late Period. All of the extant 21st Dynasty coffins show polychrome decorations on the interior and exterior surface, and Spreadsheet B shows that most of the texts on these coffins also exhibit complex patterns of polychromy. On the other hand, Fig. 3.6 and 3.9 shows that the exterior decoration of Late Period coffin lids is always polychrome, and that the exterior decoration of most boxes and bases of inner, middle, and outer coffins is polychrome, while the vast majority of the texts on lids and boxes exhibit lower levels of complexity. The interiors of boxes and lids show more variation in technique of execution, but, overall, comparatively fewer resources were invested in the decoration of this area. The interior surface is sometimes uninscribed and undecorated, it can bear line

drawings or be covered with monochrome inscriptions, and rarely shows polychrome inscriptions. I suggest that these broad fluctuations of energy expenditure seen on Late Period coffins compared to the more uniform patterns of high energy expenditure seen on coffins of the Third Intermediate Period reflect deliberate choices aimed at making the production of coffins more efficient.

In particular, differences in the energy expended on the inscriptions of coffins from the Third Intermediate Period and the Late Period show a selective use of polychromy in texts of the Late Period, which indicates higher efficiency. The level of complexity of Third Intermediate Period coffins is best illustrated by the VIL image of Turin C. 2226, where Egyptian blue was used to highlight details of the head and beak, the profile of the wing, and the claws of the *mwt*-bird in the inscription (Fig. 3.22). In Late Period coffins, on the other hand, hieroglyphic inscriptions were most commonly applied using less complex techniques, but the detailed polychrome work seen on coffins of the Third Intermediate Period is never found. In some cases, polychromy, monochromy and the "Black & Filling" technique can occur on different areas of the same coffin, each of which is used in the most efficient manner. For example, the texts on the outer coffin of Takhebkhennem (BM EA6690A) are polychrome on the interior and exterior of the box, but they are executed using the "Black & Filling" and monochrome techniques on the exterior of the lid. The texts on the lid are extensive and had to fit within a limited space, thus making the use of polychromy more cumbersome and time consuming (Fig. 3.23). On the other hand, the few hieroglyphic signs on the box occupy a wide area, which enabled a use of polychromy that was less labor-intensive compared to the level of complexity required by smaller hieroglyphic signs (Fig. 3.24).

These fluctuations in the energy expended on different areas of the same coffin reveal specific ways in which the production of coffins was made more efficient in the Late Period.

The underdrawings on the lid of the inner coffin of Ankhshepenwepet, for example, were executed by an experienced hand, but without precision. The face, the headdress, the interior and the exterior of the base were decorated without the aid of underdrawings by experienced artisans who were able to execute the decoration by means of applying paint directly to the surface with a steady hand. On the face and the headdress in particular, it is clear that the outline of the eyes and the ears, as well as the details of the wig were added last with black paint (Fig. 3.25 and 3.26). This suggests that the artisans took very little time to complete the decoration, and made use of underdrawings only when it was absolutely necessary. By using underdrawings on the lid, therefore, the artisans could afford to be less precise, hence faster, in the application of pigments without compromising the identification of the figures depicted, thus guaranteeing the symbolic efficacy of the decorative program. This implies that the artisans decorating coffins in the 25th and 26th Dynasties used methods aimed at speeding up the decoration process without compromising the ritual efficacy of the objects. In this dissertation, I suggest that these differences in the techniques used to decorate and inscribe coffins reflect low efficiency and high social inequality in the Third Intermediate Period, and high efficiency and lower social inequality in the Late Period.

3.2.5 Changing patterns of re Commodification reveal social mobility

Changing patterns of re Commodification reflect exclusivity among the elites of the Third Intermediate Period and expansion of the elite circles at the beginning of the Late Period. Practices of reuse of coffins during the Third Intermediate Period have been studied extensively by Cooney (2017; 2018a; 2019) and have shown the ways in which, in a context of scarcity of resources, economic necessity and ideology blended together to preserve the exclusivity of the existing elite circles. The fact that, in some cases, the name of the previous owner of a coffin would appear alongside the name of the new owner of the same coffin

suggests that there was little interest in hiding some reuse. In fact, the name of the new owner was sometimes added in a way that makes the reuse noticeable. The presence of the names of the current as well as the previous owner of the same coffin suggests that the object was the manifestation of the social contract that regulated coffin reuse, since the object's potential for recommodification was limited by family ties (Cooney 2017: 104).⁶² Therefore, as reuse became a necessity during a time of scarcity of resources, it was organically incorporated into the ideology by being assigned value. Practices of coffin reuse strengthened the personal bonds among family members of the current elites, who monopolized the funerary industry. The conservatism of the current elites showed institutional continuity with the New Kingdom and resulted in social stagnation.

Lack of reuse of coffins at the beginning of the Late Period shows changes in the valuation process that reveal institutional transformations, which manifested in terms of social mobility. Changes in the proportions of anthropoid coffins between the Third Intermediate and the Late Period, as well as the addition of back pillars and plinths to the structure of coffins of the Late Period did not allow the reuse of earlier coffins. This suggests that artisans of the Late Period had easier access to wood supplies, which enabled them to produce brand new coffins. This idea is supported by the yet unpublished research work undertaken by Caroline Joan Arbuckle MacLeod, who found that the Late Period yields the largest number of coffins produced using high quality imported woods. Moreover, the fact that the decoration of the exterior of many inner coffins of the 25th and 26th Dynasty was applied after the coffins were closed and sealed raises the possibility that reuse of inner

⁶² Cooney's current research is showing that reuse tends to be advertised on coffins belonging to women and hidden on coffins belonging to men, thus highlighting the patriarchal structure of Third Intermediate Period society.

coffins underwent a process of revaluation during the Late Period.⁶³ Reusing these coffins would require removing the entire old decoration and applying a new one. This implies that coffin reuse would have acquired an entirely new meaning under these new conditions, which would be more appropriately described as "recycling." Unlike the coffins of the Third Intermediate Period, therefore, the extant data from the Late Period suggests that the valuation process of coffins at the beginning of the Late Period was no longer correlated to the objects' potential for recommodification based on family ties. This made funerary commodities more accessible to a wider range of customers, who did not have to be related to the "old" elites in order to be entitled to their own coffin.

Given that there were multiple options available for the treatment of coffin decoration, the dataset has been designed to enable an assessment of the implications of having at least part of the production process of the funerary equipment take place after the completion of the mummification and wrapping of the body. Variables have been chosen to determine how often coffins were decorated after being closed and sealed with the mummy inside. For example, some inner coffins were made of cartonnage, and cartonnage required that the case be decorated after the wrapped mummy was positioned inside (Dawson *et al.* 2016: 92-94).

⁶³ The most recent and only partially published work on the inner coffin of the choachyte priest Pakepu (E.2.1869) at the Fitzwilliam Museum in Cambridge (UK) (<https://egyptiancoffins.org/coffins/pakepu>), as well as the new work undertaken by the research team at the Metropolitan Museum of Art on the inner coffin of the Singer of the Residence of Amun Ankhshepenwepet (MMA 25.3.202a,b) have yielded very similar results regarding the technique of execution of the decorative program of Theban coffins of the 25th Dynasty. In both coffins, close visual inspection has shown that most of the decoration of the exterior was applied after the coffins were closed and sealed with the mummies inside. The preliminary results of the research work conducted by the team at the Metropolitan Museum of Art were presented at the 71st Annual Meeting of the American Research Center in Egypt in April 2020 (paper title: "Ankhshepenwepet: Singer of the Residence of Amun (Tomb MMA 56)").

The easiest way to ascertain that a wooden coffin was decorated after closure is to determine whether the preparation layer and the decoration originally covered the area of the seam. This is often easy to see on the top of the head above the headdress or on the footboard, where one figure often occupies the whole area (Fig. 3.27 and 3.28). The variable "Decoration_over_seam" in Spreadsheet A lists the cases that show clear evidence of this pattern, as well as those where it is clear that the lid and the box were decorated separately.⁶⁴ In the cases where the decoration does not extend over the seam it is assumed that the lid and the box have been decorated separately, with the understanding that this fact alone does not imply anything about the timing of the application of the decoration with respect to the mummification and other phases of production of the funerary equipment. On the basis of these observations, most inner coffins were definitely decorated after closure (Fig. 3.29). This does not imply that middle and outer coffins were decorated before closure, only that it is a possibility.⁶⁵ Fig. 3.29 shows that rectangular coffins could also have been decorated after closure, but the limited data available does not allow to contextualize this practice within the

⁶⁴ The practice of decorating the exterior surface of coffins while they are closed is also attested in other periods, but it is more the exception than the rule. Moreover, in some cases it seems that the coffin was closed, though not sealed, for the application of the decoration, and later reopened to put the mummy inside and complete the burial. Only close examination of these objects can confirm these hypotheses based on the observation of the objects through photographs and glass cases. Some of the extant examples include the Middle Kingdom coffin of a woman found in TT 71 in Sheikh Abd el-Qurna (MMA36.3.184a, b), and a Third Intermediate Period coffin in the Cairo Museum (27.9.6.4). These coffins show a much less complex decorative program compared to the other examples from their respective periods, with no inscriptions or monochrome inscriptions and little decoration.

⁶⁵ The research team in Cambridge has found that the lid and the case of Pakepu's outer coffin were decorated separately (<https://egyptiancoffins.org/coffins/pakepu/decorated>), a finding confirmed in other instances listed in Spreadsheet A.

broader landscape of the funerary industry of the Late Period. However, this suggests that, in some cases, the decoration of the outermost container may have been the last stage of the funerary ritual, after the decoration of the inner coffin. This implies that none of the coffins belonging to a set could have been reused, thus marking a clear shift away from the exclusive funerary practices of the Third Intermediate Period towards a funerary industry that represented groups of more inclusive elite circles.

3.2.6 Assessing the identity of customers on the basis of correlations between titles and energy expenditure

The hierarchy of value of coffins dated to the 21st Dynasty through the 25th and 26th Dynasties reveals emphasis on group identity in the Third Intermediate Period and on individual identity in the Late Period. During the New Kingdom and Third Intermediate Period, consistent use of titles and filiations in the inscriptions on funerary objects reveals the terms of a social agreement, which made access to funerary commodities conditional upon political affiliation and family prestige. In particular, the deliberate display of the names and titles of the people who (re)used coffins suggest that family ties were fundamental in ensuring a funerary equipment during times of scarcity of resources. Additionally, the consistently high levels of energy expended on coffins of the 21st Dynasty suggests that the few available resources were all invested in the preparation of the funerary equipment of the current elites. This enforced the insularity of Third Intermediate Period elites, who *de facto* monopolized the funerary industry by means of controlling their resources. Economic scarcity combined with the conservatism of the elites hindered social mobility, which began to emerge at the beginning of the Late Period.

My assessment of the energy expended on coffins of the 25th and 26th Dynasties shows that the hierarchy of value of coffins reflected the socioeconomic status of their individual

owners, rather than their belonging to a group of exclusive elites. The evidence suggesting that inner coffins were not reused implies that these objects embodied the identity of the person who was buried in them. The ways in which this identity was conveyed was not through titles and filiations like in the Third Intermediate Period, but through the energy expended in their production and decoration. Thus, coffins that show the highest levels of energy expenditure and coffins that show the lowest levels of energy expenditure may or may not display the owners' titles, or the names and titles of their parents (Fig. 3.30). The lack of correlation between titles and energy expenditure suggests that the social agreement that had previously regulated access to funerary commodities had changed. I suggest that in the Late Period the energy expended on funerary commodities was proportional to the purchasing power of the individuals commissioning such commodities. These changes in the ways in which individual identities were expressed on coffins suggest changes in the ways in which people of the elites perceived themselves at the beginning of the Late Period. They no longer saw themselves as part of an exclusive, close-knit group of people, but as individual members of families within dynamic and interconnected groups of elites.

3.2.7 Assessing the identity of artisans on the basis of techniques of execution and patterns of standardization

An assessment of techniques used to apply the decorative program on coffins and of patterns of standardization in the modes of production of coffin lids and boxes reveals dynamics of depersonalization and producer specialization. For example, the fact that the decoration of inner coffins was often applied after these were closed and sealed with the mummified body inside reveals institutional transformations that led to the depersonalization of the funerary industry of the Late Period. This bears important implications regarding the commissioner's involvement in the production process, which was characterized by direct interaction between

the artisans and their customers during the New Kingdom and became peripheral at the beginning of the Late Period. The depersonalization of the production process of the most important piece of the funerary equipment suggests a fundamental change in the role of the artisans, who were entrusted with the production of the object that would ensure their customers' transfiguration into a divine being and convey their social identity after death.

In order to test the hypothesis that the wood infrastructure of all types of coffins could have been produced before receiving a specific commission, I assess the level of standardization of the dimensions of coffins from the 25th and 26th Dynasties. Recently, Taylor and Antoine (2014: 50) have claimed that "ancient Egyptian coffins were constructed according to standard forms and sizes – not made to measure – and the wrapping of the mummy also followed a pattern which resulted in uniformity of bodily proportions." This is an intriguing hypothesis which, to my knowledge, has never been tested. A statistical assessment of the dimensions of coffins provides a basis for testing the hypothesis that coffin boxes and lids could have been assembled in a standardized manner. The dimensions include the maximum length and width of the interior (excluding the ledges: "Inner_length" and "Width_shoulder") and the exterior (including the ledges: "Total_length"). Before testing this hypothesis, however, it is necessary to verify that the data are normally distributed, as only a dataset that is representative of the population about which inferences are being made (i.e. in this case, inner, middle and outer coffins of the 25th and 26th Dynasty) can be used to identify general trends. Fig. 31-33 show that data on coffins are approximately normally distributed.

Assessing the consistency of the interior surface tests the hypothesis that the coffins were modelled in order to contain a mummified body of standardized dimensions, following Taylor and Antoine's suggestion. Additionally, the fact that many coffins had to accommodate a mummy and fit within bigger coffins meant that both inner and outer measurements would have to fall within a relatively standardized range. Fig. 3.34 shows that

the measurements of inner coffins from Upper and Lower Egypt all fall within a relatively narrow range (between approximately 170 cm and 190 cm), with four outliers. One of these outliers is the customized coffins of Paefjtjauneith (Leiden AMM 5-e; Fig. 3.35), which has already been discussed in terms of the exceptionally high levels of energy expenditure it displays in the decorative program and its wood infrastructure. A second outlier is another customized coffin belonging to Irteru (BM EA 6695), which has also already been discussed above. The two outliers that fall below the identified trend display equally exceptional features, such as bronze inlays in the case of the coffin belonging to an unknown individual from el-Hibe (Florence 10514d) and the coffin of unknown provenance belonging to a three-year-old child named Qeref (Leiden AMM 12-b; Raven and Taconis 2005: 153; Fig. 3.36), whose thick wood infrastructure and high levels of complexity are comparable to those displayed by the coffin of Paefjtjauneith. Since none of these coffins belong to known coffin sets, it is possible that they were designed to be used individually as unique containers for the soul of the deceased, or as part of a very expensive coffin set, which may have included a stone sarcophagus.

Focusing on coffins from known sets allows to confirm the trend identified above regarding the standardization of inner coffins (Fig. 3.37). Among these coffins, only the length of the coffin belonging to the Hem Priest Besenmut (BM EA 22940) overlaps with the length of two middle coffins and two outer coffins, while the length of the coffin of the Lady of the House Takhauenbastet (Turin S.05248) falls below the identified trend. No information regarding the other coffins belonging to either set is available, which makes a more detailed analysis of these outliers impossible. Fig. 3.38 and 3.39 confirm this trend, where the limited available data on middle and outer coffins does not allow a more detailed comparison between inner, middle and outer containers. The only data point that stands out is the Middle coffin of Qenhor (Berlin ÄM 8499), whose maximum width overlaps with the width of inner

coffins. This can be explained by the fact that Qenhor had his inner container custom-made in the form of a cartonnage case, which suggests that his outer containers were likely also customized. The fact that the total length of the few cartonnage cases that I was able to assess fall outside of the trend identified for inner coffins confirm that these types of containers were reserved for those who requested a customized treatment.

These trends imply that the final product had to have specific characteristics that would make it a suitable container for most mummies, while fitting within a middle or outer coffin. A similar pattern of standardization is visible in the limited variability in the number of mortice holes for all types of coffins (Fig. 3.40). As one would expect, middle anthropoid coffins cluster within the range slightly above that of inner coffins (between c. 190 cm and 220 cm). However, outer anthropoid coffins and rectangular coffins mostly overlap with middle and, in a few cases, with inner coffins. In particular, two instances of rectangular coffins from Middle Egypt overlap with inner coffins. No data about the owner or the contents of Florence 10543 are preserved, thus making it impossible to explain its exceptionalism. However, perhaps Florence 10543 was meant to fulfil purposes similar to those of the rectangular coffin belonging to Horudja (Manchester 2271), which was designed to contain only the cartonnage case of the deceased. The lack of consistency of measurements of outer and rectangular coffins could indicate that perhaps these containers were reserved for those who requested them.

The data collected so far on inner and middle coffins supports the hypothesis that most of the wood structures were not custom-made. This suggests that artisans could assemble and partly decorate lids and boxes without any specific commission and without having the final product in mind. This also implies that different artisans could be in charge of different

phases of the production process, the decoration of the inner coffin being the last one.⁶⁶ These patterns of division of labor mark a departure from the dynamics of product specialization that characterized the funerary industry of the New Kingdom and the Third Intermediate Period, when the customer would collaborate in designing their own coffin and one artisan was in charge of delivering the finished product. The patterns of producer specialization embedded in 25th and 26th Dynasty coffins are specific to the Late Period, and show that multiple artisans could have been involved in the production of one coffin, with potentially no contribution from their customers. These artisans were entrusted with the task of perpetuating the identity of their customers among the living and ensuring their successful journey into the afterlife.

3.2.8 Comparing hierarchies of value

A diachronic comparison of hierarchies of value reveals a shift from dynamics of social stagnation in the Third Intermediate Period to dynamics of social mobility in the Late Period. Customization of 21st Dynasty coffins suggests that there was no apparent hierarchy of value among these objects, as each coffin was designed as a unique piece. This is revealed by the consistent inclusion of names, titles and filiations of the deceased, consistently high levels of energy expenditure on the decorative program, combined with lack of consistency in the wooden structure and the iconographic motifs of the coffins. As mentioned above, the highest levels of energy expenditure are visible in the complexity and precision, as well as in the use

⁶⁶ The recent unpublished work of Stefania Mainieri has shown that the faces of anthropoid coffins from the Late Period were probably modelled on the basis of the individual features of the face of the deceased.

However, the fact that all the examples assessed show that each face was carved separately and then applied to the coffin lid supports the hypothesis that lids and boxes could be produced in a standardized manner and personalized once they were assigned to a specific individual.

of reliefs throughout the decorative program of coffins of this period. Lack of consistency in the wooden infrastructure of these coffins is visible from the CT scans made of a number of objects, some of which have been studied by the research team from the Fitzwilliam Museum. Additionally, the unpublished doctoral work of Caroline Joan Arbuckle MacLeod also finds little consistency in the assemblage processes of the lids and the boxes of coffins of the 21st Dynasties, which appear as a "patchwork" made of irregular pieces of wood kept together by large amounts of paste. Similarly, at the Second Vatican Coffin Conference, Rogerio Sousa convincingly argued that from an iconographic perspective ancient Egyptian artisans and their customers were striving for uniqueness during the Third Intermediate Period.⁶⁷ Therefore, the individualization of the coffins' structure and iconography, combined with high levels of energy expended on their decorative program suggest that coffins of the Third Intermediate Period were indeed all custom-made. This absence of a hierarchy of value suggests that the elite of the 21st Dynasty was a close-knit, exclusive circle.

The coffins dated to the 25th and 26th Dynasties assessed in this dissertation tend to show more fluctuations of energy expenditure than their earlier counterparts. Standardization of the dimensions of the wood infrastructure of many pieces suggests that many boxes and lids could have been mass produced, while in a few cases they were custom-made. The coffins that exhibit standardized dimensions also display relatively lower energy expenditure on the decorative program, while the decorative program of the coffins whose wood infrastructure was custom-made show the highest levels of energy expenditure. The non-standard dimensions of the coffin of Paefitjauneith (Leiden AMM5-e), for example, matches the high complexity and detail of the underdrawings, as well as precision and evenness of the application of the pigments (Fig. 3.41 and 3.42). This implies that more resources were

⁶⁷ "The Search for Complexity in Coffin Decoration (21st Dynasty): A Genealogical Approach." Second Vatican Coffin Conference, Italy. June 6th-June 9th.

invested in the production of this coffin compared to the coffin of Ankhshenwepet (MMA 25.3.202a,b), for example, whose wood infrastructure follows standardized dimensions and whose decoration shows relatively low energy expenditure (Fig. 3.43). The hierarchy of value expressed by the fluctuations of the levels of energy expended on coffins at the beginning of the Late Period reveals more inclusive elite circles than those of earlier periods. These elites were able to commission their funerary equipment on the basis of their purchasing power.

3.3 Discussion

3.3.1 Continuity of older traditions shows cultural resilience

The practices of the funerary industry of the Late Period are rooted in practices of defensive burial of the Third Intermediate Period (Cooney 2011). A defensive burial was designed to equip the mummified body to act as the ultimate, unique container of the soul, in case the other objects of the funerary equipment, including the coffins, were removed from the tomb. Although the word "defensive" bears a negative connotation, Cooney argues that the reuse of coffins and other pieces of the funerary equipment was an informally sanctioned activity, which was prompted by necessity during a time of economic crisis (Cooney 2015). During the 21st Dynasty, the disruption of trade networks affected the procurement of wood, which was the primary raw material for the construction of funerary goods. As a result of the shortage of wood supplies, the reuse of coffins became a practice that was formalized and regulated by society. In addition to authorized recommodification of funerary goods, unauthorized tomb robberies also occurred. Practices of defensive burial, therefore, were designed to avoid reliance on equipment that was external to the body.

I suggest that the practice of decorating the inner coffin after it was closed and sealed with the body inside was the re-elaboration of a tradition that started out of necessity in the 21st Dynasty and acquired new meanings in the 25th and 26th Dynasty. The defensive aspect

of funerary practices of the 21st Dynasty found expression in the high concentration of resources invested in the treatment of the body, which was the only element in a tomb that had no potential for reuse (Cooney 2012). The body itself was treated as the ultimate, defensive container of the soul, designed to replace the coffin in case this was removed from the tomb and reused by someone else. Practices of defensive burial acquired a different form during the 22nd Dynasty, when the defensive capacity was transferred to the body's inner container. This container took the form of a cartonnage case, which was made of relatively inexpensive material and richly decorated. This case would fit tightly around the body and would have been difficult to remove and impossible to reuse. Moreover, the fact that it was made of inexpensive material made it unappealing to tomb robbers and therefore a safe defensive container for the soul of the deceased. In the 25th and 26th Dynasties, wood became more broadly available and the reuse of coffins was no longer necessary. However, the fact that the inner container was decorated after having been closed and sealed with the mummy inside suggests that it maintained its defensive structure as an expression of cultural resilience.

3.3.2 Third Intermediate Period coffins embody social stagnation

I argue that high investment of resources on 21st Dynasty Theban coffins was correlated to their potential for recommodification within an exclusive social context, in which coffins could be reused mostly by members of the same family. While from the 20th Dynasty until the early 21st Dynasty reuse was still hidden, the interest in displaying reuse in the late 21st Dynasty suggests that reused coffins may have been considered more ritually charged or generally of higher value than before. Therefore, many resources were expended on the production of coffins with the knowledge that these would provide for the burial of multiple family members. In other words, coffins of the 21st Dynasty were treated as valuable

commodities *because* they could be recommodified. The recommodification of coffins during the 21st Dynasty was integrated within the institutional framework, and became a convenient expedient that enabled the supply of funerary goods during a time of scarcity of resources. However, while guaranteeing the supply of funerary goods, this aspect of the valuation process of Third Intermediate Period coffins had important social implications with regards to the perpetuation of existing patterns of social inequality in ancient Egypt. When the conditions for the production of new funerary objects could not be met, people reverted to alternative solutions that made the supply of funerary goods possible, but which inevitably kept the supply restricted to a limited number of elite families. The recommodification of coffins among different members within the same families, as well as the scarcity of new coffins did not provide the opportunity for new members to join the existing circles of competitive elites. In Lower Egypt, on the other hand, the dissolution of traditional elite circles happened earlier than in the south, and wealth started to determine status already in the 21st Dynasty (Raven 2017). This trend reached the Theban area only in the 22nd Dynasty.

3.3.3 Coffins of the 25th and 26th Dynasties embody social mobility

I argue that the changes seen in the aesthetics of coffins between the 21st Dynasty and the 25th and 26th Dynasties reveal highly efficient modes of production at the beginning of the Late Period. New modes of production were devised to keep up with increased demand for funerary commodities generated by expanding elite circles of the 25th and 26th Dynasties, when the quality of the craftsmanship decreased, despite an increased availability of resources. While the availability and quality of the wood improved, the technique of execution of the decorative program became more rushed and less elaborate compared with the coffins of earlier periods. As noted above, while the complexity and precision in the decorative program of non-royal coffins of the Third Intermediate Period is consistently high,

non-royal Late Period coffins show more fluctuations and an overall decrease in complexity and precision. The decoration on Late Period coffins of the highest quality never matches the sophistication of Third Intermediate Period coffins. I interpret the greater fluctuation and decrease in the energy expended on Late Period coffins as an indicator of higher demand and higher efficiency.

3.3.3.1 Depersonalization of the dynamics of production made funerary commodities more accessible

My investigation of the modes of production of coffins of the 25th and 26th Dynasties reveals that many of these coffins could have been produced in a streamlined fashion, which led to the depersonalization of the funerary industry. Dynamics of producer specialization emerge from the limited variability of texts on coffins from this period, as well as from the widespread adoption of new techniques across different communities of artisans and patterns of standardization of the wooden structure of lids and boxes. First, the inscriptions found on these coffins show a tendency to repetition of a fixed set of formulas. Edoardo Guzzon's forthcoming study of the coffins from tombs QV43 and QV44, which constitute 30 percent of the corpus examined in this dissertation, shows the redundancy of the content of the inscriptions.⁶⁸ Elias (1993: 505) already noticed this trend in his analysis of the inscriptions on coffins dated to the seventh century BC, which he describes as "relatively standardized textual prescriptions suited to the conservation of the body." Uniformity of texts, technological choices and structure suggests that most of these coffins could have been

⁶⁸ Only part of Guzzon's work on the corpus from the Museo Egizio in Turin is currently published (Guzzon 2017; 2018). Guzzon's research work on the whole corpus will be published as a monograph. I am very grateful to him for sharing a draft of his manuscript with me. Older publications by D'Amicone and Fontanella (2007) and D'Amicone (2009; 2011) include photographs of some coffins from this corpus.

produced in a streamlined fashion, leaving little room for the commissioners to interfere in the production process in the same way as they did during the New Kingdom and Third Intermediate Period.

3.3.3.2 Uniformity in craft traditions shows connectivity among communities of artisans

My assessment shows that connectivity and coordination among communities of artisans in the north and in the south is revealed through consistent technological choices that are not immediately visible to the naked eye, and hide behind more obvious regional iconographic trends explored by Stövesand (2018; 2019). The little extant evidence from regions outside of the Theban area shows that similar technological choices were made by artisans in Upper and Lower Egypt, while aspects of the iconography reveal local renegotiations of a common ideology. This suggests that funerary objects are the embodiment of two social networks that are different, though closely intertwined. The techniques of assemblage of the wooden structure and the techniques of execution of the decorative program indicate a broad network of artisans who shared technological knowledge and coordinated practices in Upper and Lower Egypt. On the other hand, significant regional variations in the iconography suggests that shared technological practices had to be channeled into the production of iconographic motifs that would speak to the local audience, as representations of the local community's take on the overarching ideological framework.

The implementation of the same technological innovations shows that the artisans in Upper and Lower Egypt communicated, which was an unprecedented phenomenon among lower elites. The information obtained from the detailed analysis of the inner coffins of Ankhshepenwepet (MMA 25.3.202a,b) and Pakepu (Fitzwilliam E.2.1869), as well as the information provided by Botti's publication of coffins from the site of El-Hibeh in Middle Egypt suggests that there was some degree of uniformity in the modes of production. The

preparation layer of both the coffins of Pakepu and Akhshepenwepet show a layered structure that includes textile.⁶⁹ This type of structure has only so far been found in coffins of the Late Period. Botti's excavation reports on the burial assemblages from El-Hibeh indicate that the same technique was employed in Lower Egypt. Botti (1958) mentioned details about the unusual layer of textile visible beneath the ground layer of paste on the exterior surface of eight inner and outer coffins out of the 27 coffins of the Saite Period retrieved from the site. Although these coffins from El-Hibeh could be dated to a later phase of the Late Period,⁷⁰ the fact that they show similarities with the layered structure of the coffins at the Fitzwilliam and the Metropolitan Museum of Art supports the idea that the use of the same complex layered structure became a widespread practice in Upper and Lower Egypt during the Late Period.

So far, it has not been possible to determine with certainty whether the Upper Egyptian practice of decorating the inner coffin after it was closed and sealed with the mummy inside was implemented in Lower Egypt. However, a passage from Herodotus's *Histories* hints at the idea that the Lower Egyptian and the Upper Egyptian funerary industry were operating in the same way. During his trip to Lower Egypt in the 27th Dynasty, Herodotus (*Hist.* 2.86) reported that the wrapped mummy of the deceased would go back to the 'relatives (*οἱ προσήκοντες*),' who would make a 'hollow wooden figure which resembles a man (*ξύλινον τύπον ἀνθρωποειδέα*).' The verb 'to make (*ποιεῖν*)' used by Herodotus in this last sentence is too unspecific to assume that the ancient author meant that the inner coffin was built from scratch after the wrapping of the mummy was completed. Given that the wood infrastructure of most inner coffins seem to have been mass produced (see §3.2.7), Herodotus's account confirms that the inner coffin was at least decorated either partially or entirely after the body

⁶⁹ <https://egyptiancoffins.org/coffins/pakepu/decorated>.

⁷⁰ Personal communication with John Taylor.

was embalmed. Therefore, the story told by Herodotus about the funerary practices in Lower Egypt seems to match the story told by the objects from Upper Egypt.

Herodotus described a well-connected system, in which the embalmers were closely interacting with other specialists of the funerary industry who were in charge of making coffins. In *Hist.* 2.86, Herodotus explains that when a dead body was brought to the embalmer, the specialist would have 'wooden samples of dead bodies (*παραδείγματα νεκρῶν ξύλινα*)' on display, painted to imitate a human figure ('τῆι γραφῆι μεμιμημένα'). This passage is followed by a description of the different types of mummification, from the most expensive to the cheapest on offer. I suggest that the anthropomorphic figures mentioned by Herodotus could, in fact, be ready-made coffins displayed perhaps for relatives of the deceased to view or choose, implying that coffins could have been pre-made to some extent. This would explain the standardization of the dimensions of inner boxes and lids, as well as the relatively low levels of energy expended on the decoration of the interior surface of inner coffins. For example, the fact that some texts were applied on the interior surface of a coffin leaving a blank space for the name of the deceased to be added once the mummified body was ready for burial suggests that this whole area was probably decorated before the coffin was assigned to a particular individual (Fig. 3.44-3.45). This hypothesis would explain why the interior surface generally displays the lowest levels of energy expenditure, as well the occurrence of many coffins that bear no texts and no decoration on the interior surface (Fig. 3.6 and 3.9). The coordination between the activities of the embalmers and that of the craftsmen implies that artisans and customers in Upper and Lower Egypt may have thought of the mummification process as the combination of the embalming and the production of the inner coffins, with the decoration of the inner coffin after closure being, in fact, the last stage of the mummification process.

3.3.3.3 Streamlined modes of production left space for customization

The inner coffins of the 25th and 26th Dynasties assessed in this dissertation show that the majority of people had their coffins "paid for" during their lifetime, but decorated after their death, whereas some people were able to have their own coffins assembled and decorated while they were still alive. The latter type of coffins tends to show the highest quality of wood and the highest quality of painting, as well as non-standardized dimensions (see § 3.2.7). This suggests that the people who could afford to have their inner coffins assembled and decorated during their lifetime were paying for the privilege of choosing the materials and, perhaps, also the type of decoration they wanted on their inner coffins. However, those inner coffins that were not decorated during the customer's lifetime still exhibit various degrees of energy expenditure and customization of the decorative program. For example, the coffin of the Lady of the House, Ta-aati (Manchester 10881.b), was decorated after closure and shows that the orientation of the coffin was changed while the paint was still wet, which conveys the hastiness with which the decorative program was applied in this instance (Fig. 3.46). On the other hand, the coffin of the Mistress of the House and daughter of a Priest of Montu and Scribe of the Two Treasuries of the House of Amun, Wedjaresen (MMA O.C. 22) follows the trend of standardized dimensions and seems to have been decorated after closure, but the energy expended on its decorative program is comparable to that displayed by the coffins which were not decorated after closure, with a complex use of polychromy and high precision in the texts. These different levels of energy expenditure displayed by inner coffins may reflect socioeconomic differences among the people who were buried in them.

I suggest that the hierarchy of value displayed by coffins at the beginning of the Late Period is correlated to the wealth people invested in their production, rather than their political affiliation. The wood infrastructure of the box of the coffin of Irteru (BM EA6695), for example, required high levels of energy expenditure compared to most coffins of the same

period, since at least its box was carved out of one tree trunk (Fig. 3.14). However, the fact that the titles and filiations of the Irteru are not included in the inscriptions shows that they were irrelevant for the obtainment of a customized coffin. Similarly, a number of coffins displaying various degrees of energy expenditure do not show any titles or filiations, and coffins belonging to people who bear the same titles display various degrees of energy expenditure (Fig. 3.30). For example, while the coffin of Paeftjauneith mentioned above bears titles and filiations of the deceased inscribed in elaborate polychrome hieroglyphs, the equally refined inscriptions on the coffin of Wahibre (Liverpool 1978.291.453) do not show the titles of the deceased. This suggests that within the funerary industry different services were made available to people on the basis of their socioeconomic status. This implies that the acquisition of wealth was no longer dependent upon political or corporate affiliation and that the funerary industry of the Late Period revealed lower social inequality compared to earlier periods.

3.3.3.4 To what extent did people give up control over the production of their own funerary equipment?

The fact that the innermost container of the body was often finished after the embalming of the body was completed poses limitations to the commissioners' involvement in the production of their own funerary equipment. The suggestion that only inner coffins were decorated after closure introduces the possibility that the artisans could get started on the production of the other components of the funerary equipment while the mummification process was underway, and perhaps before even receiving a specific commission, leaving the decoration of the inner coffin to the end. The fact that none of the middle and outer coffins assessed in this dissertation shows evidence that their exterior decoration was applied after closure may indicate that they were at least to some extent prefabricated and the inscriptions

were added once the objects were assigned to a specific individual (Fig. 3.29). This hypothesis is consistent with the fact the standardization of the structure of boxes and lids of middle coffins, and with the evidence attesting that coffins could be decorated before being assigned to a particular individual. This suggests that the commissioners gave up control over the production of the most important pieces of their funerary equipment, which was left in the hands of the artisans.

My assessment of the energy expended on middle, outer and rectangular coffins has confirmed that not just inner coffins were produced in a streamlined fashion. While the energy expended on inner coffins is overall higher compared to the energy expended on middle and outer coffins (see § 3.2.4.1), the energy expended on the decorative program among outer and middle coffins varies widely. Some middle and outer coffins display bare wood on the interior and most of the exterior, with the exception of the head end and collar, the inscriptions along the side of the box and the central inscribed band on the lid (Fig. 3.18 and 3.19). The red register lines of the inscriptions along the side are often uneven and roughly drawn (Fig. 3.47). Other middle and outer coffins display an extensive, complex and precise decorative program with lengthy inscriptions similar to those often found on inner coffins (Fig. 3.48). These latter cases also show exceptionally thick wood planks compared to most middle and outer coffins. Therefore, the fact that most middle and outer coffins tend to show overall lower levels of energy expenditure than inner coffins suggests that they could have been assembled and at least partly decorated without receiving a specific commission. On the other hand, the rare cases of elaborate middle and outer coffins may indicate that these objects were customized. Thus, the patterns of energy expenditure revealed by middle and outer coffins seem to confirm the patterns identified on inner coffins.

While an assessment of the dimensions of inner coffins has revealed patterns of standardization, it has been more difficult to identify a clear trend in the modes of assemblage

of middle and outer coffins. As I discuss in § 3.2.7, the fact that the length of middle coffins follows a clear trend suggests that their wood infrastructure could have been standardized and produced in a streamlined fashion. However, the fact that the dimensions of outer and rectangular coffins largely overlap with those of middle coffins suggests that middle coffins might have been employed as outer coffins in sets that were composed of only two coffins, namely an inner and an outer container.⁷¹ The versatility of middle coffins is further illustrated by the fact that the inner coffin of Harwa (Turin S.5226) has the dimensions and features of a middle coffin, with relatively low energy expenditure on its decorative program. This example suggests that middle coffins could have been sometimes employed as inner coffins for people who would have required a customized coffin, but could not afford it.⁷² This system changed the market of the funerary industry by granting access to funerary commodities to a broader portion of the elites.

3.4 Conclusion

In this chapter, I show that cultural resilience lies at the core of the innovations in the production of coffins of the 25th and 26th Dynasties. Political decentralization caused the retention of some traditions that go back to the New Kingdom and the re-elaboration of the cultural aspects connected to defensive burial. These dynamics rendered the institutional framework of communities of artisans permeable to novelty. When circumstances limited the supply of brand new commodities during the Third Intermediate Period, shifts in the dynamics of the valuation process not only made the production of brand new objects no longer necessary by enabling coffins to re-enter the market, but it turned the use of

⁷¹ For a discussion of what constitutes a coffin set, see § 3.2.2.

⁷² The length of Harwa's mummy is 180 cm, which is beyond the average length of the interior of inner coffins of this period.

recommodified objects into a manifestation of prestige and social stagnation. While the recommodification of funerary objects did not require an extensive coordination of specialized artisans, such coordination would have been necessary to supply brand new funerary goods to a wide range of customers once raw materials became available again. The coordination through dynamics of producer specialization as revealed through the coffins of the 25th and 26th Dynasties suggests that the demand for funerary artifacts increased at the end of the Third Intermediate Period, and that communities of artisans had to devise ways of making funerary goods available to a broader audience.

The permeability of institutions left space for the development of efficient modes of production that enabled the artisans to keep up with the growing demand generated by the new elites. Changes in the ways resources were invested in the production of coffins signal an overall reduction of the energy expended on and depersonalization of the production of coffins. This reduction does not imply that less energy was invested into funerary practices during the Late Period. Instead, I suggest that it indicates that the energy was expended more efficiently compared with earlier periods of Egyptian history in order to keep up with the growing demand for funerary commodities. The fact that the provisions for funerary equipment seemed to rely on one's personal wealth implies that funerary assemblages became more accessible. Therefore, increased demand and efficiency in modes of production reveal lower social inequality at the beginning of the Late Period. Higher efficiency in the funerary industry was a manifestation of resilience during a time when political fragmentation caused the renegotiation of the social networks that previously made this industry reliant upon royal affiliation. In the following chapter, I show how such a radical shift was made possible through the involvement of temple organizations as mediators between the artisans and their customers.

4. Exploring economic growth through a technical assessment of small funerary commodities

4.1 Introduction

In Chapter 3, I argued that patterns of continuity in energy expenditure on coffins of the New Kingdom, the Third Intermediate Period, and the 25th and 26th Dynasties are manifestations of long-term cultural resilience. Within this framework of continuity, changes in the modes of production of coffins reveal institutional changes that created opportunities to improve economic performance. My assessment of inner coffins in particular suggests that at the dawn of the Late Period people gave up control over the production of at least some of their own funerary equipment and delegated it to professionals who would assemble the inner coffin after the commissioner's death. I also propose that the lids and boxes of inner coffins might have been built in a standardized fashion, without having the final product in mind, and were then decorated after being assigned to a particular individual. I conclude that coffins of the 25th and 26th Dynasties reveal highly coordinated specialized activity of professionals working in the funerary industry, which resulted in its depersonalization. This made the production of coffins more efficient and accessible to a broader audience, potentially including emerging new elites.

So far, only very few scholars have considered the social implications of modes of production of ancient Egyptian coffins, and have recently joined forces to provide more nuanced perspectives on the social aspects of coffin production and reuse (Cooney 2007; 2011; 2017; 2018b; 2021; forthcoming a; Arbuckle MacLeod 2019; Arbuckle MacLeod and Cooney 2019; Koons and Arbuckle MacLeod 2021). None of them, however, assesses modes of production of other types of funerary objects, or includes case studies from the Late Period. Modes of production of objects other than coffins have been assessed by other scholars, although with a limited sample size, which never includes artifacts from the Late Period. For example, Eschenbrenner-Diemer (2017) assesses regional variations in the

production of wooden models from funerary contexts of the Old Kingdom and the Middle Kingdom. Killen (2017) assesses the modes of production of specific case studies of wooden furniture from the Old Kingdom until the Ramesside Period, none of which include artifacts that were specifically produced for funerary purposes. Lastly, Jolanda Boss's unpublished work on beadwork from different periods of Egyptian history confirms some of the technical analysis of mummy nets from the 25th and 26th Dynasties presented in this chapter.⁷³ Beyond their limited sample size and chronological framework, none of these studies attempts to assess the social implications of the modes of production they examine.

In this chapter, I consider some specific aspects of the modes of production of mummy nets and Ptah-Sokar-Osiris statues and argue that the patterns they reveal confirm the trends identified in Chapter 1.⁷⁴ The objects assessed in this chapter are innovations introduced in the Late Period, which, with the aid of typological studies, can be dated relatively precisely. In my analysis, I also use the data collected from a limited sample size of shabti boxes only to support the trends identified in wooden objects of which I have a more representative sample size (coffins and Ptah-Sokar-Osiris statues). The story told by the archaeological material is then combined with information gathered from the extant documentary evidence produced by the professionals working for the funerary industry in Late Period Egypt. My assessment explores the social dynamics of production through an assessment of the level of specialization and coordination of the communities of artisans by whom the artifacts were assembled and decorated. Coordination and specialization are inferred by an assessment of patterns of standardization, modularity, and energy expenditure, which also reveal a degree of efficiency in the funerary industry that went beyond the production of coffins. I suggest that

⁷³ Personal communication.

⁷⁴ Rondano (forthcoming) presents a more extensive discussion of the modes of production of mummy nets and Ptah-Sokar-Osiris statues, including specific details of the methods used to assemble the modules.

high levels of efficiency in the modes of production could have been a response to a growing demand for funerary objects. This implies that a broader segment of the population had access to funerary objects compared with earlier periods. This, in turn, indicates economic growth. Increased demand and connectivity among artisans are a manifestation of resilience in the funerary industry at a time when demand for funerary goods was no longer correlated with a strong centralized power.

4.2 Methods

4.2.1 Selection of the material: mummy nets

Mummy nets made of blue faience beads and linen threads are one of the innovations introduced in funerary assemblages during the 25th Dynasty (Aston 2009: 293).⁷⁵ These objects have been found on top of mummified bodies, secured with linen straps (Fig. 4.1). The nets were embellished with amulets, beadwork decorations, or a combination of the two. Decorations representing a winged scarab placed at the height of the chest and the four sons of Horus below it are usually present on mummy nets that have not been restrung in modern times.⁷⁶ In many cases, additional decorative elements made of beadwork were added. These

⁷⁵ Faience is a vitreous material which was produced in Egypt already in the Predynastic period. The production techniques used for faience can only be inferred from the extant archaeological evidence of workshops in the ancient urban settlements of Amarna (Nicholson 2007) and Qantir (Rehren 1997; 2008), as well as archaeometric analyses of available faience objects (Shortland 2000). The wall paintings inside the 26th Dynasty tomb of Ibi in Thebes show artisans at work and provide the only extant pictorial representation of faience production from ancient Egypt (Davies 1902: pl.25).

⁷⁶ In my assessment of mummy nets from different museum collections, I have noticed that many of the extant mummy nets have been restrung in modern times. Since the decorative elements are sometimes not preserved, in many cases the reconstructed nets do not include the decorations that were originally attached to them. Since more often the decorative elements are preserved but became detached from their nets already in ancient times,

included a face and a collar, one or multiple figures of female goddesses (often Isis and Nephthys), and a vertical inscribed band. As is the case with many funerary objects from ancient Egypt, the religious meaning of these mummy nets is still a matter of debate. A detailed typological study based on iconography undertaken by Silvano (1980) remains the publication of reference. It treats some of the symbolic aspects of these objects but does not include a discussion of the techniques used to assemble them and the social dynamics they embody.

In Spreadsheet C, I selected 228 pieces in the form of fragments and mostly preserved artifacts which convey at least partial information about modes of production. The selection of the material has been limited by the fact that many extant mummy nets have been restrung in modern times.⁷⁷ Many lack secure provenance, and most of the provenanced objects are in a fragmentary state of preservation. Most of the fragments that survive are decorative pieces made of beadwork or faience amulets. The best preserved mummy nets were retrieved from two royal tombs in the Valley of the Queens which were reused during the 25th and 26th Dynasties by two families of priests from the Karnak temple.⁷⁸ The unpublished corpus of mummy nets from these tombs was the object of my M.Phil. thesis at the University of

they are included in the reconstruction, though not in their original location. Since mummy nets whose original threading is preserved are rare and tend to be in a fragmentary state of conservation, my assessment focuses on the decorative elements of mummy nets, which tend to be better preserved.

⁷⁷ The original thread allows for an assessment of the ways in which the nets were assembled, which I have explored in detail elsewhere (Rondano forthcoming).

⁷⁸ The coffins from this tomb will be published by Edoardo Guzzon (see footnote 63 above), while the rest of the funerary assemblage remains unpublished. I have analyzed the corpus of fragments of mummy nets and reconstructed some of them with the help of conservators Cristina Meli and Cinzia Oliva. Based on my assessment of the extant fragments, I have estimated that there were originally 30 mummy nets present inside the tomb.

Oxford and constitutes the primary pool of data for this chapter of my dissertation. From the extant fragments, I have inferred the type of decorations applied to each net (variable "Type_of_decoration"). For example, when one of the sons of Horus was added in the form of a faience amulet, I assume that the other three were also faience amulets (label "Amulets"). It is highly probable that amulets bearing different inventory numbers originally belonged to the same mummy net, but since there is no way of establishing this, they will be treated as separate fragments. On the other hand, fragments of beadwork are treated as belonging to different nets unless they are attached or can be attributed to the same net (label "Beadwork"). When amulets and fragments of beadwork decorations are attached to the same fragment of mummy net, this is reflected in the dataset (label "Amulets&beadwork")

In the following sections, I focus on the aspects that reveal energy expenditure, hierarchy of value, customer identity, producer specialization and recommodification. In addition, since the selected pieces are securely provenanced, they also provide information about the level of uniformity of the identified patterns throughout Egypt, which in turn reflect the level of connectivity among communities of artisans and the organizations to which they belonged in Upper and Lower Egypt.

4.2.1.1 Assessing energy expenditure through complexity

I measure the energy expended in the production of mummy nets on the basis of the level of complexity they display. Like in Chapter 1, complexity is here measured in terms of material and labor invested in the production of mummy nets. For example, beadwork decorations required higher levels of energy expenditure than faience amulets because their production involved two different types of material (i.e. yarn and faience), as well as more labor, since their assemblage involved two stages (i.e. production of beads and assemblage). Within this group, there are beadwork elements that were produced using single ring-beads or double

ring-beads, which produced very different visual effects and expressed different levels of energy expenditure. Beadwork decorations produced using single ring-beads appear more complex than those produced using double ring-beads. Both types of beadwork decorations required practical as well as visual skills, but the threading of single-beads was performed in such a way as to create smoother curves of facial features by tilting or skipping beads in some areas, which required more time and skill (Fig. 4.1 and Fig. 4.2; Rondano 2015: 40).

Therefore, I suggest that beadwork elements displaying single-ring beads are representatives of the highest levels of energy expended on mummy nets, followed by decorations produced with double-ring beads and amulets.

Faience amulets required the lowest levels of energy expenditure because their production required only one type of material which was easier to manipulate, given that each amulet was bigger than beads and that most of these objects seem to have been molded (Rondano 2015: 41-42). Amulets also display various degrees of complexity. There are amulets that display incised details (Fig. 4.3), amulets that show details applied with slurry or paint (Fig. 4.4), amulets that show both incised and applied details (Fig. 4.5), and amulets that show neither (Fig. 4.6). Therefore, the energy expended on the production of these objects was proportional to the presence or absence of painted or incised details. Sometimes, a mixture of beadwork elements and amulets can be found on the same net, which suggests that amulets and beadwork decorations were ready-made modules that were combined in different ways (see § 4.2.1.2). The nets that showed the highest levels of energy expenditure, with most decorative pieces made of single-ring beads also tend to include unusual features in the network proper, such as polychrome ring-beads instead of blue ring-beads that matched the color of the tubular beads throughout (Fig. 4.8; Rondano 2015: 41). This suggests that the energy expended on the decorative pieces was sometimes matched by the network proper.

4.2.1.2 Assessing the identities of artisans through standardization and modularity

I have argued that the fact that each beadwork decoration was produced as an appliqué to be either secured on top of a ready-made net or integrated into the network proper suggests that these decorations could have been produced by specialized artisans and then circulated to other artisans who were in charge of assembling the nets (Rondano 2015: 40). This hypothesis is supported by the fact that identical parallels of the same type of beadwork decorations and amulets were retrieved from different areas of Egypt. Exact parallels of beadwork collars have been retrieved from the Theban area (Fig. 4.7) in Upper Egypt, el-Lahun (Fig. 4.9) and el-Hibeh (Florence 10727, Fig. 4.2) in Middle Egypt, and Saqqara in Lower Egypt (Fig. 4.13). Moreover, exact parallels of beadwork rosettes have also been retrieved in Qubbet el-Hawa (Bonn_Inv.n._unknown_5), Abydos (Fig. 4.10) and el-Hibeh (Florence 10729(11-12)), and the beadwork face of Turin S. 05290 (Fig. 4.7) from Upper Egypt matches the single-ring and double-ring bead structure and iconography of some of those found in Middle and Lower Egypt (Fig. 4.1, 4.13 and 4.14). The uniformity of iconographic patterns and techniques used to assemble beadwork decorations suggests that either specialized artisans moved between Upper and Lower Egypt, or that specialized artisans were trained in similar ways throughout Egypt.

Similar patterns of standardization can be found in faience amulets, which have only been retrieved from sites in Upper Egypt. The maximum length and width of each amulet have been measured using a caliper. A statistical exploration of these measurements shows that the data collected is approximately normally distributed (Fig. 4.15-4.20), and that the vast majority of amulets fall within a relatively limited range of length and width, regardless of the type of decorations with which they were combined (Fig. 4.21-4.26). The only "extra large" amulets belong to the set attached to the net Turin S. 05291 found in one of the tombs of the families of priests from the Karnak temple buried in the Valley of the Queens. Since it

is impossible to attribute this net to any specific individual, it is impossible to account for its exceptionality. Amulets also show standardized iconography, as the same types of amulets have been found in different sites between the Qubbet el-Hawa and Abydos, which are 300 km apart (Fig. 4.27-4.29). The type of amulets do not seem to vary on the basis of the energy expended on each net, as the same type of amulets can be found on nets that only display decorative elements in the form of faience amulets, as well as on nets that bore other decorative elements made of beadwork (Fig. 4.30 and 4.31). The fact that the same types of beadwork decorations were found in Upper and Lower Egypt, and that the same types of amulets were produced in or distributed among different Upper Egyptian sites with few regional variations suggests that custom-made decorations were probably very rare.⁷⁹ Furthermore, the fact that none of the few extant fragments of inscribed bands made of beadwork bear the name of the deceased suggests that these, too, could have been mass produced as standardized modules.⁸⁰ In both cases, evidence shows the connectivity among the communities of artisans from Upper Egypt to Lower Egypt, which, in addition to social mobility also embodied in these artifacts (see § 4.2.1.3), created new opportunities to expand the funerary industry.

⁷⁹ Mummy nets displaying both amulets and beadwork elements have so far only been found in the Theban area (Rondano 2015: 53).

⁸⁰ The few extant examples come from el-Hibeh (Florence 10728 and Florence 10729, Freiburg Ae 150) and the Theban area (Turin S.05290, Berlin ÄM 5, as well as the mummy nets of Namenkhanum and Inamunnefnebu in Venice, all of which are unpublished). I was able to perform close examination of four of the given examples, as well as of the inscription on Freiburg Ae 150, which has been published by Strecker and Heinrich (2007: 224). Freiburg Ae 150 bears the only fully preserved inscription, which reads 'royal offering (to) Osiris, great god, lord of the sky. May he grant a perfect burial (in) the necropolis (*hṯp di nsw Wsir ntr ꜣ nb pt di=f kꜣrst nfrt Hrt Nrt*)'. This same inscription seems to be replicated on the extant fragments of the other mummy nets (Rondano 2015: 54).

These patterns of producer specialization are expressions of the depersonalization of the funerary industry already discussed in Chapter 1, which still allowed for the customized treatment of some products. The mummy net of Tabakenkhonsu (MMA 96.4.5) shows even more clearly that the beadwork modules were produced independently from the net, since the recipes used to produce the beads of the net and the recipes used to produce the beads of the beadwork decorations were different. Figures 4.32 and 4.33 show that the beads used for the net were made of Egyptian blue, while the blue beads of the decorative elements were probably made of glass or faience. I argue that the structural characteristics of beadwork decorations combined with the high level of craftsmanship required to assemble these modules suggests that they could be produced by highly specialized artisans who would then distribute them to other artisans who were in charge of assembling the nets. As in many of the extant mummy nets that bear decorations exclusively made of beadwork, the decorative pieces of this mummy net were integrated into the network. This implies that the net was assembled last, after the decorative modules had already been produced, instead of applying them on top of a ready-made net. The decorative elements that required the highest level of energy expenditure with single-ring beads tended to be integrated into a network that shows unusual features, such as polychrome ring-beads instead of blue ring-beads (Fig. 4.8). This suggests that these specific nets may have been custom-made by the same specialized artisans who produced the beadwork decorations (Rondano 2015: 41). Thus, while an assessment of the decorative pieces shows that these elements were probably produced as standardized modules by specialized artisans, an assessment of the process of assemblage of each individual net reveals the interaction between different specialists who coordinated their activities within a highly efficient system. Within this system, it was still possible to receive special treatment for those who were able to afford it.

4.2.1.3 Assessing the identities of customers through a hierarchy of value

A comparative assessment of the energy expended on mummy nets and the status of the people to whom these nets belonged confirms the reconstruction I proposed in Chapter 3 of a social organization based on distribution of wealth rather than on sociopolitical status. A precise evaluation of the correlation between the energy expended on each mummy net and the title of the deceased to whom that mummy net belonged is difficult for two reasons. First, none of the extant mummy nets bears the name of the individual to whom it belonged. Second, all of the provenanced mummy nets assessed in this chapter come from tombs that were plundered already in antiquity, which implies that most nets were found by archaeologists detached from their mummies and their respective coffins. Within contexts that favored group burials, this makes it impossible to reconstruct individual assemblages. However, the fact that each group burial was traditionally composed by members of the same family allows the identification of some social patterns expressed through the hierarchy of value embodied in mummy nets. For example, Figures 4.34 to 4.37 show that the mummy nets belonging to different members of the same family of priests from the Karnak temple who were buried in the same reused royal tomb in the Valley of the Queens received different levels of energy expenditure. This confirms the pattern displayed by the coffins of this period, which show lack of correlation between energy expenditure and the titles of the people buried in them (Chapter 3). This also confirms Taylor's recent hypothesis that elites of this period had different means of accumulating wealth that were not connected to their "job titles" or family ties, but on individual economic enterprises (2018: 382). In Chapter 5, I will explore the ways in which the accumulation of wealth was made easier through the introduction of a bureaucratic system that was divorced from local networks of patronage and ensured a more consistent enforcement of private transactions. This made the economy of the Late Period

more dynamic, and the integration of different groups present in Egypt at the dawn of the first millennium BC, allowing individuals from different sociocultural backgrounds to thrive.

4.2.1.4 Absence of re Commodification reveals individualism

Although the lack of individualized mummy nets shows their potential for re Commodification, the fact that many inner coffins were probably not re Commodified implies that their contents, including mummy nets, were meant to accompany the person on their journey for eternity. The inner coffin of Tabakenkhonsu (MMA 96.4.3a, b), for example, shows that it was decorated after the coffin was closed with the mummified body and its mummy net inside. This implies that reusing her mummy net would have required recycling at least her inner coffin, since this process would have required to break the decoration of the inner coffin in order to open it, and then strip it of the whole decoration in order to make it available for someone else's burial. Therefore, in this chapter I propose that the impossibility of re Commodifying the funerary objects that were directly connected to the body of the deceased reveals a reinterpretation of older practices of defensive burial, which conveys the individualism of Late Period Egyptian society.

4.2.2 Selection of the material: Ptah-Sokar-Osiris statues

Ptah-Sokar-Osiris statues are part of the innovations introduced in funerary practices during the Third Intermediate Period. These are wooden mummiform statues with an anthropoid shape that bear a crown composed of two ostrich feathers and a pair of horns (Fig. 4.38). The statues are fixed to rectangular stands which protrude in the front. Sometimes, the protruding part of the base includes a cavity covered by a lid in the form of a miniature *qrs*w coffin or a mummified falcon on a stand (Fig. 4.39). Within the burial setting these statues tend to be found in the proximity of the feet or the head of the coffin (Rindi 2014). The religious

significance of these objects is still debated, but there seems to be agreement that they express a reinterpretation of older traditions (see §4.2.2.1). A typological study first undertaken by Raven (1979) and expanded by Aston (2009: 302-308) suggests that the iconography of these objects changed considerably over time. My assessment focuses on Type V, which has been dated to the eighth and seventh centuries BC (Aston 2009: 305-307) and Types III and IVB, which have been dated to the seventh century (Aston 2009: 305), which together coincide with the 25th Dynasty and the Saite Period.

In Spreadsheet D, I selected 112 pieces in the form of fragments and fully preserved artifacts which convey at least partial information on the modes of production. The selection of these artifacts has been limited by the fragmentary state of a large number of objects, many of which provide no relevant information for this study. The objects included in my dataset provide at least one of two types of information. First, objects whose decoration is extensively damaged or not preserved tend to show either partial or no damage in their structure and, therefore, provide information about standardization and modularity. Conversely, when the decoration has survived the underlying wooden structure is often only partially visible or not visible at all. In these cases, the variable "N_of_pieces" reports the number of modules that are visible upon inspection. If none of the modules is visible, the variable is left blank. If only one of the modules survives, the presence of other modules is inferred from other structural features (see §4.2.2.3). Though these objects may not provide exhaustive information about modularity, they do provide information about patterns of standardization, individualization, and energy expenditure. In addition, the objects with a secure provenance reveal patterns of uniformity of production techniques and the level of connectivity among communities of artisans in Upper and Lower Egypt.

4.2.2.1 Assessing energy expenditure on Ptah-Sokar-Osiris statues

My assessment of the energy expended on the decoration of Ptah-Sokar-Osiris statues shows that these small funerary objects tended to account for relatively low energy expenditure.

This assessment is based on three observations. First, the layout of the decoration is always imprecise, with limited or no use of underdrawings and no polychrome inscriptions. Second, the areas that would be hidden from view show no energy expenditure. These areas include the bottom of the stand and the interior of the cavity on the stand, when this is present. The same trend is also visible in the limited number of instances of shabti boxes I was able to analyze, which show no energy expenditure on the exterior of the base, and the interior surface.⁸¹ Among wooden objects, therefore, inner coffins seem to have received the highest levels of energy expenditure, while fewer resources were invested in the production of other elements of the funerary equipment.

Most of the variables that I have used to assess the energy expended on the decorative program of coffins cannot be applied to the assessment of energy expenditure on the decoration of Ptah-Sokar-Osiris statues. Among the objects whose decorative program is preserved, I focus my assessment of energy expenditure on the use of golden foil, as well as of Egyptian blue.⁸² Egyptian blue is easy to identify on objects that have not undergone conservation treatments, but it often appears black to the naked eye when objects have been treated, or when the pigment has decayed. For this reason, a selected number of objects have been photographed using VIL (Visible Induced Luminescence).⁸³ My selection includes

⁸¹ Florence 10779; Florence 10780; Fitzwilliam E.25.1887; Fitzwilliam E.91.1896; ÄM 760; ÄM 761; ÄM 759; Leiden L.IX.2; MMA 25.3.206.1a, b; MMA 25.3.207a, b; Manchester 9887.

⁸² See note 50.

⁸³ See note 60. The variable "VIL" in Spreadsheet D shows the objects that have been photographed using Visible Induced Luminescence.

objects that have a secure provenance and show at least the name of the deceased, objects that do not have a secure provenance, but bear the name and title of the deceased, as well as objects that bear standardized inscriptions or no inscription at all.

4.2.2.2 Potential for re Commodification shows inclusivity of the elites

Different attitudes toward practices of reuse reveal social dynamics of exclusivity in the Third Intermediate Period, and inclusivity in the Late Period. Patterns of exclusivity and inclusivity are revealed through different levels of individualization. Objects bearing the names and titles of the deceased displayed more limited potential for re Commodification compared with objects bearing standardized inscriptions. In order to be re Commodified, these objects would have required some energy expenditure to modify the inscriptions, and there is no evidence that any of the inscriptions on the objects assessed in this dissertation were modified. Therefore, it is improbable that individualized objects were reused. This suggests that only objects with standardized inscriptions (i.e. those that bore neither names nor titles of the deceased) could have been reused, but it is impossible to tell whether they were actually re Commodified. The fact that some Ptah-Sokar-Osiris statues only bore standardized inscriptions indicates that these objects had high potential for re Commodification. This suggests that, if re Commodification were taking place, it was regulated by less exclusive social agreements than in earlier periods. This confirms the pattern found on coffins, implying that the social agreement that made access to funerary commodities exclusive in earlier periods had changed, and that these commodities had become accessible to a wider audience.

Attitudes toward re Commodification of small funerary commodities during the 25th and 26th Dynasties are also evidence of lower social inequality. Unlike Late Period coffins, which were purposefully designed to show absence of reuse, the potential for re Commodification of

Ptah-Sokar-Osiris statues is shown by the widespread use of standardized formulas, as well as by their placement within the tomb space, since they were not placed inside the coffins. This potential was heightened by the fact that specialists of the funerary industry would have known where these statues were interred, and would have been able to retrieve and use them for more than one funeral. Since efficiency was at the core of Late Period funerary industry, artisans knew that they had to be efficient in producing, as well as using funerary commodities. This implies that they would probably reuse statues whenever they could. Therefore, these objects could have been reused multiple times by people belonging to different families, suggesting that funerary practices reflected the social integration and mobility that characterized the beginning of the Late Period.

4.2.2.3 Assessing the identity of artisans through standardization and modularity

Standardized inscriptions on Ptah-Sokar-Osiris statues can also be considered an expression of the efficiency of the funerary industry in this period, which reflected high demand from expanding elite circles. Moreover, patterns of standardization and modularity similar to those identified on mummy nets are also visible in Ptah-Sokar-Osiris statues. Among the statues whose wooden infrastructure is visible, I have identified three basic modules: the stand, the statue, and the crown. To this basic structure some features, such as a false beard and horns on the crown, were sometimes added separately. Since all modules of a specific object are rarely preserved, the minimum number of original modules can be estimated from the number of sockets visible in the modules that are extant. For example, evidence suggests that all extant crowns were applied to the statues as separate modules, but not all of them survive. For this reason, the variable "Plug_crown" is used to show that a crown was added as a separate module when the module itself does not survive.

In order to give a transparent account of the extant evidence, Spreadsheet D is designed to show which specific modules of each object survive and an estimate of how many modules the object included. For example, since horns are not often applied as a separate module, the variable "Plug_horns" shows the instances in which horns were applied separately. The statues that only display evidence of two modules are either broken, or were mounted on a modern stand (Fig. 4.40). In both cases, it is impossible to see the plug that served to insert the statue into its original stand. The statues that are unbroken and mounted on modern stands that allow to view the objects in their entirety show evidence of at least three modules. The objects that are fully preserved tend to show at least four modules or above. In addition to the statue, the stand and the crown, the fourth module could be the horns that were applied separately (Fig. 4.38) or the lid covering the cavity on the protruding part of the stand, when this was present (Fig. 4.39). Beyond four modules, there are objects showing that each horn was plugged into the crown individually, or cases in which the stand was assembled using different pieces of wood (Fig. 4.41). Provenance does not seem to be correlated to differences in the number of modules, since objects from Upper and Middle Egypt display the same number of modules (Fig. 4.40). This indicates that artisans in different communities were trained in similar ways.

The dimensions of each module can also inform this assessment of connectivity among communities of artisans in different areas of Egypt. After plotting the data that are approximately normally distributed (Fig. 4.42-4.45) so as to identify potential clusters corresponding to regional traditions, the results show no correlation between the dimensions of each module and the provenance of the object (Fig. 4.46). A bigger sample that includes more objects of known provenance would confirm this trend. Fig. 4.46 also shows that these measurements fall within a relatively narrow range: statues tend to be 25-45 cm tall, crowns 10-17.5 cm tall and stands 20-35 cm long. Therefore, it is possible that each module could

have been produced by specialized artisans without having the final product in mind. This hypothesis is supported by the fact that the correlation between the length of the stands and the height of the statues is not matched by a correlation between the height of crowns and the width of horns (Fig. 4.46). This discrepancy could be explained by the fact that the proportions between the statues and the stands and the statues and the crowns had to be fixed in order to ensure the stability of the finished product, while the dimensions of horns could not affect its balance. In other words, artisans knew that the length of stands and the height of statues and crowns had to fall within a specific range in order to enable the assemblage of the modules. Moreover, the application of standardized formulas as part of the decorative program without the addition of names and titles of the statue's owner suggests that some of these objects could have been assembled and decorated before a specific commission was received. These trends of modularity and standardization identify high levels of efficiency through the depersonalization of the funerary industry, whose artisans were specialists who were not directly hired by their customers, but belonged to communities of specialists who were coordinated by the same organization.

4.2.2.4 Assessing the identity of customers through a hierarchy of value

An assessment of the energy expended on Ptah-Sokar-Osiris in correlation to titles and filiations reveals similar patterns to those displayed by coffins and mummy nets. Titles in the inscriptions on funerary objects embody the terms of a social agreement by revealing that access to funerary commodities relied on political affiliation. However, some of the Ptah-Sokar-Osiris statues whose texts are preserved only show the name of the deceased, often without a title (Fig. 4.47). When a title is shown, it is often unrelated to the political sphere (the most common being 'Lady of the House (*nbt pr*)'). The individualism of Late Period society is further emphasized through ample use of filiations, which appear more often than

titles (Fig. 4.48). Moreover, the lack of correlation between the title of the deceased and the dimensions of the objects, as well as the materials used for its decoration shows that the sociopolitical status of the deceased was irrelevant to the energy expended on one's funerary commodities. The height of crowns and statues are not correlated to the sociopolitical status of the deceased (Fig. 4.49-4.50), and Egyptian blue was used on some pieces that bear a standardized inscriptions and avoided on other pieces that are individualized (Fig. 4.51). In other words, materials of high value like Egyptian blue or golden foil could be applied to these pieces for "extra cash" upon request, but did not receive consistently high energy expenditure because they were not the focal point of the funerary ritual. This suggests that the hierarchy of value was not representative of social inequality based on political affiliation. Instead, I argue that this implies that energy expenditure was proportional to the amount of wealth that was invested in the production of the funerary equipment.

4.3 Discussion

4.3.1 Mummy nets are expressions of cultural resilience

A careful assessment of mummy nets and their symbolic meaning reveals patterns of continuity and cultural resilience. Mummy nets are a manifestation of continuity with practices of defensive burial started in the Third Intermediate Period, which invested most of the resources on the treatment of the body of the deceased. I have argued that these objects embodied multiple religious meanings, which were, in part, a condensed version of older traditions (Rondano 2015: 21-35). For example, Aston (2009: 389) suggests that the figures of the four sons of Horus on mummy nets may have been introduced as a substitute for the wax statuettes that had been placed inside the mummified body during the 21st and 22nd

Dynasties, which, in turn, replaced functional canopic jars.⁸⁴ Aston (2009: 394) also suggests that the winged scarabs attached to the mummy nets were an alternative to the heart scarabs that were traditionally placed inside the body cavity. Both examples show that mummy nets were a manifestation of the contraction of funerary equipment which characterized the Third Intermediate Period during which cultural resilience was expressed through continuity and renegotiation of funerary traditions.

I argue that, unlike the practices of the 21st Dynasty, however, the primary goal of the practices of the 25th and 26th Dynasties was not just to preserve the ultimate container of the soul of the deceased (i.e. the body) against looters and provide it with the means for revivification that did not rely on an extensive tomb equipment (see § 1.5). Rather, I suggest that these practices became efficient ways to keep up with the growing demand for funerary commodities while maintaining old traditions alive. Therefore, mummy nets served a practical function that enabled a reduction of the funerary equipment and its reconfiguration to serve the religious purposes of enabling the transfiguration of the deceased.⁸⁵ The multilayered symbolism of mummy nets is closely connected with the Osirian cults and the solar cycle, both of which are metaphors for the transfiguration of the deceased. For example, the blue color of the net is an allusion to the nocturnal sky goddess Nut, whose body the solar

⁸⁴ According to Taylor (2001a: 72-75), the few extant examples of canopic jars retrieved from burials of the 21st and 22nd Dynasties were either empty or had no cavity to contain organ-bundles, since all the organs were put back into the body cavity after mummification. The jars were replaced by wax figurines of the sons of Horus, each of which was placed next to the mummified organ it was meant to protect.

⁸⁵ The connection between the material and iconographic aspects of objects and the abstract sphere of religious meaning has been first theorized by Assmann (2001: 453-458). Following Assmann's concept of "sacramental interpretation," Smith (2009: 218) explains that the material and iconographic aspects "establish a connection between the sphere of the cult and the divine sphere, thus triggering a process whereby a particular ritual action is transformed into an event in the world of the gods."

disk traverses during the night in order to be reborn at dawn (Silvano 1980:81).⁸⁶ The soul of the deceased is meant to follow the sun in its regenerative journey through the body of the sky goddess. The solar aspect of the deceased in its transfigured state is evoked by the yellow or red color of the skin of the beadwork faces on some mummy nets (Corcoran 1995: 28-29, 39-44, 55-58; Taylor 2001b: 165-166; Fig. 4.1). During this nocturnal journey the sun acquires an Osirian aspect, which is traditionally equated with the regeneration of nature and is another metaphor for the transfiguration of the deceased. For this reason, some beadwork faces display a green skin color (Fig. 4.7). Therefore, mummy nets embodied a multiplicity of old traditions regarding the revivification of the deceased and the provisions for their afterlife.

My assessment of mummy nets has revealed the presence of a number of older traditions which used to take a written form (Rondano 2015: 25-27, 57-58). I have identified the net as a particular type of object which is prominent in older Egyptian religious texts (the so-called "Netting Spells"), which had been included in earlier burials on papyrus scrolls. These texts referred to specific challenges undertaken by the deceased during his journey in the underworld. For example, in the Book of the Dead (Spell 153B, line 18, pLondon EA 10477, Lapp 1997: pl. 60) the deceased has to engage in a battle which involves avoiding the nets of the enemies of the sun god and capturing them with his own net. The deceased then devours his opponents in order to rise as Re. Since the aim of the deceased is to be revivified by following the sun god in his daily cycle, netting spells described the intermediate stages

⁸⁶ Nut is often depicted wearing beadwork garments in Egyptian art of this period (Neugebauer and Parker 1960: v. III pl. 46-50). In particular, Taylor (2010: 235) suggests that the representation of the sky goddess Nut along the inner surface of coffins lids of this period alludes to the identification of the deceased with the solar deity and source of creation emerging from the womb of the sky goddess. Mummy nets could then be a projection of the sky vault onto the mummified body aimed at enabling the revivification of the deceased.

during which the deceased had to fight against the spirits that populate the night sky, and capture and feed on them in order to enable his own revivification. Therefore, mummy nets could be the materialization of the weapon the deceased required to ascend to the night sky and follow the daily cycle of the sun for eternity, thereby completing his own revivification. Since the 25th and 26th Dynasties bear little evidence of lengthy and finely written and illustrated papyri that accompanied the deceased through their journey in the afterlife in earlier periods, I suggest that mummy nets were the materialization of these older traditions. I also suggest that these objectified versions of older texts may have been more efficient to produce, since the texts required scribal skills that might have no longer been accessible to the specialists of the funerary industry.

4.3.2 Ptah-Sokar-Osiris statues are the manifestation of changing attitudes toward religion

The Ptah-Sokar-Osiris statues of the 25th Dynasty and the Saite Period are the materialization of cultural resilience through the re-negotiation of older traditions. These artifacts evoke similar statues of earlier periods. They combine the polychromy of Osirian statues of types IC and IID (Aston 2009: 304-305), dated between the fourteenth and the tenth century, and the shape of the black varnished statues of types IA and IB (Aston 2009: 302-304), dated to the tenth century. Raven (1979: 254-257) has discussed the religious significance of these objects, which he links to the Osirian cult. He finds their precursors in wooden statues of the Middle Kingdom, which represented the deceased as a deified being. In the New Kingdom, Raven finds parallels in wooden statues which were representations of the deceased as individuals, who in the inscription are described as being "with Osiris" or "beloved of the god." According to Smith (2017: 267-268), the inscription 'Osiris of N.N. (*Wsir n NN*)' found on Third Intermediate Period and Late Period funerary objects, including Ptah-Sokar-Osiris statues, is simply a variant of earlier inscriptions. From the New Kingdom through the Late

Period, therefore, wooden statues represented the deceased as a transfigured being separate from the deity and with the ability to follow the god Osiris in his nocturnal journey. The similarities between the artifacts of the Middle Kingdom and the New Kingdom and the objects of the Late Period show a degree of cultural resilience. But behind the aesthetic and religious similarity are hidden some conceptual differences which can clarify the institutional framework that enabled highly efficient production of these commodities in the Late Period.

Given the emergence of more accessible forms of expression of personal devotion in the New Kingdom (see § 1.4.1), I interpret the introduction of Ptah-Sokar-Osiris figures as part of a process that began several centuries earlier. This process emphasized a closer and more dynamic relationship between the people and the organizations representing the gods they worshiped. The fact that Ptah-Sokar-Osiris statues could be accessible to people of different socioeconomic status, as reflected in the hierarchy of value they embody, suggests that people felt a more personal connection with their gods than in earlier periods, when similar types of statues did not convey a hierarchy of value. This represents an institutional shift that had repercussions on multiple areas of society. I suggest that this increased accessibility of the divine reflected greater accessibility of the organizations that represented the gods on earth. Therefore, I argue that Ptah-Sokar-Osiris statues are the materialization of a more inclusive interaction between individuals and temple organizations. This gave more people access to commodities whose production was coordinated by these temple organizations and made temples key players in the economy of the Late Period.

4.3.3 Temple organizations controlled the funerary industry of the Late Period

The extant material evidence from the Third Intermediate Period and the 25th and 26th Dynasties, combined with documentary evidence from the Late Period and from New Kingdom Deir el-Medina reveals a shift in the institutional framework of the Late Period.

This shift created higher demand for funerary commodities by generating trust in corporations of specialists in the funerary industry who responded to temple organizations. Deir el-Medina was a village of artisans sponsored by the state whose activity was focused on the preparation of royal tombs and burial equipment. On the side, artisans from Deir el-Medina were also producing funerary commodities for themselves and for members of the elite of the Theban area (Cooney 2007: 46-47). The documentary evidence from Deir el-Medina and the extant non-royal tombs and funerary materials from the New Kingdom suggests that the procurement of funerary commodities was conditional upon family prestige based on affiliation with royal power (Parkinson 1997: 235-245; Kemp 2006: 302; Baines 2007: 52). In the New Kingdom, therefore, the royal power was driving the demand of the funerary industry, which remained accessible to a relatively small group of selected individuals. After the collapse of the central power at the end of the New Kingdom, people lost trust in royal authority, which no longer drove demand in the funerary industry. They instead gained trust in temple organizations. The extant evidence suggests that in the 21st Dynasty funerary commodities remained accessible to an exclusive group of members of the elite who were affiliated with temple organizations. This marked a shift of power from the royal authority to temple organizations, which, I argue, acquired control of the funerary industry and, by the 25th Dynasty, made funerary commodities accessible to anyone who could afford to buy them.

Although none of the extant documents explicitly mentions the production of funerary commodities,⁸⁷ the idea emerging from the evidence of the 25th and 26th Dynasties is one of

⁸⁷ The latest extant texts mentioning funerary commodities before the 27th Dynasty are dated to the 22nd Dynasty. P. BM EA 10800 (Edwards 1971; Menu 2011) and P. Louvre E 6858 (Maspero 1880) concern the sale of shabtis to Nesykhonsu, the wife of the Priest of Amun Pinedjem II. The highly formal tone of these texts, both of which are written in very elegant uncial hieratic, as well as the fact that they were part of the funerary

extensive coordination and bureaucratization of the funerary industry. The most relevant extant documents were produced by professionals whose occupation was most closely connected with the funerary industry and who are now identified by scholars with the term "choachyte." The term "choachyte" was used during the Graeco-Roman Period to identify professional undertakers, which in the Egyptian language would be addressed as 'water pourer (*w3ḥ-mw*).⁸⁸ These individuals formed their own community in the Theban West bank near the temple of Medinet Habu, together with other professionals in the field, such as the embalmers (P. Turin 2123 and P. Louvre E 7128, both published by Pestman 1994). Choachytes appear as early as the New Kingdom and were in charge of the upkeep of mortuary cults (Vleeming 1995). Their tasks seemed to include the initial stages of preparing the body for burial and procuring the funerary equipment.⁸⁸ In the Late Period, one could hire a choachyte by donating a plot of land to the temple, which then would guarantee the service of the choachyte at the time of one's death and the ongoing upkeep of the funerary cult (Donker Van Heel 2017-2018). These contracts were recorded on stone stelae, which so far have only been retrieved from the Theban region. But Donker van Heel convincingly argues that similar practices were being followed in Lower Egypt as well. Therefore, choachytes acted as representatives of temple organizations, which were offering funerary services in the form of "package deals" and needed personnel who could coordinate the artisans and manage the workflow of the funerary industry.

It remains unclear, however, how exactly preparation for each funeral was handled by the choachytes. These undertakers kept personal archives that included documents about

equipment (including the actual shabtis) of Nesykhonsu suggest that they were probably conceived as "warranty cards" that guaranteed the effectiveness of the product, rather than mere receipts (Poole 2005; Warburton 2007).

⁸⁸ During these initial stages, a choachyte could also acquire other priestly titles, and act as 'sealer of the god (*htmw-ntr*)' or as 'lector priest (*hry-ḥb*)' (Cannata 2009: 57-68; Vleeming 1995: 253; Smith 2009: 178-192).

business transactions and juridical disputes, most of which are unrelated to their work in the funerary industry.⁸⁹ Among the extant documents, two make only tangential references to funerary practices.⁹⁰ Of the three documents that make explicit references to preparations for funerary rituals, one records the lease of a slave to a choachyte with the purpose of making preparations for a burial (P. Louvre E 3228 Étiq. D Carton A).⁹¹ The other two are lists of materials purchased and professionals hired for the preparation of the funerary ritual of a woman named Taperet, daughter of Ibes, who died during the reign of Taharqa (between 676 and 675 BC).⁹² These lists include 'textile(s) for the Good House and (final) wrapping (lit. burial) (*ḥbs i pr-nfr ḥnꜥ t3 kꜣris*),' sycamore wood, a scribe, a 'cooker of the red pigment (*pꜣ pꜣsꜣ tms*)' (P. Louvre E 3228 Étiq. A Carton F, lines 4, 7, 14 and 15), and a 'draftsman (*sḥ-kꜣ*)' (P. Louvre E 3228 Étiq. H Carton H, line 9). Neither of these documents provides further details about what exactly these provisions were for. These three documents show that choachytes were in charge of making all the necessary provisions for the burial, including hiring

⁸⁹ These documents have been studied in great depth by Koenraad Donker Van Heel at Leiden University, who generously shared his unpublished doctoral dissertation and forthcoming publications to help me unravel the dynamics of the funerary industry during the 25th and 26th Dynasties.

⁹⁰ The first text is P. Louvre 7843, which is a contract made between two choachytes who decided to split the jurisdiction of a tomb space between them. The second text is P. Louvre 7848, which records a dispute between two groups of choachytes regarding the rights to a tomb in the Theban necropolis. Both texts are part of the corpus studied by Koen Donker Van Heel (1995).

⁹¹ This text is part of the corpus studied by Koen Donker Van Heel in a forthcoming publication. A translation of this text was published by Griffith (1972: 57).

⁹²P. Louvre E 3228 Étiq. A Carton F and P. Louvre E 3228 Étiq. H Carton H (Donker Van Heel 2015 and 2018). The full updated translation and transliteration of both documents will be available in Donker Van Heel's forthcoming publication.

specialized artisans and procuring the raw materials for the production of the funerary equipment.

4.3.3.1 Shedding more light on the activity of choachytes through evidence from the Ptolemaic Period

Since there is not enough documentary evidence illustrating the *modus operandi* of choachytes during the Late Period, records from the Ptolemaic Period may reveal dynamics that could fill in the gaps. Thanks to the records of court cases, we know that during the years 205-180 BC Theban choachytes were stashing mummies in the property belonging to a man named Hermias, who spent most of his time in Lower Egypt and only discovered after his return to Thebes that his property had been repurposed during his absence (Pestman 1992). To help themselves identify the mummies, the choachytes made use of mummy labels (Allen 1917; Hayes 1995; Almásy-Martin 2019). The fact that there are no extant examples of mummy labels in abnormal hieratic suggests that choachytes of the 25th and 26th Dynasties may not have needed them because their business was restricted to the provision of funerary services to one or two families, as the extant texts suggest.⁹³ Although the activity of the

⁹³ The land acquired as payment for the funerary service of one individual in the Late Period seems to have been enough to sustain a choachyte and his/her family for years, if not for life. A choachyte named Petemin in 556 BC received 11 *arouras* (almost three hectares) of land in exchange for his services for the funerary cult of a woman named Tsenhor (P. Louvre E 10935, Pestman 1994). In 497 BC, Petemin's granddaughter Ruru also appears to have acquired land in return for her services as the choachyte of a high official of the temple of Amun in Karnak (P. Louvre E 3231A, Pestman 1994). Upkeep of the funerary cult of at least one individual may have been sufficient, in addition to the property inherited from one's predecessors, to support a family. The extant documents show that the funerary industry grew further in the Ptolemaic period, with burials becoming more affordable as time went on. The choachyte Shakhepery, for example, inherited 36 tombs and the duty of keeping up the mortuary cult of their inhabitants (P. Berlin 5507 and 3098, Mairs and Martin 2008-2009: 25-42). P.

choachytes of the Late Period seems relatively limited compared with the activity of their counterparts of the Ptolemaic Period, the ways in which their work was carried out might show some degree of continuity.

Since people made use of writing only when necessary, the documents regarding the legal dispute between Hermias and the Theban choachytes record an exceptional situation. Revealing where the exceptionality of the situation lies may provide important insights into the activity of choachytes of the Late Period. The problem was not that choachytes were stashing mummies, but that they were stashing mummies inside Hermias's house. This implies that stashing mummies was indeed considered a standard procedure, which may have gone back to the Late Period. I suggest that choachytes were storing the mummies in order to allow themselves sufficient time to gather resources for the production of the funerary equipment and the organization of the funeral. It is reasonable to infer that the revenues obtained from land donations did not go directly into the timely preparation of the funerary equipment. It is also probable that the land was managed by the temple while the customers were still alive and then transferred to the choachytes after their death. This would explain why, according to Herodotus, the mummification process took seventy days (*Hist.* 2.86). Moreover, the Ptolemaic papyrus of *Setne I* (P. Cairo Museum 30646, line 25; Lichtheim 1980: 132) alludes to the fact that the body of one of the protagonists of the story was wrapped on the thirty-fifth day (presumably from his death) and buried on the seventieth, thus leaving thirty-five days of the funerary ritual unaccounted for. This implies that seventy days were needed not just for the mummification process, but also for the preparation of the equipment needed to accompany the deceased in the afterlife.

Leiden I 380A (Martin 2009) shows that choachytes would sell mummies to colleagues, implying that the mummies would come with the endowments the people had made for the upkeep of their own funerary cult during their lifetime.

4.3.3.2 Absence of records indicates depersonalization of the funerary industry

The absence of records regarding the commission of specific items of funerary equipment is a testament to the increasingly depersonalized nature of the funerary industry, which enabled the production of funerary commodities to be streamlined. The documents from Deir el-Medina show that the funerary industry of the New Kingdom was based on personal interaction between the artisans and the people who were commissioning their own funerary equipment (Cooney 2007). By interacting directly with the artisans, the customers also influenced their choices. On the other hand, the documents from the Late Period show that people gave up control over the production of their funerary equipment when they sealed their contract of land donations with the temple. The terms of these contracts were implicit, and through them people entrusted temples with the production of their funerary equipment and arrangements for the funerary rituals. This implicit agreement made the production of more detailed documents unnecessary and the production process of funerary commodities increasingly depersonalized. My assessment of coffins from the 25th and 26th Dynasties has already shown that people were not in control of the production of the most important element of their funerary assemblage, namely the inner coffin. Evidence from later periods also shows that the rituals performed on mummies by the choachytes immediately preceding the burial left little time for decorating the inner coffin (P. BM EA 10507, Smith 1987). However, this does not imply that the wood structure of the inner coffin could not be assembled in advance, and that the rest of the funerary equipment could not have already been prepared.

This depersonalization of the funerary industry was an opportunity for the choachytes to put in place a system that favored division of labor through craft specialization and standardization of products. Standardization of the iconography of faience amulets and

beadwork decorations found on mummy nets from different areas of Egypt, as well as standardization of the dimensions of faience amulets and wood modules used to assemble Ptah-Sokar-Osiris statues suggest that these pieces could have been produced by well-connected communities of specialized artisans. The fact that the decorations made of beadwork were produced individually and subsequently either integrated or applied to the mummy nets suggests that they could have been produced as modules without having the final product in mind. Similarly, the relative uniformity in structure and dimensions of the pieces used to assemble Ptah-Sokar-Osiris statues suggests that different artisans could produce different modules for the same statue without having the final product in mind. The modularity displayed by mummy nets and Ptah-Sokar-Osiris statues, as well as by other objects of the funerary equipment,⁹⁴ reveal patterns of producer specialization which generated high levels of efficiency in the funerary industry.

The fact that the modules of the statues whose decoration is still preserved were not decorated individually, but only after they were assembled, implies that the modules could have been prefabricated, whereas the decoration was applied after the commission was received. The hastiness with which the decoration was often applied resembles the patterns seen on coffins of this period. For example, the shabti boxes of the Singer of the Interior of Amun, Ankhshepenwepet, also show evidence of specialized labor and quick execution of the tasks. The lids of the boxes seem to have been closed and secured with dowels before the decoration was applied, as the traces of Egyptian blue on one of the dowels, matching the stripe of the decoration below, suggest (Fig. 4.52). Moreover, changes in the direction of some drips of the preparation layer on the interior surface of each box reveal that the

⁹⁴ Taylor has pointed out that, already during the Third Intermediate Period, papyri could be produced in a modular fashion by having different scribes work on "a 'stock' of prefabricated sheets which could be assembled on an ad hoc basis when needed" (2010a: 282).

decoration was applied hastily, and the object was moved without letting the preparation layer dry first (Fig. 4.53-4.54). This recalls the hastiness seen on the decorative program of the inner coffin of Ta-aati discussed earlier (Fig. 3.46). Overall, the evidence suggests that the production of funerary commodities no longer received the attention and care that had been required of the artisans of Deir el-Medina in the New Kingdom.

Artisans of the Late Period could afford to invest relatively few resources in the production of funerary commodities thanks to the depersonalized system that the choachytes put in place. This system left limited choice to the customer by forcing those who wanted to purchase a funerary equipment to abide by the rules imposed by temple organizations. The frequent omission of titles and filiations on funerary commodities of the Late Period suggests that the degree of energy expenditure depended on the purchasing power of individual commissioners whose wealth was not acquired through affiliation with a local patron. Their only commitment was to donate enough land to the temple so that the choachytes would have sufficient resources available to provide for their own sustenance, as well as the upkeep of the funerary cult of their client. While in New Kingdom Deir el-Medina the local network of patronage was self-sufficient and provided enforcement for all kinds of economic activities, in Late Period society agents from different communities and different cultures regularly interacted outside of their local networks. In this highly mobile context, different services were provided by different organizations, and the quality of these services depended on the wealth invested by the customer. In Chapter 5, I argue that enforcement of private economic transactions was guaranteed by a newly founded corporation of bureaucratic specialists. In this chapter I argue that funerary services were monopolized by temple organizations.

The documentary evidence in the funerary industry suggests that the production of most funerary commodities was streamlined and that customization of funerary assemblages was a treatment reserved for those who could afford it. Documents seem to have been produced

only when a customer requested some special treatment. For example, the lists of supplies for Taperet's burial reveal the exceptional nature of the funeral for which the provisions were made. Given that in 524 BC a whole burial would cost ½ kite of silver (P. Cairo CG 50062, Spiegelberg 1932: 52-53), the fact that just the wood purchased for Taperet's burial was worth 2 kite of silver suggests that she had requested some sort of special treatment.⁹⁵ This implies that Taperet had made a more generous donation to the temple in order to have her choachyte purchase a larger quantity of more expensive materials and hire specialized craftsmen to customize her funeral.⁹⁶ The exceptionality of the items mentioned on Taperet's lists suggests that these documents were produced to record unusual procedures. By extension, this implies that the standard procedure was not to have the funerary equipment custom-made.

The depersonalization of the funerary industry enabled the production of more funerary commodities for a wider range of individuals of different socioeconomic status. The lack of individualization seen on some Ptah-Sokar-Osiris statues in particular implies that these objects could have been produced without a specific commission and could have retained their potential for recommodification after deposition. This suggests that these objects could have been designed to facilitate the provision of funerary commodities for multiple burials. The data, therefore, reveal a well-connected and organized industry whose efficiency enabled it to keep up with a growing demand for funerary commodities. The assessment of the resources invested on the production of Ptah-Sokar-Osiris statues and

⁹⁵ According to the most recent studies in metrology, 2 kite of silver in the Late Period correspond to one Ionian stater, and one Athenian tetradrachm, which was broadly used as currency in Persian Period Egypt and weighed 17.2 grams (Muhs 2016: 190; Chauveau 2000).

⁹⁶ Donker Van Heel (forthcoming) suggests that the supplies listed in the documents may have been required for the reenactment of the Khoiak Festival arranged specifically for the funeral of Taperet.

mummy nets shows that the procurement of funerary commodities was not based on sociopolitical status. This supports the story told by the coffins of the 25th and 26th Dynasties (Chapter 3), whose energy expenditure also does not seem to be correlated with the titles of the deceased. The energy expended on the funerary equipment, therefore, did not depend on sociopolitical status, which had driven the energy expenditure in the funerary industry until the Third Intermediate Period. This institutional shift of the funerary industry reveals decreased social inequality. The depersonalization of the funerary industry made it more inclusive, since the organizations that coordinated it generated trust as they guaranteed the quality of the services.

4.3.3.3 Institutional retention and depersonalization were instrumental for manufacturing trust

The cultural resilience embodied in funerary objects of the 25th and 26th Dynasties was not just a way of ensuring some stability and continuity in a society that was undergoing radical changes. Retention of older traditions with strong ideological associations served the purpose of creating trust in the new system. The defensive features of inner coffins at the beginning of the Late Period seem to have been devised specifically to show lack of reuse, which counterbalanced the lack of agency left to the customer by the depersonalized funerary industry. In other words, in a world where people had limited control over the production of their funerary equipment, they were at least reassured that their inner coffins were their own and nobody else's. Similarly, as I discussed above, mummy nets embodied several symbolic features that used to be embodied in different objects placed *outside* of the inner container in earlier times. By *de facto* condensing all of these features into one object, attaching it to the body of the deceased and placing it inside a brand new coffin that was not going to be reused, one would guarantee that at least that essential part of the funerary equipment would stay

with the deceased. Therefore, retention and re-elaboration of earlier practices of defensive burial in the Late Period were instrumental to building trust in the new funerary industry.

The depersonalization of the funerary industry relied on display, which was aimed at fabricating trust in craft specialists. Among the wealthiest members of the elites, trust could still be created through direct collaboration between the owner of the funerary equipment and the artisans in charge of producing funerary commodities, following the tradition of the New Kingdom. However, the fact that, in many cases, at least the focal pieces of the funerary equipment were completed after the death of its owner required that artisans devised methods of producing funerary commodities that were aimed at manufacturing trust in ways that could no longer rely on the direct interaction with their customers. For example, mummy nets displayed defensive features that were complementary to those of inner coffins, as one could envision the mummy net as a seal that was laid and secured on top of the mummy, perhaps in the presence of the relatives of the deceased, to indicate the completion of the embalming process, and marked the authenticity of the mummy wrappings. The fact that the amulets depicting the sons of Horus were migrated from the interior of the body (in the Third Intermediate Period) to the exterior surface of the wrapped body, where they could be seen by those witnessing the process, safeguarded the trustworthiness of craft specialists. People needed to trust that the body would not be tampered with after deposition. This kind of trust could not be achieved through bureaucratic practices, but required the development of modes of production that *showed* people that they could trust these artisans. I argue that it is precisely this kind of manufactured trust which paved the way to sustained economic growth.

4.4 Conclusion

My assessment of the documents from the archives of the choachytes of the Late Period and the Ptolemaic Period, combined with a technical assessment of Ptah-Sokar-Osiris statues and

mummy nets, suggests that the funerary industry of the Late Period was under the control of temple organizations. The contracts establishing endowments for funerary cults implied that the choachytes were in charge of arranging the mummification of the body and providing for the funerary assemblage. The exact tasks of the choachytes were not specified in the documents because they were socially mandated. Such services required the accumulation of substantial capital, which was naturally limited in a non-capitalistic society. This would explain why choachytes needed to stash the mummies of their customers in order to allow enough time to gather the necessary resources to make arrangements for a proper burial. The activities of choachytes and the level of specialization of the artisans as well as standardization of the funerary objects, suggests that the industry was depersonalized. This means that, unlike in New Kingdom Egypt, the customers had limited control over the decisions made about the production of their own funerary equipment. Depersonalization made funerary commodities more accessible and reduced social inequality. Depersonalization also made the funerary industry highly efficient, since customized burials became a rare and expensive commodity. Donating land to a temple in exchange for funerary services implied a guarantee that these services would be carried out properly. Trust in this new system was manufactured through the re-elaboration of old defensive practices based on display. By sealing the wrapped body with a mummy net and showing that inner coffins could not be reused, craft specialists showed that they deserved the trust of their customers. The temple was the organization that coordinated these artisans and guaranteed the quality of the service provided after the death of the customer.

5. Exploring economic growth through scribal practices

5.1 Introduction

In Chapters 3 and 4, I explore efficiency and depersonalization in the funerary industry, as well as the inclusivity of the elites of the 25th and 26th Dynasties by means of exploring the social implications of the modes of production of a selected number of funerary objects. In Chapter 3, my assessment of the modes of production of inner coffins in particular shows that people gave up control over the production of the most important piece of their own funerary assemblage, since many inner coffins display evidence of having been decorated after they were closed with the body inside. This suggests that people entrusted the procurement of a key element of the funerary equipment to an organization, which gathered the material and the labor force to assemble funerary objects, and also guaranteed the effectiveness of the services provided. In Chapter 3, I infer high levels of coordination of the funerary industry from an assessment of standardization and modularity of mummy nets and Ptah-Sokar-Osiris statues. On the basis of the evidence presented in both chapters, I suggest that the efficiency of the communities of practice at the beginning of the first millennium BC reached a level of organization and coordination which enabled them to keep up with growing demand for funerary objects. This implies that the funerary industry was the manifestation of resilience at work by means of providing a coordinated system for the provision of funerary goods which no longer relied on royal patronage. I argue that the collapse of the centralized government made funerary practices accessible to a broader range of the population, as demand was no longer exclusively dictated by the royal court.

One way of assessing the extent to which the society of the 25th and 26th Dynasties supported private enterprise is by looking at the use people made of bureaucracy for preventive purposes. Scholars have looked at bureaucratic documents as the manifestation of the fundamentally corrective aspect of bureaucratic practices in general (Kemp 2006: 305-

306). In the realm of private transactions, scholars tend to see bureaucracy as the expression of the intervention of central authorities to settle disputes, rather than a manifestation of people's intention to prevent disputes. Eyre (2013) for the first time looks at preventive aspects of Egyptian bureaucracy, but he still sees scribal practices as expressions of the exclusive involvement of state authorities outside of the patronage-based system. This implies an exclusive connection between scribal bureaucratic practices and central authorities, and it accounts for the exceptionality of these practices during the New Kingdom. According to this logic, fragmentation of the central power should have led to a generalized lack of coordination in bureaucratic practices. Only recently, Cooney (forthcoming b) has suggested that the unprecedented use of documentation at the end of the Ramesside Period signals a reaction to the incipient crisis of the centralized power and distrust in the traditional patronage system, which gave way to individual agency and allowed new agents to enter the competitive elite circles. The extant evidence from the Late Period represents a development of this phenomenon. Therefore, the current scholarship has only just started to take into consideration individual agency and the ways in which bureaucratic practices were developed to cater to the changing nature of private enterprise through the Late Period. This chapter aims to contribute to this most recent narrative regarding the changing function of bureaucracy in Ancient Egypt.

In this chapter, I argue that the recession of the centralized royal power enabled the transition from a village-based economy to a more interconnected system, which created demand for more preventive bureaucratic practices and more frequent interventions of third parties. This chapter explores the possibility that bureaucracy of private transactions was developed independently from the bureaucracy of royal administration. Through an assessment of literacy levels and uniformity of scribal practices, I propose that the beginning of the Late Period saw the creation of a class of specialized bureaucrats, whose literary

competence was limited to documents of private transactions. My assessment also suggests that documents of the Late Period show signs of depersonalization of bonds of patronage. This implies that bureaucratic documents became instruments that facilitated the involvement of third parties external to local communities as enforcement agents. I argue that the longevity and efficacy of this system relied in the advantages it bore to both state organizations and private individuals. Bureaucracy at the dawn of the Late Period manifested resilience by providing structure to private enterprise during a time of political instability.

5.2 Methods

5.2.1 Selection of the material

The New Kingdom and Late Period documents I have selected provide a snapshot of bureaucratic practices applied to private property transfers, namely documents of the preventive type that attest to the exchange of property between two or more individuals. The 106 documents of private transactions written in uncial hieratic assessed in this chapter all come from Western Thebes, mostly from Deir el-Medina, and are those listed in the section dedicated to "administration of personal transactions" by Haring (2003: 148-161). From Haring's list, I excluded unpublished documents and texts that are court proceedings and oracle petitions, since these are corrective activities, as well as divisions of property and lists of commissions, when these do not include an exchange of commodities. The selection process has been severely limited by the very few published texts in abnormal hieratic (over 200) which do not do justice to the growing number of new abnormal hieratic documents that are emerging from museum storerooms (Donker van Heel 2020). The 23 selected documents of the Late Period span the two centuries during which the shift from uncial hieratic to abnormal hieratic and from abnormal hieratic to demotic occurred. Since no extensive list of the extant abnormal hieratic texts has yet been published, this selection of the documents

from the Late Period has been drawn from published and unpublished sources.⁹⁷ Among the available documents of private transactions, I focus on the specific types of transactions that yield the highest number of documents. The selection covers the period from the first known document in abnormal hieratic to demotic documents from after the 26th Dynasty. I focus on three specific types of property transfers: four contracts of sale or lease of slaves over the 40 year period from 727 BC to 687 BC, 11 land leases from the Late Period after the introduction of demotic in Upper Egypt, and five sales of cows, which enable a comparison between abnormal hieratic and later demotic documents, and between abnormal hieratic and uncial hieratic documents. No such selection based on specific types of private transactions is possible for the New Kingdom due to the particular nature of the texts, which often report transactions of multiple different types of objects and do not lend themselves to a detailed typological assessment. The fact that all the texts assessed in this chapter come from Upper Egypt reflects a bias of the available evidence, since Upper Egypt has the most favorable conditions for survival of organic material.⁹⁸

5.2.1.1 Comparing apples with apples

Since the discrepancy in the content and structure of the extant documents of the New Kingdom and the Late Period lies at the core of my argument, it is necessary to ascertain that the selected texts are in fact comparable. One way of doing so is to make sure that differences

⁹⁷ Vittman 2015 provides a list of the published documents in abnormal hieratic. To these texts, I have included some of the texts from the unpublished doctoral dissertation of Koen Donker van Heel (1995), from an edited volume that will soon be published (forthcoming) and from two recently published articles by Archidona Ramirez (2019; 2020).

⁹⁸ Yet, one unpublished papyrus from Lower Egypt (GEM 3632) shows that similar texts to those found in Upper Egypt also occurred in the north.

in the content and structure of the texts cannot be ascribed to substantial differences in the value of the property transferred. While most of the extant records from the Late Period deal with transfers of property of relatively high value, some are comparable to the commodities that appear in the records from Deir el-Medina. Beyond leases of estates and slaves, there are a number of texts that focus on the transfer of cattle, the value of which is comparable to the value of the donkeys that were leased or sold in Deir el-Medina. Given that cattle and donkeys could be considered of similar value, the fact that donkey hires from the New Kingdom and cattle sales from the Late Period show the same types of differences that more broadly characterize the documents of the New Kingdom and the Late Period suggests that these differences are not correlated to a difference in the value of the transferred property. Furthermore, there seems to be little correlation between the medium employed and the differences in content or structure of the texts. Although all the documents assessed from the Late Period are on papyrus and most of the texts from Deir el-Medina are on ostraca, the same differences in content and layout can be detected between a broad range of documentary texts on papyrus from the New Kingdom and the texts from the Late Period. One example of these different trends in scribal practices is the differential use of dates (see § 5.2.2). Overall, the fact that the type of commodity transferred bore little correlation with the way in which the property transfer was recorded suggests that these documents reflect fundamental differences in the social organization between the New Kingdom and the Late Period.

5.2.2 Assessing energy expenditure through complexity, material and labor investment

Different levels of energy expenditure are conveyed by the materials used as medium for documents recording private transactions and the labor required to produce them. For example, the ostraca from Deir el-Medina are fragments of limestone and potsherd, which

undoubtedly abounded in a village of artisans who were working with many different types of materials. While ostraca were waste matter used as support for written documents, the papyri of the Late Period were manufactured for this specific purpose. Higher levels of energy expended in the production of the medium implies high value of the document. Furthermore, the use of ostraca in the New Kingdom also implies that the circulation of these documents was limited, while the papyri of the Late Period were more suitable for transportation, thus reflecting their potential for being handled by multiple people within and outside of the local community. I argue that this potential reflects the added legal value this type of documents acquired in the Late Period. In addition to the value conveyed by the materials used, I assess energy expenditure in terms of the complexity of the script and the details provided by the documents. These include the date in the first line, the names of the parties involved in the transaction, the addition of titles and filiations of the parties involved, as well as of preventive formulas and the signatures of scribes and witnesses.

Complexity is here defined as the degree of similarity between a sign or sign group and its hieroglyphic equivalent. For example, I consider a sign group to be more complex if the hieroglyphic equivalents of the cursive signs are identifiable, as opposed to a case where two or more signs blend together through ligatures into one highly simplified version of the sign group. The underlying assumption is that higher complexity would have required more scribal training and that a scribe would be well-versed in a wide variety of texts and possibly also in different scripts. When the signs are highly simplified and ligatured to the extent that they become difficult to identify, I suggest that the scribe was writing within a particular context and for a specific audience, as simplification would impose limitations on the types of texts that could support this simplified system. This does not imply that texts displaying low levels of complexity were regarded as less valuable than texts displaying high levels of complexity. This implies instead that the coexistence of different scripts that required

different levels of energy expenditure reflected a separation in the valuation system between different social spheres during the Late Period (§ 5.2.4).

The variable "Party_A_number" in Spreadsheet E indicates the number of people from whom commodities were transferred. The variable "Party_B_number" indicates the number of people to whom commodities were transferred. The identification of the number of people involved in the transaction relies on the count of the names mentioned in the texts. However, the names of both parties were not always recorded in the documents, since sometimes different people are addressed through the use of pronouns (as in O. Glasgow D.1925.89, O. Liverpool 13625 and O. DeM 602). For this reason, some of the fields in the columns "Party_A_number" and "Party_B_number" are left blank when the texts do not provide any names that would enable the identification of the number of people that constituted Party A or B. When a lacuna in the text does not allow to determine whether names were mentioned in the text, then the variables "Party_A_number" and "Party_B_number," as well as the variables "Name_of_party_A" and "Name_of_party_B" are left blank. When the name of one of the parties is not specified, I suggest that the record of the transaction served a very limited function and was probably kept by the party whose name is not recorded. This suggests that the transaction was meant to be enforced through the local network of patrons. From an economic perspective, lack of specificity in names and filiations reflects a village-based economy based on social bonds that act as guarantors of economic transactions. Within such context, the legal value of written records was subordinate to the value of the social ties that guaranteed the validity of the transactions.

The differential use of dates can reflect different types of archival practices and reveal changes in the valuation of bureaucratic documents. In a domestic archive, for example, it might have been more practical to have the type of transaction stand out in the first line of the document, since the members of a household would be more likely to remember the type of

transaction and the names of the parties involved, rather than the exact day when the transaction took place. In these cases, I suggest that the transactions were meant to be enforced through the local network of patronage. Similarly, the inclusion of a date without the addition of the name of the current ruler (i.e. day and month only, or day, month and year without the name of the king) suggests that the document was meant to fulfill its purpose during the lifetime of the individuals mentioned in it. Therefore, a lack of specificity in dating private transactions suggests that specificity was not necessary, probably because these records were kept in family archives and the transactions recorded were meant to be enforced by the local community. The addition of the name of the king in the date allowed the production of the document to be precisely located chronologically and suggests that the document was meant to fulfill a purpose that may have gone beyond the lifetime and the social network of the people mentioned in the record.⁹⁹ This type of document had evidentiary value, and could have been produced for state archives, where it would have been more practical to arrange documents by date. Documents that were produced for state archives acquired high legal value because they enabled the intervention of third parties as enforcement agents.

⁹⁹ The documents that show a full date in the first line are probably the type of documents that Kemp (2006) would define as “official,” although he never provides a definition of what he considers to be an “official record” (he only implies that village barter transactions of the kind that survive from Deir el-Medina cannot be regarded as “official records”). Kemp intuitively excludes from the pool of “official” documents those that are not written on what we would regard as an “official” medium, namely papyrus or stone, probably on account of the inherent value or durability of the material. There is now agreement among scholars that ostraca were “regarded as an inferior class of material” (Eyre 2013:28), despite the fact that they were the most commonly used medium for writing. A distinction between official and unofficial records based exclusively on the medium implies a projection of our modern view of what the medium for an “official” record should be. I discard distinctions based exclusively on medium.

The addition of titles and filiation fulfilled a similar function. One purpose of adding titles and filiations to names is to facilitate the identification of an individual within a community where many people share the same name. In that context, it would be easier to differentiate Pentaweret the woodcutter from Pentaweret the watercarrier (O. UC 39664), as this was probably the way people of the local community would have distinguished between these individuals (Bierbrier 1975). Since titles and filiations served the practical purpose of differentiating people that bore the same name, they are not always specified on documents. The variables "Filiation_of_party_A" and "Title_of_party_A," and "Filiation_of_party_B" and "Title_of_party_B" include the counts of the occurrences of filiations and titles in the records assessed. A more frequent and consistent inclusion of filiations and titles is the manifestation of a highly interconnected and mobile society in the Late Period, in which these specifications were necessary to make the parties more easily identifiable.

The specificity of titles and filiations in documents implies that people beyond the family circle of the parties involved could make use of the records, thus introducing the potential for the intervention of third parties external to the community to enforce the transaction. The use of titles and filiations in addition to specific dates (i.e. dates that include the name of the current king) suggests that this type of record could have been kept in central archives to facilitate investigations by the state officials in case of a dispute. Conversely, I suggest that absence of titles and filiations next to names may indicate that the documents in question were produced only for the parties mentioned in them, whose families lived in the same village for generations, knew the people mentioned in the documents, and probably recalled the transactions recorded in those documents. Lack of precision in the identification of the parties involved implies that the legal value of these documents was at least partly reliant on people's memory and close-knit social networks. This inevitably undercut the value of

written records, which alone could not provide enough detail that could be used in a legal proceeding.

The majority of documents from the Late Period explicitly conveys their preventive value through the use of formulas (see variable "Preventive_formulas") that guarantee the validity of the recorded transaction (e.g. "as for the one who will raise an issue, his statement shall not be heard in any Hall of Writing"), while documents from the New Kingdom tend to be less explicit in the expression of their legal preventive value. Additionally, witness lists and scribal signatures in property transfers were ways of formalizing the introduction of third parties that guaranteed the legal validity of the transaction (Fig. 5.1). Signatures of third parties could be taken as the embodiment of the social stature of the people who signed the document or were present when the document was produced. By adding their names to the documents, these people transferred their authority to the documents. This may have served the purpose of discouraging disputes concerning private transactions, or it may have helped state officials to enforce such transactions. The absence of witness lists and scribal signatures in documents of the New Kingdom indicates that the recorded transactions had value only within the close-knit social network of the local community and could be brought to the attention of state officials only through the exploitation of local ties of patronage. On the other hand, recording the names of witnesses and scribes probably enabled the individual to bypass some intermediary steps in case of a dispute. A consistent use of documents that included preventive formulas, witness lists and scribal signatures suggests that the enforcement of private transactions tended to rely upon organizations which were external to the local community. This implies that records of private transactions acquired preventive legal value only during the Late Period.

5.2.3 Assessing scribal identity through changes in script, specificity of language, and standardization of layout

A more simplified rendition of signs and sign groups in documents of the Late Period would make the scribal training faster and simpler and would enable the training of specialized scribes with literacy skills limited to bureaucratic practices. Baines (2007: 59) has already highlighted the correlation between differential access to literacy and changes in social organization, and suggested that literacy in ancient Egypt became increasingly specialized over time. In this chapter, I investigate the possibility that the development of a new script in the Late Period could have been a manifestation of the specialization of specific scribal practices. Given that any cursive script is designed to make the writing process more efficient, the fact that different cursive scripts were introduced in Ancient Egypt at different times and sometimes coexisted suggests that changes in social dynamics led to the introduction of more efficient modes of writing. Three cursive scripts emerged in Egypt. Uncial Hieratic remained in use from the Middle Kingdom until the Third Intermediate Period. Abnormal hieratic was in use in Upper Egypt at the beginning of the 25th Dynasty while demotic was being developed in the north and subsequently introduced into the south during the 26th Dynasty (Martin 2007). The differences in complexity among these cursive scripts were a manifestation of the social changes underlying their introduction.¹⁰⁰

I suggest that the systematic simplification of a cursive script offered the potential for training more specialized scribes with limited access to literacy. While uncial hieratic maintained a high level of complexity, abnormal hieratic and demotic display low levels of complexity throughout the extant documents. This implies that the scribes of the New Kingdom were likely proficient in the hieroglyphic script, as well as in the cursive script.

¹⁰⁰ Agut-Labordere (2014: 1008-1009, 10025) has recently alluded to the possibility that a change in script might reflect improved economic performance in Late Period Egypt, in particular during the reign of Amasis.

This hypothesis is supported by the study of scribal hands in Deir el-Medina undertaken by Stefan Polis, who found that there were very few scribes in the village who fulfilled all the scribal tasks in the community, as well as by ostraca displaying the same text written in uncial hieratic and hieroglyphs side by side (O. Cairo CG 25671; Černý 1935a: 55-56, 75, pl. 70). On the other hand, the overall lower level of complexity of the abnormal hieratic and demotic scripts suggests that there may have been more differential access to literacy in the Late Period. This interpretation does not imply that highly trained scribes would always employ high levels of complexity in their writing. My interpretation implies instead that the systematic simplification of a cursive script offers the potential for training more specialized scribes with limited access to literacy. Therefore, I generally interpret high levels of complexity to indicate highly literate non-specialized scribal practice in the New Kingdom and lower levels of complexity as an indication of specialized scribal practice in the Late Period.

Coordination and specialization of writing practices point to a well-defined division of tasks and the formation of groups of specialized scribes whose tasks were confined to the production of bureaucratic documents. I analyze the structure of the selected documents and the ways in which structural changes of the documents correspond to increasing levels of standardization of bureaucratic practices and connectivity among the communities of practice by tracking the sequence of the units of content in each document. A unit of content is a phrase or a number of phrases that convey a piece of information. My assessment includes six units of content: 1) Date; 2) Introduction of parties; 3) Activities recorded; 4) Formulas guaranteeing the validity of the transaction; 5) Scribal signature; 6) Witness list. Specific units of content can provide information about the function of a document, as well as the ways in which the transaction recorded was expected to be enforced. The order in which these units of content occur does not vary in the documents I assess, but the fact that some

documents include some units but not others reflects fluctuations in the level of coordination of bureaucratic practices. On the basis of the occurrence and the consistency of the sequence of units of content, I assess the level of standardization of the bureaucratic practice in the New Kingdom and the Late Period. Higher levels of standardization correspond to higher levels of coordination (and, therefore, efficiency) among scribal communities and enforcement agents, and larger numbers of economic transactions taking place in a growing economy.¹⁰¹

Specialization of scribal practices is linked to depersonalization of the enforcement of private transaction and increased legal value of written records. As noted above, the legal value of most records of property transfers from the New Kingdom lies in the social ties connecting the parties who are transferring property, regardless of the type of property that is being transferred. These documents appear as lists of goods (in the form of crop, cattle, metals, furniture etc.) that party A is transferring to party B in exchange for a commodity or a list of goods of various sorts. The disregard for the relative value of the property transferred and the fact that the texts do not always mention the name of both parties implies that the enforcement of the recorded transaction relied upon the social network of the parties involved. On the other hand, records of property transfers from the Late Period focus on the transfer of only one type of product from party A to party B. In addition to the specificity of the product, these transfers display various degrees of specificity in other units of content. The donkey hires from Deir el-Medina, for example, exhibit a limited degree of specificity beyond the type of commodity that was transferred, while most documents from the Late Period tend to show titles, filiations, scribal signatures and witness lists. While the degree of

¹⁰¹ Two articles by Menu (1988 and 1994) apply a similar method to the analysis of a limited number of documents. However, the author never addresses the theory behind the use of units of content, nor does she specify the exact number of documents she is assessing.

specificity in the type of commodity may have been correlated with its value, the overall increase in specificity of records of property transfers of comparable value between the New Kingdom and the Late Period indicates that private individuals had an incentive to have each transaction recorded individually by a professional, and that the bureaucratic system was able to meet the demand created. This process of expansion of the bureaucratic system required an expansion of the class of specialists who were in charge of recording transactions.

5.2.4 Assessing the identities of customers through a hierarchy of value

The fact that uncial hieratic was not entirely replaced by abnormal hieratic at the beginning of the Late Period suggests that these two cursive scripts embodied a hierarchy of value that conveyed at least part of the identity of the people for whom these texts were written.

Recently, Archidona Ramírez (forthcoming) has convincingly argued that scribes who were able to write in uncial hieratic as well as in abnormal hieratic chose to use uncial hieratic in specific places in documents that were otherwise mainly written in abnormal hieratic. He explains their choice by correlating the aesthetically higher value of uncial hieratic to the high status of the people whose names were written using this script. Therefore, the use of uncial hieratic over abnormal hieratic seems to have been dictated by the status of the customer.

The use of different scripts on the basis of the identity of the commissioners bears implications regarding who had access to the professionals in charge of producing these records. I suggest that the limited access to literacy before the Late Period, as well as the use of one highly complex cursive script for all types of texts shows that these texts were produced by and for people belonging to an exclusive and small group of elites. Like coffins of the Third Intermediate Period, documents of the New Kingdom convey the absence of a hierarchy of value, which implies that only members of the local elites were able to put their transactions in writing. Conversely, the hierarchy of value conveyed by documents of the

Late Period suggests that bureaucratic documents were accessible to a broader audience, and that people could acquire wealth and, perhaps, even status by engaging in economic enterprises that would have been very difficult to enforce within the exclusive patronage system of the New Kingdom. The depersonalization of bureaucratic practices through an increased use of written records in the Late Period enabled the enforcement of economic transactions that were taking place at many levels of the social hierarchy, thus allowing an expansion of the elite circles.

5.2.5 Recommodification as a reflection of the legal preventive value of the written record

Patterns of recommodification of ostraca and papyri have not yet been studied in depth. However, the fact that most of the extant written records from the New Kingdom are on ostraca and most of the surviving written records from the Late Period are on papyri reveal different potential for recommodification (Fig. 5.2). Both ostraca and papyri could be recommodified, but ostraca might have born a higher potential for recommodification, given that it was probably difficult to erase texts on the relatively fragile surface of a papyrus. Some of the Late Period records in Spreadsheet E were written on both sides with texts that do not always involve economic transactions, nor do they always date to the same year. This implies that papyri were probably only reused once. Thus the switch from a cheap, widely available material such as pot sherds or limestone to an expensive material with low potential for recommodification is indicative of the value these records acquired in the Late Period and their function in the long-term enforcement of the transactions recorded on them. Their limited potential for reuse may indicate that these records were meant to be stored for long periods of time, thus ensuring that the enforcement of the transactions recorded would not rely on the memory of the local community. This represented a major change in the way in

which business was conducted between the New Kingdom and the Late Period, and encouraged more people to engage in economic enterprises and acquire wealth.

5.3 Discussion

5.3.1 Current discourse on the legal role of bureaucracy in Ancient Egypt

There is some disagreement in the scholarship regarding the extent to which records of private transaction carried legal evidentiary value. Haring's model relies on the idea that people only began to make extensive use of written records when they started believing in their reliability (2003: 257). Haring suggests that the increased production and uniformity of documentary texts in the 20th Dynasty implies that a conceptual change took place in society, whose trust in the written record increased. He also argues that increased trust in the written record meant that records of private transactions came to carry more legal evidentiary value as the practice of writing things down became more common and more standardized. Eyre (2013: 127), however, suggests that ancient Egypt always remained an oral culture and that written records only served as supporting material to oral testimony through the Late Period. On the one hand, Haring does not account for the social dynamics that made people trust the bureaucratic system more than oral agreements and local bonds of patronage. On the other hand, Eyre's model does not engage with Haring's theory and consequently does not incorporate an interpretive framework to account for the more abundant and standardized production of documents after the New Kingdom. Following Cooney's model (forthcoming b), I suggest that people in ancient Egypt always trusted the written record, but did not make extensive use of it as long as they could rely on the traditional patronage system. After the collapse of the centralized power and the patronage system of the New Kingdom, people lost trust in the figure of the king and his extensions (i.e. people of the royal entourage, including the vizier and the *knbt* court, for example), and had to navigate a network of multiple

competing agents and patrons. Therefore, I argue that after the New Kingdom documents acquired a more prominent preventive role as supporting material for transactions that were taking place in a highly mobile, competitive and interconnected society. Increasing mobility and connectivity in the society of the Late Period triggered the creation of a coordinated bureaucratic system.

The production of private contracts during the Late Period still relied on individual initiative but became more accessible with the creation of a system that supported its routinization and depersonalization. Bureaucracy contributed to the efficacy of patronage and state control by providing the instrument for the exertion of that control.¹⁰² The use people in Egypt made of bureaucracy suggests that they generally trusted its efficacy but not its efficiency. Bureaucratic efficiency is related to the mechanism of production of bureaucratic documents. For this mechanism to be efficient it required a system that allowed the production of documents in large quantities and within a limited amount of time. My definition of bureaucratic efficiency is based on the assumption that different levels of coordination in the bureaucratic system reflected differing abilities to produce such documents in an efficient manner. Coordination of bureaucratic practices was an attempt to make the enforcement of private transactions more efficient. I suggest that the routinization of bureaucratic practices during the Late Period shows that the elites of the Late Period embraced a system whose efficacy they always trusted, in response to the growing distrust in the new social order brought about by the Kushite invasion. My interpretation is inspired by two models historians developed to explain the development of bureaucracy in England and Italy.

¹⁰² According to Moreno García (2014), while state control may not always have been efficient, it could be effective, and the patronage system contributed to its efficacy.

5.3.2 Current models: Medieval England. Bureaucracy as an instrument of a fiscal regime

Through an investigation of documentary practices, Clanchy (1993) has explored some of the social dynamics at the core of a widespread adoption of literacy in Medieval England. His investigation shows that up until the eleventh century AD the Anglo-Saxon kingdom, much like Ancient Egypt, relied on customary mechanisms of oral practice rather than a complex bureaucratic apparatus (Clanchy 1993: 66). Before that time, written records of private transactions were rare, difficult to obtain, and procured at the discretion of the individual. After the Norman conquest, systematic record keeping began to be employed by the royal court. It became a common way of documenting private transactions after the second half of the thirteenth century (Clanchy 1993: 75). Although Clanchy does not consider the social implications of this shift in bureaucratic practices, for the purposes of my assessment it is important to emphasize that this shift was a reaction to the introduction of the Norman elites as new agents in a colonial context. Old and new agents did not know one another and probably had little cultural affinities, which made the traditional ways of dealing with economic transactions based on personal trust inadequate. In this context, bureaucratic practices provided the means for old and new economic agents to manufacture trust and guarantee protection for their economic enterprises.

Clanchy's case-study hints at the correlation between the large scale systematic adoption of written records triggered by changes in society and economic growth. This correlation was explored in more depth by McDonald (1998), who has suggested that the introduction of systematic record keeping was followed by increased efficiency of production and growth. Although economic growth at this time was doubtless influenced by additional factors, it seems that systematic adoption of bureaucracy increased private investment. The introduction of systematic record keeping implies that the royal court introduced the census system in order to regulate taxation, thereby establishing the role of the state as enforcement agent of

private property. At the same time, by having their property recorded, property owners in Medieval England committed to paying taxes and, by having the state guarantee their ownership, ensured that the property would remain in their possession. This lowered transaction costs by making the enforcement of private transactions easier, and boosting private enterprise. Securing one's property became particularly important after the Norman invasion when political instability caused by foreign invasions threatened private property and the introduction of new elites meant that these had to negotiate their place in society. The social narrative behind the introduction of bureaucracy after the Norman conquest of England can inform our understanding of bureaucratic practices in Egypt after the Kushite invasion in the 25th Dynasty. Following the elite replacements of the 25th and 26th Dynasties, the existing system of local patronage was overturned, and people demanded more consistent use of documentation to counter the distrust in the traditional patronage system and build a safer environment for private transactions.

5.3.3 Current models: Medieval Italy. Bureaucracy as an instrument of private enterprise

The top-down phenomenon observed in Medieval England had a counterpart in the bottom-up dynamics seen in Italy between the end of the Roman Empire and the beginning of the Middle Ages. Costamagna's study of the creation and development of notaries in Northern Italy shows that this transition kept the basic structure of bureaucratic documents of Roman times, thanks to the creation of a class of specialized bureaucrats in charge of composing the documents (di Renzo Villata 2009). Costamagna's study emphasizes the fact that the figure of the *notarius* (a specialized record keeper) was demanded by the people, whose faith in the governmental bureaucratic apparatus was gradually diminishing after the collapse of the Roman Empire. This suggests that people were aware of the economic advantages of having their property transfers recorded, and put pressure on the system for the creation of a

specialized class of bureaucrats whose exclusive task was the recording of private transactions at a time when the state was unable to provide those bureaucratic services. While the widespread introduction of bureaucratic practices in England seems to have improved economic performance in the long run, the Italian case-study indicates that once people became accustomed to bureaucratic practices they saw an advantage in maintaining them. This process shows human resilience at work during a time when the governmental superstructure crumbled and people tried to create a system that met their demand for enforcement of private transactions.

5.3.4 Systematic changes in language as manifestations of societal changes

The routinization of record keeping in Medieval England prompted the creation of a new highly specialized class of bureaucrats. In this case, specialization implies that the new large group of bureaucrats acquired a more limited access to literacy compared with the few state officials who met the demand for documents at an earlier stage. For this new social group, literacy was restricted to the language and script required for the completion of bureaucratic tasks. This limited access to literacy was reflected in the replacement of a variety of languages employed in bureaucratic documents until the end of the thirteenth century (Latin and French, based on context and status of the individuals involved in the transactions) with English, which had been used only as a spoken language until the fourteenth century. In a similar fashion, the demand for written documents in medieval Italy became so compelling that it led to the creation of a new class of specialists, whose access to literacy is more difficult to assess since Latin remained the language of bureaucracy. Medieval England, however, offers an example of the way in which shifts in the use of language can be a manifestation of societal changes. Similarly, the use of Canaanite-Akkadian to administer Egyptian holdings in the Levant during the New Kingdom, in addition to standard Egyptian

bureaucratic language, as well as the introduction of Aramaic and Greek in Egyptian bureaucracy of the Late Period reveal new societal trends at times when Egyptian society was more competitive and inclusive (Mandell 2015).

5.3.5 Distrust as driving force for the adoption of bureaucratic practices

Clanchy's analysis shows that people tended not to have private transactions recorded during times when written documents were difficult to obtain. This alienated people from bureaucratic practices, which they regarded as cumbersome and reserved for high stakes transactions. Clanchy (1993: 75) suggests that even after written records became easier to obtain, it still took two centuries for property owners in Medieval England to make systematic use of the new bureaucratic system. The people of Italy also took some time to adjust to the newly established bureaucratic system of notaries before fully embracing it (di Renzo Villata 2009). Once fluid and accessible bureaucratic processes were put in place, and people became accustomed to them, the mutual advantage for the state and the people of having transactions recorded secured the longevity of the bureaucratic apparatus. The use people of Italy and England made of bureaucratic documents shows that they always trusted the efficacy of the bureaucratic system, though not its efficiency. Following the collapse of the political structure and patronage system, people eventually embraced and demanded a more efficient bureaucratic system that would protect their transactions during a time of political fragmentation. Uncertainty and distrust in new patrons and in old patrons who had lost their sphere of influence created an emotional reaction which involved a commitment among people to overcome the earlier system based on oral agreements and adjust to new ways of enforcing private transactions.

Consideration of these case-studies of pre-modern England and Italy, as well as of current theories about the role of written records in Egypt during and after the New Kingdom

suggests that these European models may add a new layer to our interpretation of bureaucratic practices in Late Period Egypt. Clanchy's case-study shows that people in England trusted the efficacy of the bureaucratic system, even though they had a fundamental lack of trust in its efficiency. Based on Clanchy's logic, people who undertook economic enterprises with high stakes would take the trouble to have their transactions recorded even before the introduction of a more accessible bureaucratic system, no matter how cumbersome the procedure may have been. Most people would undertake economic transactions without resorting to bureaucratic practices because the value of the property being transferred was not worth the trouble of jumping through the bureaucratic hoops. To this, I would add that perhaps most transactions, both big and small, were protected by the old system of local patronage, before it collapsed. Before the introduction of new competitive agents in local economies, people had no reason to resort to bureaucracy because they trusted the bonds of patronage for the enforcement of private transactions. The advantage of using bureaucratic documents after foreign invasions was that written records enabled one to limit interaction with local and unreliable networks of patronage and request the intervention of state authorities as enforcement agents in case of a dispute.

Eyre (2011) suggests that people of Egypt had a similar attitude toward the bureaucratic system, where, during the New Kingdom, patrons pushed against the use of written records. Eyre's and Clanchy's narratives differ in their conceptualization of the purpose of documentary practices. While in Medieval England documents seem to have had evidentiary value on their own, according to Eyre (2013), ancient Egyptian documents facilitated the investigations of state officials whose verdict was ultimately based on the oral testimony of the witnesses listed in the written records. This suggests that having a transaction recorded in writing was inefficient, even as its efficacy seems to have been unquestioned in both Medieval England and in ancient Egypt. Yet, in both cases the use of documentation implies

distrust among the agents involved in the transaction, and the fabrication of trust in the authority of those who kept the records and enforced the transactions. Moreover, the Italian case-study suggests that trust in written language grew together with trust in the people who produced the records and the organizations to which these specialists belonged. Growing trust in the bureaucratic apparatus may have fueled the distrust among the competing agents and increased demand for professional bureaucrats as lawyers or notaries to protect private transactions. The case-studies from Medieval Europe bring an anthropological element into the discussion which has so far been underestimated in the Egyptological discourse. In order for people to systematically embrace bureaucratic practices, they had to lose trust in the current patronage system, be forced to compete with new agents whom they distrusted, and embrace the relative efficiency of those who were in charge of compiling the records, as well as the efficacy of the enforcing agents who used them.

5.3.6 The Late Period: A plurality of patrons

The fragmentation of central power during the Third Intermediate Period caused a renegotiation of power structures and networks of patronage that had permeated Egyptian society in the New Kingdom. Even after the unification of Egypt under Kushite rule in the 25th Dynasty, the figure of the king remained ancillary to the authority of temple organizations, which in the meantime had become the new power players (see Chapter 1). This new dynamic generated a redistribution of assets, which, as I point out in Chapters 3 and 4, resulted in a systematic reorganization of the funerary industry. Such reorganization allowed for flexibility in expressions of social competition within the framework of specific cultural references. For example, some people may have been able to invest in lavishly decorated coffins more than others regardless of their political affiliation, but everyone seemed to have had to conform to guidelines imposed by the funerary industry. The analysis

in Chapter 3 suggests that the decoration of inner coffins often was entrusted to the artisans who decorated them after they were closed with the body inside. Though apparently unsurprising, this dynamic reverses the trend of earlier periods, when people were commissioning and designing their own burial equipment during their lifetime. This implies that some of the tasks which had been under the direct control of the individual in the New Kingdom, might have been more often entrusted to third parties in the Late Period. The fragmentation of power at this time generated higher social mobility and increased connectivity within the social fabric, expanding the existing network of patronage within which individuals perhaps began to surrender direct control over several aspects of life. I argue that the scribes who compiled the records of private transactions in the Late Period operated within this expanded system of patronage in which bureaucracy became the manifestation of the involvement of third parties in the enforcement of private transactions.

5.3.7 Trust in personal memory and enforcement by local communities: the New Kingdom

Evidence for the widespread production of records of private transactions in Egypt seems to go hand in hand with the first evidence of the widespread practice of storing written records in private archives (Haring 2003; Hagen 2018). Although the motivations underlying the introduction of written records in support of private enterprise cannot be accessed directly, one can speculate about the effects this practice had on private enterprise, which probably became easier to manage and, therefore, also easier to pursue. The general lack of specificity in the records from Deir el-Medina, however, implies that the documents could not have been designed to facilitate the intervention of third parties external to the community. The information provided by the documents had to be supplemented with people's memories of the events recorded. For example, the fact that sometimes the name of one or both parties was omitted and the fact that the types of transaction was not always specified (Haring 2003: 152,

Fig. 5.3) suggest that these documents were kept by the individuals who were directly involved in the transaction and the information they provided could only be helpful to a limited number of people who either took part in or witnessed the transaction, or had close connections with either of the families of the people who were involved in the transactions.

Due to their lack of specificity, these documents alone would not have been useful beyond the close-knit local community of the parties directly involved in the transaction. This suggests that the involvement of third parties external to the community in the enforcement of private transactions did not rely on bureaucratic documents. Rather, it is more probable that the enforcement of private transactions was assigned to local patrons. Even when third parties external to the local community were involved, there is no evidence that their involvement was requested through bureaucratic practices rather than personal interactions with patrons who would act as intermediaries between the local community and the external enforcing agents. This interpretation is compatible with the narrative presented by McDowell (1987) on the jurisdiction in Deir el-Medina, which shows that recourse to the oracle or outside authorities was made in exceptional cases (McDowell 1987: 206, 211) Even in the course of their intervention third parties did not seem to make much use of the written record, relying instead on the testimony of the people of the community, as Eyre (2013) argues. All we have is the evidence of their intervention in the form of accounts of court proceedings following their investigations. There is no extant evidence of their use of preventive bureaucratic documents.

From an economic perspective, this system reflects a village-based economy which relied on close-knit social bonds that acted as guarantors for private economic transactions. The sporadic and inconsistent use of dates in New Kingdom documents shows that these records could only be helpful to the parties involved and the local community. For example, the fact that the regnal year was often omitted in dates implies that the documents alone did

not enable one to locate the recorded event precisely. This suggests that the evidentiary value of the document in question was unlikely to extend beyond the lifetime of the people mentioned in it, or beyond the close-knit ties of the community at the time when the document was compiled. None of the 106 records of private transactions assessed in this chapter include a date with regnal year in the heading, where the heading is preserved.¹⁰³ This implies that these records were kept by families who had lived in the same village for generations and who had relied on the social network of the village for the procurement of goods and subsistence, as well as the enforcement of private transactions. This might explain the lack of specificity in the records of these transactions. In most small villages in remote rural areas, everybody knew everybody else's business, and the people of the village were regarded as witnesses whose testimony could be relied upon in case a transaction was disputed. There was no need for a coordinated and well-organized system of record keeping to enable the enforcement of private transactions within the local community, and there was probably also very little incentive for the central administration to get involved in private enterprise, unless the stakes were very high.¹⁰⁴

Cooney (forthcoming b) suggests that the increase in documentation between the 19th and 20th Dynasties corresponds to a systematic failure of the traditional patronage system that relied on personal connections. This created confusion and competition among different agents and patrons in Deir el-Medina and Western Thebes as a whole. The failure of the

¹⁰³ Haring (2003: 146) suggests that the inclusion of dates in donkey hires as opposed to all other types of private transactions has a practical function. Although this may be the case, it does not account for the omission of the regnal year in most records of private transaction and in most cases across the range of documents from Deir el-Medina.

¹⁰⁴ In the case of land leases, for example, McDowell (1987: 206) convincingly argues that the *knbt* court or temple oracles had to be involved in juridical disputes.

traditional patronage system prompted people to find alternative means of protecting their economic enterprises by demanding the production of documents on an unprecedented scale. This prompted the creation of a more efficient bureaucratic system in the attempt to manufacture the trust that people had lost with the collapse of the old social order. By the Late Period, the distrust in the central authorities and patrons had become systematized to the extent that the royal court took advantage of the coordination of the bureaucratic system at the beginning of the Late Period and began to exploit it for fiscal purposes.

5.3.8 Bureaucracy of private transactions developed independently from royal administration

Although it seems clear that the development of written records of private transactions from the Late Period were on some level influenced by the central administration and could have been used as instruments for royal propaganda (see § 2.2.2.1), documents of private transactions from Deir el-Medina do not seem to draw inspiration from royal documents. On the basis of clusters of identical document headings of New Kingdom documents, Haring (2003: 253) argues that during the 20th Dynasty uniform bureaucratic records of private and judicial matters started to be developed independently rather than as imitations of official royal documents. Given that private documents made ample use of elements of the spoken language, Haring (2003: 257) argues that the transposition of vernacular language into written documents prevented the creation of fixed formulas. Haring suggests that the use of spoken language in private documents did not enable the development of a standardized system of record keeping for the private sector in the community of artisans.

The fact that Deir el-Medina gathered literate artisans whose activity was monitored and compensated by the royal administration implies that the literate people of the community must have been aware of what official documents looked like, and some of them were probably used to produce them. That records of private transactions did not imitate

documents from the royal administration suggests that the people of Deir el-Medina made a deliberate choice not to make use of a standardized format in records of private transactions, probably because an organized bureaucratic apparatus was not considered necessary in such a small, exclusive and non-competitive community. The discrepancy in the form of the documents produced for the royal administration and those of private transactions produced during the New Kingdom suggests that bureaucracy of private transactions operated within a different framework, which did not rely on the enforcement power of the state or central organizations. The familiarity among the agents partaking in economic enterprises in Deir el-Medina did not require the intervention of third parties for the enforcement of private transactions.

5.3.9 Can evidence from Western Thebes be representative of a broader trend?

Based on internal references and because the collections of the museums to which these texts belong can be traced back to the activity of archaeologists who worked in Deir el-Medina during the 19th and 20th centuries, it is often assumed that all the documents included in the Deir el-Medina Database come from Deir el-Medina, although many lack a secure provenance.¹⁰⁵ Assuming that the written records from the New Kingdom all come from Western Thebes, the question then becomes whether the trend seen in these New Kingdom documents can be applied to other areas of Egypt. Haring (2003: 255) claims that formulas used in Deir el-Medina also occur in documents from elsewhere in Egypt, but he does not discuss the levels of consistency in the layout of these formulas more extensively. The isolated location of the workmen's village acted as a natural barrier and probably made the community self-sufficient in many respects, especially when it came to the enforcement of

¹⁰⁵ <https://dmd.wepwawet.nl/>.

private transactions. Such a small community had little incentive to develop a coordinated bureaucratic system. Although the lack of evidence makes it impossible to determine whether the situation of Deir el-Medina is representative of that in other New Kingdom communities, scholars have noticed an overall increase in the use of texts starting from the 19th Dynasty (Haring 2003; Cooney forthcoming b). This shift within the community might reflect a broader phenomenon which continued after the village was dismantled and whose effects can be seen in the extant evidence from later periods.

5.3.10 Distrust in the patronage system and involvement of third parties: Late Antiquity

A diachronic perspective might enable a better understanding of the development of bureaucratic practices and the ways in which these related to private economic activities in Ancient Egypt. The Late Antique village community of Jeme (formerly Medinet Habu) on the Theban West bank can provide an insight into the social dynamics that influenced the production of documentary texts in a community whose size was comparable to that of New Kingdom Deir el-Medina but whose location connected it more closely with other areas of Egypt. The case-study of Jeme shows a degree of continuity with New Kingdom Deir el-Medina regarding the management of some kinds of private economic activities, as well as a correlation between social connectivity and the development of a more coordinated bureaucratic apparatus aimed at enforcing private transactions. The private transactions recorded on ostraca found in a domestic archive of Jeme provide more details than similar texts from Deir el-Medina, though still with a high degree of inconsistency. Some of them include the names and filiations of the parties involved and the scribal signature and the witness list (Wilfong 2002: 121; O.Medin.HabuCopt. 50). Others include names and filiations but omit the scribal signature and witness list (Wilfong 2002: 122; O.Medin.HabuCopt. 72). In other cases, only the activity is recorded (Wilfong 2002: 123;

O.Medin.HabuCopt. 93), leaving out the names of the parties and other details that we would expect to see in the written record of a private transaction. As with the case of Deir el-Medina, the lack of consistency and specificity of some texts recorded on ostraca shows that after almost two millennia small village communities still preferred to rely on oral agreements and personal memory rather than of legal documents to enforce private transactions.

The case-study of Jeme also shows that inconsistency in documentary practice had a logic that could be found in the structure of the economy of the village, which still relied on the local community for the enforcement of some, though not all, private transactions. The specificity and detail of records of private transactions from Jeme would vary according to the extent of the influence of the social network of the village and its power to enforce the specific type of transaction. For example, Wilfong (2002: 122) has noticed that the more detailed contracts record the transfer of goods or sums of relatively high value or the transfer of goods or sums beyond the village border, or to organizations that could not always be trusted. Similarly, contracts which include extensive formulas and detailed records of dates and parties involved in the transaction were concerned with the transfer of immovable properties such as lands and estates (Wilfong 2002: 126). These documents show longer witness lists which include the signatures of local state officials (Wilfong 2002:121). That some written records may have had no legal evidentiary value can be inferred from the fact that sometimes a security deposit was requested to guarantee a loan larger than the usual amount (Wilfong 2002: 122). This suggests that people in Late Antique Jeme, much like people in New Kingdom Deir el-Medina, still relied mainly on oral agreements rather than written contracts. Nevertheless, whenever a transaction had higher stakes people would resort to professional scribes and powerful witnesses for help in recording it. An assessment of the extant evidence from both Deir el-Medina and Jeme confirms Eyre's argument regarding the

exceptional nature of the written record in private transactions throughout ancient Egyptian history. However, a new trend emerges from Wilfong's analysis of the evidence from Late Antiquity, which speaks to the correlation between the connectivity of a community and the development of coordinated bureaucratic practices within that community.

Wilfong suggests a correlation between the use of different media and different levels of specificity in different types of private transactions. In his analysis of two private archives from Jeme, Wilfong (2002: 121-126) argues that differences in structure of texts and media should be ascribed to the type of activities recorded and the value of the properties transferred.¹⁰⁶ Wilfong points out that the contracts of transactions with high stakes tend to be recorded on parchment or papyrus and also tend to be more detailed and specific in the information they provide. This suggests a change in trend from the New Kingdom, from which no extant record of private transactions on papyrus survives, and never show the level of detail seen in the documents from Jeme. Therefore, there seems to be in Jeme a correlation between medium and level of specificity, and between level of specificity and the value of the

¹⁰⁶ The archive of the moneylender Koloje was composed of thirty ostraca, none of which includes the date of the transaction in the heading (Stefanski and Lichtheim 1953), whereas the archive of Elizabeth/Abigaia was composed of texts written on parchment or papyrus, all of which include lengthy introductory formulas and dates in the headings and longer lists of witnesses (Crum and Steindorf 1912). Since Koloje would require a security deposit when a loan was requested that was higher than the usual amount, Wilfong (2002: 122) suggests that the documents from her archive did not have legal value. The second archive includes texts of division of properties belonging to Maria among the members of her family, and particularly her daughter Elizabeth and her granddaughter Abigaia. The content and structure of these documents reflect the value of the property that was being transferred, with the use of an elaborate protocol and the participation of state officials as witnesses (Wilfong 2002: 126). Wilfong implies that people would resort to the use of formal legal documents only when the stakes were high and there was no other way of securing the value of the transaction.

property being transferred. People from this small community seem to have had an incentive to have certain kinds of private transactions recorded by professional scribes. This implies that people were resorting to time-consuming and expensive record keeping practices because the authority of social network and family ties of the village community was not sufficient to secure proper enforcement of some transactions. This was because communities like Jeme were more integrated within a competitive society, whose economy required bureaucracy and the intervention of third parties external to the community for the enforcement of private transactions.

5.3.11 Transition from village economy to involvement of third parties: the Late Period

The time between New Kingdom Deir el-Medina and Late Antique Jeme spans nearly two millennia of the Late and Graeco-Roman periods. I argue that the Late Period was a time when most of the transition from a village-based economy, like that of Deir el-Medina, to a more connected and dynamic economy, as reflected in the documents from Jeme, occurred. The bureaucratic practices of the 25th Dynasty were an organic development of the practices found in Deir el-Medina and the inception of the practices that remained relatively unaltered through the Late and Graeco-Roman periods until Late Antique Jeme. The fact that most of the documentary evidence from the 25th and 26th Dynasties is yet to be published and the vast majority of the published documents are on papyrus does not enable a comprehensive assessment based on text and medium. Nevertheless, some socio-economic trends of the Late Period can be inferred from an assessment of the texts alone. The texts listed in Spreadsheet E, from the reign of Piankhy (743-712 BC) at the beginning of the 25th Dynasty until the introduction of the demotic script under the reign of Amasis (570-526 BC) in the 26th Dynasty display both consistency and specificity in the information they provide. The sequence of units of contents remains consistent across all documents, and each individual

unit of content displays higher levels of specificity in the information provided compared with the same types of documents from Deir el-Medina. Greater specificity in dates, names, titles, and filiations of the parties and the commodity exchanged suggests that the documents from the Late Period were less reliant on personal memory and had more potential for third parties to get involved in the enforcement of the recorded transactions.

Differences in scribal traditions between the New Kingdom and the Late Period show that the bureaucratic practices of the Late Period were more consistently organized. Although the texts on the papyri from Deir el-Medina are not always fully preserved, different trends in the written records from the New Kingdom and the Late Period become apparent when the content of these records is assessed holistically. For example, only five out of 239 papyri in the Deir el-Medina Database include a date with the regnal year in the first line.¹⁰⁷ In addition to these papyri, six more include dates with the regnal year, but not in the first line.¹⁰⁸ While the papyri that show the full date in the first line only display one text, the others include multiple texts on the same papyrus sheet, some of which are administrative records, others of which are juridical records and hymns. Only some of these other texts include dates, and the ones that do often only state the day and the month without specifying the season and the regnal year. On the other hand, none of the extant papyri from the Late Period that record private transactions include multiple texts, and high levels of specificity are applied more consistently across multiple documents. For example, among 45 documents recording private

¹⁰⁷ P. Ashmolean Museum 1945.97, P. Turin C. 1883 + C. 2095, P. Turin C. 1907 + C. 1908, P. Turin C. 1932 + C. 1939 and P. Turin C. 2018.

¹⁰⁸ P. Berlin P 10496, P. BM EA 10691, P. Turin Cat. 1881+2080+2092, P. Turin Cat. 1907+1908, P. Turin Cat. 1923+2073+2082+2083 and P. Turin Cat. 1966.

transactions from the Late Period,¹⁰⁹ 33 show the date in the first line and include the king's name. A more thorough organization of bureaucratic practices suggests lesser reliance on personal memory. This could indicate a shift in the social dynamic as society transitioned from a village-based economy into a more interconnected system where the involvement of third parties might have become more frequent.

The discrepancy in the levels of specificity between documents from the New Kingdom and the Late Period further signals a transition from an economy where socio-economic ties linking the seller to the buyer were taken for granted and transactions essentially occurred through oral agreements, to an economy where the written record became a means of recording that oral agreement, thereby establishing and securing the socio-economic ties between the parties. The documents from Western Thebes emphasize the act of giving (*rdit*) or receiving (*šsp*), often with the addition of the names of the parties (Fig. 5.4) and rare mentions of titles and filiations (Fig. 5.3). The contracts from the Late Period begin with the act of saying (*dd*) and the introduction of both parties with the respective titles and/or filiations followed by the description of the object and conditions of the transaction in the form of a personal statement spoken by one of the parties. This statement is then followed by an oath or another type of formula that attests to the preventive aspect of the interaction between the two parties. In the former case, records report the action of exchanging goods, while in the latter they report an oral description of the transaction and details of the social

¹⁰⁹ P. Louvre E 3228; P. Vatican 38595; GEM 3632; P. Cairo 30657; P. Leiden F 1942/5.15; P. Louvre E 2432; P. Turin C. 2119; P. Turin C. 2121; P. Turin C. 2120; P. Turin C. 2118; P. Louvre E 7858; P. Louvre 7861; P. Louvre 7841; P. Louvre 7848; P. Louvre 7844; P. Louvre 7845A; P. Louvre 7845B; P. Louvre 7847; P. Louvre 7846; P. Louvre 7840; P. Louvre 7842; P. Louvre 7832; P. Louvre 7835; P. Louvre 7838; P. Louvre 7834; P. Louvre 7836; P. Louvre 7843; P. Louvre 7833; P. Louvre 7837; P. Louvre 7839; P. BM EA 10113; P. BM EA 10432.

context of both parties.¹¹⁰ While written documents continued to be less important than oral interactions from a legal perspective throughout the New Kingdom and the Late Period, during the Late Period they acquire an openly preventive value by becoming a testament to the the creation of socio-economic ties linking the seller to the buyer through oral agreements.

By emphasizing the acts of giving and receiving, the documents from Deir el-Medina focus on the objects being transferred, omitting details about the socio-economic context and the social interaction that doubtlessly took place during the transaction. This implies that in Deir el-Medina the personal relationship and socio-economic ties between the parties were taken for granted, and the written record of the objects that changed hands was needed for private administrative purposes as a means of keeping track of the objects exchanged. The fact that similar documents of the Late Period go to the trouble of building the socio-economic context of the parties involved in the transaction suggests that the social ties between the seller and the buyer needed to be recorded. This practice was followed in order to facilitate the investigations of third parties external to the community in case the transaction was disputed. Therefore, it seems reasonable to infer that the social mobility and connectivity generated by the reorganization of communities like Deir el-Medina following the political fragmentation of the Third Intermediate Period took power away from local networks based on family ties and bonds of patronage in close-knit local communities. The involvement of third parties as enforcement agents might have given more freedom to undertake private enterprises beyond the local community. This is not to say that informal transactions of the type seen in Deir el-Medina no longer took place in the Late Period. The case-study of Jeme shows that these transactions continued to occur for a very long time, but

¹¹⁰ This format is reminiscent of juridical texts from the New Kingdom (McDowell 1987).

the more systematic practices of recording private transactions that were put in place after the New Kingdom enabled more private transactions to be recorded by specialized scribes. The introduction of new agents and expansion of elite circles in the 25th Dynasty generated competition and demand for documents.

5.3.12 Bureaucracy as an instrument of enforcement by third parties

The coordination and specificity of the bureaucratic system in the Late Period was a way of facilitating the involvement of third parties that were external to the local communities in the enforcement of private transactions. Ancient Egyptians never relied on written records as much as they relied on oral agreements. This dynamic created a natural limit to economic transactions, which had to rely mostly on political affiliations, family connections, and local social networks through bonds of patronage. Only when the existing networks failed and distrust permeated new networks of competing agents did people entrust state officials with written records of transactions involving properties that were of high value. In these situations, written records served as supporting documents for the central administration, while only the testimony of the witnesses mentioned in these records would have sufficient legal weight to settle a dispute. As Eyre (2013: 155-232) and Wilfong (2002: 127) suggest, people chose to not make more frequent use of bureaucracy because of the cumbersome nature of the system. This implies that people generally trusted organizations as enforcement agents more than they trusted their local patrons, and that their choice to rely on either of the two systems determined the use, if any, that they would make of the bureaucratic apparatus. Therefore, while the involvement of professionals was reserved for exceptional cases, low-stakes economic activities were supervised and enforced through local bonds of patronage. High levels of consistency and specificity of the bureaucratic practices of the Late Period were an indication of higher demand for bureaucratic documents, which could only be met by

a highly efficient bureaucratic apparatus. The bureaucratic system of the Late Period ran parallel with and may have even been instrumental in the existing patronage-based system that expanded its boundaries to include a more interconnected society which may have included a plurality of corporate agents.

This increase in the efficiency of the bureaucratic process during the Late Period was in response to a demand for more thorough coverage of private transactions through the involvement of a third party. Specificity in dates, filiations, titles, and the descriptions of the property being transferred indicates that the documents could be accessed by someone who did not belong to the immediate social network and was not directly related to any of the parties involved in the transaction. The consistent occurrence of scribal signatures on records of private transactions, for example, shows that the value of these documents became tied to the names of the people who produced them. The presence at the bottom of the text of the name of the professional who compiled the document shifted the legal burden of the transaction away from both the parties involved and placed it on the scribe himself. This implies that, in case of a dispute, the enforcement of the transaction was not left entirely to the discretion of the people who conducted the transaction. The scribe could facilitate the settlement of disputes, or connect with state officials in case the dispute needed to be brought to court. The role of the scribe in private transaction of the Late Period seems to have been that of a modern lawyer or notary, filling the gap between private individuals and local patrons or state officials, as people became more suspicious in pursuing economic affairs within the competitive environment of Late Period Egypt.¹¹¹

¹¹¹ For the role of scribes as lawyers already in the New Kingdom see McDowell (1987). I see the scribes of the Late Period as notaries, since the actual enforcement of the transactions was probably carried out by other agents.

Coordination in the scribal activity of the Late Period may suggest an effort on the part of the central power to create the conditions for consistent bureaucratic practices that could be applied to private transactions. The earliest extant document in abnormal hieratic is the lease of a man from the North dated to the first king of the 25th Dynasty (P. Leiden F 1942/5.15). It shows that the highly specific and structured aspects seen in later abnormal hieratic and demotic document had already appeared at the very beginning of the Late Period. This implies the intervention of an organization which acted as catalyst for the creation of a coordinated bureaucratic system. The practice of systematically adding the regnal year to the date seems to be a manifestation of the involvement of the central administration in setting up this coordinated bureaucratic apparatus. The central administration probably had an incentive to become involved in private enterprise for taxation purposes. Taxes might have been levied on the transaction itself through the hiring of scribes, or perhaps the records produced were employed by the central administration to calculate taxes on the property that was being transferred. In the absence of direct evidence, however, this interpretation remains speculative and circumstantial. The extant evidence certainly suggests the existence of an organized and coordinated bureaucratic apparatus, as well as the idea that people needed some incentive to make use of it. This incentive may have been the advantages of granting more accessibility to third parties as enforcement agents for private enterprise. The following sections explore the ways in which coordination in the bureaucratic system created the conditions for the emergence of a class of specialized bureaucrats, which in turn made bureaucratic system more accessible to individuals, in the face of the vacuum left by the royal court and growth of corporate agents.

5.3.13 Coordination as a sign of depersonalization of bonds of patronage

Greater standardization in the structure of documents coincides with increased coordination among the scribes who compiled the documents. Coordination among scribes implies the existence of an organized system that enabled such coordination. People who had private transactions recorded distrusted other economic agents and trusted the authority of the organization in general and the scribe in particular. This implies that bureaucracy was not always independent of patronage, but that it was another element of the complex network dominated by patronage relationships. Within this highly mobile and interconnected social context, high levels of specificity in the data recorded on documents of private transactions would make the enforcement of the transactions easier for those who were not part of the immediate social network of the parties involved in the transaction. For example, detailed descriptions of the land that was being transferred or the inclusion of filiations of the parties involved in the transaction would have made it easier for third parties to identify both the land and the people mentioned in the document. A consistent application of this kind of specificity in the written record of private transactions implies that the involvement of third parties external to the immediate family network became common practice during the Late Period. Frequent interventions by third parties triggered the systematization and depersonalization of the dynamics of patronage through a more consistent use of the written record.

5.3.14 Expansion of access to literacy and specialization of scribal practices

Coordination of scribal practices were the manifestation and consequence of the political fragmentation and social reorganization that followed the New Kingdom. Given that coordination of activities is only possible with high levels of connectivity in society, high levels of coordination in scribal practices of the Late Period imply a degree of connectivity in

society that went beyond local communities and is not seen in documents from Deir el-Medina. This level of connectivity enabled the bureaucratic apparatus to support an increasing demand for bureaucratic documents. Coordination is also the basis for training a large number of scribes who would then facilitate people's access to specialists trained in recording private transactions. The lack of complexity of the abnormal hieratic script in Late Period documents is a sign of the expansion of access to literacy and, potentially, the creation of a class of specialized bureaucrats whose literary competence was limited to the production of bureaucratic texts. The consistency of the structure of these documents suggests extensive coordination and professionalization of bureaucratic practice.

Lack of internal consistency in structure and formulas among the documents from the New Kingdom attests to the fact that record keeping of private matters was an uncommon practice in Deir el-Medina. The description of the activity recorded often appears first on the records from Deir el-Medina, sometimes followed by the names of either one or both parties. Moreover, the document headings of property transfers from the New Kingdom show very little consistency in the formulas employed. The documents from the Late Period display a much narrower range of variations in formulas (see, for example, the dating formula), higher consistency in structure, and a narrower focus on the object of the transaction. The unit of content that includes the description of the activity recorded always refers to the transaction of only one object, whether that object is a plot of land, a slave, or cattle. The only documents from Deir el-Medina that are similarly specific are donkey hires and sales of cattle, furniture or pieces of funerary equipment, whereas the vast majority list a number of goods of all kinds. The fact that in the Late Period a high level of specificity in the records was extended to a wide range of transactions suggests that the bureaucratic apparatus was able to meet the demand created by keeping records of individual transactions. The specialized aspect of

bureaucratic practices in the Late Period was an indication that these practices had become more common than they were in the New Kingdom.

I argue that uniformity in the structure of the bureaucratic documents of the Late Period was a manifestation of coordination and specialization of bureaucratic tasks. While the property transfers from Deir el-Medina rarely include a date and, when they do, it is rarely complete and does not always appear in the first line, texts of property transfers of the 25th and 26th Dynasties always begin with a date which is complete in the majority of cases (Fig. 5.7). Moreover, in the Late Period documents assessed in this study, the date is always followed by the introduction of both parties, while the documents from Deir el-Medina do not always mention both parties and never with the same degree of specificity seen in later texts (Fig. 5.3 and 5.4). The description of the activity recorded is the only unit of content that always occurs in texts from both periods, since it provides the data that have enabled scholars to identify these documents as property transfers. While only two of the extant private transfers from Deir el-Medina show preventive formulas (O. Turin N. 57173 and O. DeM 62), one includes a scribal signature (O. Berlin P 1268) and one a witness list (O. DeM 410), Late Period documents consistently display these three units of content. The discrepancy between the lack of uniformity of the layout of documents from Deir el-Medina and the uniformity of the texts from the Late Period reflects a shift in society which required the specialization of bureaucratic practices.

I argue that the use of abnormal hieratic script for specific bureaucratic activities created the conditions for the development of a group of specialists who were exclusively dedicated to the production of bureaucratic documents. The fact that the vast majority of the extant abnormal hieratic texts pertain to the bureaucratic sphere¹¹² suggests that this particular script

¹¹² With one largely unpublished exception (P. Queen's College (1997); Baines *et al.* 1998).

was introduced as a tool for specifically bureaucratic purposes. The tenuous connection between abnormal hieratic and hieroglyphic script suggests that the scribes who were trained in abnormal hieratic would not have had access to the hieroglyphic script without specific training. For example, Fig. 5.5 and 5.6 illustrate the rendition of the Egyptian word for 'pharaoh (*pr ꜥꜣ*)' in uncial hieratic, abnormal hieratic, and hieroglyphs. While one can see the similarity between the uncial hieratic and the hieroglyphic version of the word, there is only a vague resemblance between the abnormal hieratic version and the uncial hieratic version. The fact that abnormal hieratic is so far removed from both uncial hieratic and hieroglyphic suggests that if scribes were trained only in abnormal hieratic, they would not have had immediate access to the other scripts and would have had more extensive training to use uncial hieratic. The fact that abnormal hieratic served a relatively limited range of bureaucratic purposes does not preclude the possibility that at least some scribes were, in fact, proficient in uncial hieratic and hieroglyphs. For example, in the oath formula on P. Louvre E 3228 C, the scribe Hetepamun wrote the name of the god Amun in uncial hieratic, while in the rest of the document the name of the same god appears in abnormal hieratic. This is not the only example of the inclusion of uncial hieratic in an abnormal hieratic document, and only tentative interpretations of this phenomenon have been advanced (Archidona Ramirez forthcoming). The fact that this phenomenon is limited to groups of words that are often found in all types of documents (not just in records of private transactions) does not imply that the scribes who made sporadic use of uncial hieratic were, in fact, proficient in that script.

The extant published texts from the 25th and 26th Dynasties required limited scribal skills and a relatively limited bureaucratic vocabulary. For example, the fact that one sign in abnormal hieratic (called "multifunctional sign") could stand for multiple hieroglyphic signs or sign groups means that one could only understand the meaning of the sign contextually.

The multifunctional sign is often intimidating to students becoming acquainted with abnormal hieratic script for the first time, but it becomes easier to interpret if one understands that the texts are very repetitive, making it relatively easy to identify their content and, thereby, decipher the multifunctional sign on a contextual basis. This implies that the literacy level of the scribes who were in charge of compiling bureaucratic documents might have been limited to the ability to read and write bureaucratic documents only. If the abnormal hieratic script required limited scribal skills, those skills could be transferred easily to a large number of people, which would explain why witnesses would often add their own name to a document ‘in writing (*m sh*)’, instead of having the scribe add it on their behalf, as it was more often the case during the New Kingdom.¹¹³

The trend seen in documents from the Late Period represents a systematized development that seen in the documents from the end of the New Kingdom. The systematic addition of the scribal signature in particular indicates that the legal validity of the transaction was linked to the authority of the scribe who compiled the document. This suggests that the parties involved in the transaction hired the scribe because they trusted the organization (or organizations) to which the scribe was connected as an enforcing agent of the transaction recorded. This also suggests that they distrusted the network of patrons and organizations that used to be responsible for enforcing private transactions in the New Kingdom. One could see the figure of the scribe as the link between the parties involved in the transaction and the enforcing agents, as McDowell (1987) already suggests in the case of Deir el-Medina. Therefore, it seems reasonable to assume that the scribe would have been a member of the local community. This interpretation is consistent with the ways in which scribal signatures were added to documents. Sometimes they included the filiation. Sometimes they only stated

¹¹³ During the New Kingdom, the name of each witness would be preceded by the phrase ‘in the presence of (*m-b3h*).’

the name of the scribe (Fig. 5.8). Given the fact that these records were devised to support investigations undertaken by third parties external to the community, titles and filiations served the purpose of facilitating the identification of the individuals mentioned in the texts. Therefore, if the same principle applied to scribal signatures, given that the social role of the scribe is implicit in the scribal signature, then the scribal signatures which do not include filiations indicate that there was no other scribe either in the local community or in its vicinity who bore that name. The fact that most scribal signatures include a filiation suggests that there might have been two or more scribes sharing the same name in the area. This seems to support the idea that specialized scribal training became relatively widespread at the beginning of the Late Period, thus enabling the formation of a class of specialized bureaucrats.

5.3.15 Drawing connections between the bureaucratic apparatus and the funerary industry

My assessment of bureaucratic practices of the Late Period shows that people trusted the authority of the scribes and their role in the enforcement of private transactions in the same way they trusted the authority of the choachytes and their role in the funerary industry. As I argue in Chapter 3, the fact that inner coffins were at times decorated after closure and that there are no extant receipts from the Late Period for the production of funerary equipment suggest a depersonalization of the funerary industry and the idea that people had to give up at least part of their control over the production of their own funerary equipment. This marks a shift from the Third Intermediate Period, when the level of energy expenditure on coffins was remarkably higher than in the Late Period, probably because people knew that their investment would benefit several members of the family through the practice of reuse. Innovations in the modes of production of coffins occurred together with the introduction of innovations in the funerary equipment. Changes in the funerary industry corresponded to a

conceptual change similar to that seen in the bureaucratic system assessed in this chapter. In both cases, we see a more individualistic approach marked by less emphasis on royal affiliation of the deceased on the funerary equipment, as well as the creation of an organized apparatus to support private enterprise at a bureaucratic level. On the other hand, both sectors took advantage of people's distrust in the broken patronage system by manufacturing trust in the authority of third parties and their ability to provide an effective burial and enforce private transactions.

The material evidence in Chapter 3 and Chapter 4 has revealed patterns of producer specialization through the development of the modes of production of funerary artifacts of the 25th and 26th Dynasties in Upper and Lower Egypt. The same kind of assessment is not possible with documentary evidence, since all of the extant published texts come from Upper Egypt. If considered together, however, these two sets of data show similar patterns of producer specialization, with the artisans of the funerary industry producing standardized modules, and the bureaucrats specializing in records of private transactions in a modular fashion. These datasets also show that changes in the funerary industry preceded the coordination of bureaucratic practices, at least in Upper Egypt. Scholars agree that abnormal hieratic and demotic were developed independently in Upper and Lower Egypt respectively until, in the 26th Dynasty, king Amasis (570-526 BC) introduced demotic in Upper Egypt. Given that the earliest examples of Late Period coffins date to 904 BC, and that Ptah-Sokar-Osiris statues and mummy nets start to appear in the funerary equipment in 950 BC and 800-750 BC respectively, the intervention of king Amasis seems to have followed a pattern of cultural changes that had already begun centuries earlier. It is possible that the intervention of Amasis completed the program of unification started by Piankhy, and that the changes in the funerary industry were manifestations of the actions of his predecessors. But the emphasis placed on the individual in funerary practices was more likely a manifestation and

consequence of the social mobility that followed the Third Intermediate Period and the Kushite invasion. In this new dynamic social setting, one would have been able to commission funerary equipment regardless of their political or religious affiliation, as long as they could afford to pay for it. The quality of the product would have varied according to how much someone was willing to pay for it. This suggests that kings of the 25th and 26th Dynasties drew upon these existing and ongoing social trends in order to establish their own power over the land.

5.4 Conclusion

One of the premises of this chapter is that private enterprise was a driver of economic growth, since it generated demand that was separate from, and added to, the demand that had traditionally been generated by the royal court and its entourage. As the driver of growth, private enterprise also demanded adaptations be made in the bureaucratic apparatus to manufacture trust that was lost at the end of the New Kingdom. With the political superstructure and unity of the New Kingdom crumbling during the Third Intermediate Period and the invasion from Kush at the end of the Third Intermediate Period, people of Egypt had to at least partially re-negotiate their existing social networks. Part of these social networks constituted the infrastructure that ensured the enforcement of private transactions by local communities through oral agreements and bonds of patronage. During the New Kingdom this dynamic is visible in Deir el-Medina, where the practice of recording private transactions for preventive purposes was in place, but appears much less organized than in the extant records from the Late Period. The Late Period saw the introduction of systematic bureaucratic practices that had an explicitly preventive function for private enterprise in addition to and probably in support of the patronage-based system, which had become less reliable and more competitive. The importance of bureaucracy in the Late Period lies in the

fact that preventive bureaucratic documents imply the intervention of third parties external to the community as enforcement agents.

This dissertation goes beyond an attempt to determine whether the changes seen in bureaucratic practices of Late Period Egypt were a top-down or a bottom-up phenomenon. The extant evidence does not allow for the identification of a clear trend, and it does not appear that any such trend was ever unidirectional. Rather, I explore the social dynamics behind the introduction of a coordinated bureaucratic apparatus. The ways in which bureaucratic practices were carried out in the Late Period show that the central administration and the people who had their transactions recorded had a mutual interest in keeping this system alive. The level of specificity and consistency of records of private transactions increased in the Late Period, indicating that there was more coordination and specialization within the bureaucratic system, and more demand requiring this coordination. People needed an incentive to go to a scribe and have a transaction recorded. The central administration needed an incentive to train new scribes and put a coordinated bureaucratic system in place.

The coordination of record keeping by specialized bureaucrats and the demand for written records of private transactions imply that people were willing to pay to have professional scribes record their transactions. The incentive for people to hire a specialist may have been that contracts produced by professional scribes granted greater legal protection to the transaction and were less likely to be disputed. On the other hand, the central administration may have had an incentive to record transfers for taxation purposes. This change was probably related to higher levels of mobility, connectivity and competition among different agents, which may have caused the dissolution of the close-knit community ties that we see in Deir el-Medina, as well as distrust in the traditional patronage system. The loosening of these ties triggered the creation of a system that would rely less on personal connections and more on the depersonalizing function of bureaucracy. The involvement of

third parties as enforcement agents indicates that people agreed to give up part of their control over the enforcement of private economic enterprises through a direct interaction with local patrons, and began to rely on the support of a multiplicity of patrons.

6. Overall conclusions

6.1 Summary

According to anthropological theories, human behavior and habitual actions are codified within the institutional framework of a society, which shapes individual and collective identities. According to New Institutional Economics, this institutional framework impacts a society's economic performance by predisposing that society to growth, stagnation or decline. I have argued that during times of collapse, institutions provide the grounds for long-term cultural resilience, while becoming more flexible and open to innovation. Thus, if the institutional framework of New Kingdom Egypt predisposed society to economic stagnation, the loss of trust in the royal power caused by the collapse of the Third Intermediate Period changed the old institutional framework. In the Late Period, new institutions maintained their focus on old religious beliefs, but removed the figure of the king from the religious landscape, shifting the focus toward a relationship between the individual and the deities. In addition to these renegotiations occurring within Egypt, the invasion of Egypt by the Kushite rulers of the 25th Dynasty introduced new agents into Egyptian society, who had to find ways of negotiating their status with the existing elites. This forced Egyptian society to acquire a more inclusive perspective in order to accommodate the conflicting interests of old and new agents. I suggest that these shifts in institutional focus predisposed Egyptian society to growth.

In this dissertation, I have used different types of evidence from non-royal contexts to explore dynamics of resilience that enabled economic growth during a time of political fragmentation. I have shown that coffins of the 25th and 26th Dynasties retained aspects of old funerary traditions that date back to the New Kingdom, as well as more recent practices of defensive burial started in the 21st Dynasty. Similarly, Ptah-Sokar-Osiris statues show continuity with practices of the Middle Kingdom and mummy nets embody continuity with

older practices connected to the Osirian cult and the solar cycle, as well as practices of defensive burial. Widespread adoption of bureaucratic practices was a manifestation of the long-lasting trust people had in the efficacy of the bureaucratic system, whose exploitation was made necessary by the introduction of new competing agents and the need to find new ways of protecting private enterprise. In other words, bureaucracy provided a structure that ensured the enforcement of private transactions at a time when local patrons were no longer able to exert their power in legal matters, and when organizations had the power to extract wealth from the individual in exchange for specific services. These patterns of retention provided the groundwork that enabled survival and provided the stability necessary for innovation and growth.

The collapse of the royal power at the end of the New Kingdom generated distrust among the elites and institutional change. The collapse of the old power structure also marked the collapse of the earlier hierarchical system, which was based on affiliation with the royal power and on trust in local patrons. These were replaced by a network of organizations, each of which monopolized one aspect of the economy. Thus, temple organizations monopolized the funerary industry, and a new class of specialized bureaucrats took charge of enforcing private transactions. These organizations operated independently from one another, though under the aegis of the state. This decentralized narrative conveyed by the extant evidence from non-royal contexts reveals a reality of social mobility, in which wealth was not acquired through political affiliation, but political affiliation relied upon the wealth of the elites. The social dynamics embedded in funerary objects and bureaucratic documents reveal the ways in which people were navigating the network of multiple competing patrons based on their purchasing power. The amount of wealth invested determined one's position in the competitive arenas of funerary practices, while the enforcement of their private transactions was no longer left at the discretion of local patrons.

These organizations were structured so as to compartmentalize and fabricate trust among the elites of the Late Period through depersonalized modes of production. In the funerary industry, depersonalization is revealed by the exceptionality of written records. This shows that most people gave up control over the production of their funerary equipment, which was entrusted to temple organizations and choachytes in particular. Depersonalization in the funerary industry is also embedded in the practice of decorating inner coffins after they were closed with the mummies inside. In this new system, trust was fabricated by means of displaying that inner coffins could not be reused by other people. In private economic enterprises, on the other hand, depersonalization is revealed through an abundance of detailed documentation. The practice of meticulously recording the names and filiations of the parties involved, as well as those of the people who witnessed the transactions was aimed at ensuring their enforcement by external agents. These agents were not tied to the parties involved through personal relationships and family networks, but belonged to the same organization of professionals who recorded the transactions. Since these organizations specialized in specific tasks and operated in the same way throughout Egypt, they granted more freedom for people to undertake economic activities within and outside of their local communities.

In order to guarantee this kind of flexibility to all agents in Late Period society, a high number of craftsmen and scribes needed to be trained to accomplish specialized tasks and collaborate to ensure high efficiency in response to high demand generated by the competitive elites. High levels of connectivity among these artisans and scribes can be inferred from standardization of modes of production of funerary commodities and uniformity of scribal practices in Upper and Lower Egypt. More specifically, the modular structure of small funerary objects and bureaucratic documents implies that low skill-level artisans and scribes could be trained to accomplish limited tasks, which enabled the production of funerary commodities and bureaucratic documents for a large audience. An

expansion of the workforce would have also allowed highly skilled artisans and scribes to focus on the production of customized commodities and documents that required more elaborate skills. This kind of coordination of the funerary industry and bureaucratic apparatus presupposes a high degree of mobility among the communities, which are the spaces in which institutions were retained, reorganized or transformed in ways that enabled economic growth.

In addition to increasing the efficiency of the production process, this expansion of the workforce also increased opportunities for socioeconomic advancement by extending pockets of middle elites. While until the Third Intermediate Period a few specialists were in charge of producing funerary commodities and documents for an exclusive group of elites to which they belonged, the lower prestige of the artisans and scribes of the Late Period suggests that their job had become more accessible. The introduction of abnormal hieratic and demotic during the 25th and 26th Dynasties as more simplified and, in the case of demotic, standardized scripts for bureaucratic documents shows the potential for wider access to literacy and the formation of a new social group of bureaucratic specialists. This new class of bureaucrats emerged in response to the demand for legal coverage of private transactions, and in turn generated new demand for commodities. Meanwhile, communities of artisans expanded and developed complex systems of craft specialization as society adjusted to political fragmentation and social mobility. By this point, people from many different backgrounds had access to funerary commodities and to better organized means of enforcing private transactions. This adjustment led to times of prosperity at the end of the Third Intermediate Period, when greater purchasing power in society, combined with the resources necessary to produce brand new commodities in large quantities, created the conditions for the implementation of highly efficient modes of production. Such modes of production enabled the supply of a large number of brand new funerary goods to a market that expanded beyond the closed circle of the 21st Dynasty elites.

6.2 Hope, trust and resilience are drivers of ancient and modern economic systems

Hope, trust and resilience are very closely intertwined, and together they impact economic performance in ways that scholars are just beginning to explore. In a relatively recent publication about processes of valuation in the modern global economy, Mazzucato (2019) entitles her conclusive chapter 'The Economics of Hope.' Mazzucato debunks the vision we tend to have of our economy as something ruled by objective forces, divorced from our culture and mindset, and convincingly shows that this vision is very much a product of our own worldview (much like in ancient societies), which is based on fear instead of hope. The impact of culture on dynamics of valuation has already been studied at length by archaeologists and anthropologists, as I explain in Chapter 2. But the notion that human emotions can impact economic performance seems novel.

In fact, the impact of hope on economic performance was already suggested almost three thousand years ago by Hesiod, in his *Works and Days*. The well-known myth of Pandora, who released all evils by opening a mysterious jar, but managed to keep hope from getting out, seems a *non sequitur* in the context of what otherwise appears to be an economic treatise. In the light of Mazzucato's argument, however, one could see how Hesiod thought it relevant to include a myth about hope and fear (evil) in a treatise about economy. It seems that he, too, believed that the economy of his time was ruled by fear and that people needed to find a way of opening that jar again and releasing hope into the world. To this end, in his proem Hesiod outlined the difference between competition based on envy and competition based on emulation, implying that the latter is based on hope for a better future and, therefore, productive, while the former is based on fear of failure and, therefore, destructive. In other words, Hesiod explained the importance of considering the long-term consequences the choices we make now may have on long-term economic performance.

Hesiod was indeed writing during the Dark Ages in Greece, which coincided with the

Third Intermediate Period in Egypt. During this moment of collapse, in which economic crisis went hand in hand with societal crisis, people lost hope and begun to renegotiate their values in order to regain it. But hope is built on trust. For this reason, I have made ample use of the concept of trust in order to explain dynamics of economic growth during times of political fragmentation. I have chosen to use trust because it is by creating and breaking bonds of trust that people generate and lose hope. This may raise eyebrows in some quarters, but it appeals to the idea that there is something very powerful that connects us with the people of the ancient world: our shared human nature. The emotions that drive human beings have not changed throughout history, and we can examine those driving forces in order to discover how ancient people saw the world and reacted to it, how similar we are to them, and perhaps even what we can learn from them. Economists have acknowledged the importance of this anthropological approach, and particularly emphasize the importance of diachronic studies of historical cycles in assessing current economic performance.¹¹⁴ My research aims to contribute to this debate, by adding a piece to this complex puzzle of collapse and resilience that permeated human history, and exploring the ways in which the people of the past were able to fabricate trust in one another and hope for a better future.

This dissertation proposes a novel methodology, which crosses traditional disciplinary boundaries between Philology, Archaeology, and Art History, and that enabled me to use different datasets. I have extrapolated dynamics of trust embedded in very different types of objects by examining modes of production, as well as their symbolic meaning. Looking at the ways in which craft specialists and scribes operated in similar ways by reconstructing the sequence of actions that led to the production of funerary commodities and documents inevitably leads to an inquiry into the extent to which their customers were involved in these

¹¹⁴ 'Economists Understand Little About the Causes of Growth. The First of a Series on the Profession's Shortcomings', *The Economist* (14 Apr. 2018).

production processes, and how their involvement in these processes was instrumental to the fabrication of trust and economic growth. Looking for these dynamics has enabled me to go beyond the traditional compartmentalization of scholarly disciplines and build a narrative with a more holistic approach, which offers a more extensive account of economic performance.

My research shows that trust (and therefore hope and resilience) is fundamentally based on shared values based on co-participation. This may seem obvious, but modern companies still seem to fail to fabricate trust among their employees and customers because they do not rely on dynamics of co-participation. For example, big technology companies have only recently come to realize that solid values are a powerful driver of sustained growth, because they generate hope. Big firms such as Google and Facebook have dedicated a lot of time and effort to defining their core values, but this has often been little more than a marketing exercise that ignores the importance of carefully defining those values. What these companies have not realized is that it is the process itself that generates hope, not the end product. Values acquire meaning for the individual only when the individual takes part in the process. When values and meaning are served as a prefabricated package, the content of the package becomes less meaningful to the individual. Let us take the funerary industry of Late Period Egypt as an example of values based on co-participation. I have discussed how members of the middle elites who wanted to commission funerary commodities had to rely on temple organizations and their network of artisans. Since customers were allowed very little or no agency in designing their own funerary equipment, they had every reason to distrust the artisans. Yet, the values shared by the customers and the artisans triggered adjustments in the modes of production so as to create trust in the funerary industry and enable it to grow.

Trust is not unidirectional and cannot be imposed from the top down. However, it can be fabricated through shared core values. The importance of shared core values and trust lies in their ability to generate hope, the primary driver of human resilience. Without hope, human

beings do not see the point of being resilient. Realistic and unshakable hope is not easy to produce, and the process that generates it is fundamental to the outcome. Going back to the example of modern technology companies, it is in the best interest of any company to encourage individuals to contribute to the joint effort to define these corporate values and not delegate the process to senior leadership. Even if the values defined by the leadership of a corporation are the best imaginable, the very fact that the process of defining them took place behind closed doors will make them ineffective in boosting individual performance. Values are an important unit of measure for reviewing the performance of both a company as a whole and its individual components. Understanding core values, and the ways in which these generate trust and hope enables a more precise assessment of performance and growth of the individual and the company. The concept that shared core values are important in shaping the trajectory of economic performance is not new, as my assessment of the *modus operandi* of the funerary industry and bureaucratic apparatus of Late Period Egypt has shown. In addition, the idea that only values based on hope rather than fear can sustain long-term economic growth was already raised by Hesiod in the first millennium BC and is now at the core of contemporary scholarly debates in Economic theory. Like us, people of the past clearly struggled to uphold core values that are based on hope, eventually indulging in those based on fear. Perhaps people of the future will live up to this task, or perhaps this inability is inherent in human nature.

6.3 Cultural organizations hold a key role in promoting resilience

Now more than ever cultural organizations are important for the survival of society and their activity goes hand in hand with the economic performance of society at large. Since resilience is essential to the survival of the human species, examining the ways in which past societies coped and even thrived during times of extreme social, political, and economic distress can suggest how contemporary society might find the hope to deal with today's socio-political

situation. Looking back at how societies in the past manifested this naturally human resilience will help us to better understand how resilience is manifested in our own time. Looked at in this way, many objects from the past that are now displayed in museums can be considered as examples of human resilience and instruments for building hopeful narratives. It is particularly important during times of uncertainty and crisis that we be reminded that people in the past could and did overcome seemingly insurmountable obstacles. Rather than looking at rulers and renowned figures from the past, it is important to examine the resilience of people like scribes whose names are largely unknown even to scholars, and artisans whose names were rarely even recorded. A greater awareness and understanding of the challenges faced by these people and how they managed to overcome them is fundamental to the creation of a hopeful narrative of human resilience for people of the present. As scholars of the ancient world, it is our responsibility to bring these narratives to the fore.

6.4 Potential avenues for future research

The fragmentation of the political sphere in Late Period Egypt seemingly gave way to a fragmented society, in which bonds of trust had to be manufactured constantly by hiring professionals in different fields. In this dissertation, I have often referred to the "individualism" of Late Period Egyptian society. However, the emphasis placed on filiations in documents, as well as on funerary commodities suggests that we should not see this society as individualistic in the same way as ours. It has become clear to me that people in Egypt during the first millennium BC were relying on nuclear families. Through their families, people negotiated their place in society. Therefore, a detailed assessment of filiations and titles on funerary objects and documents could reveal the ways in which different families competed with one another and interacted with different patrons. This type of study could also enable an assessment of the amount of wealth and prestige members of the elites could

acquire from their families, as well as the wealth and prestige people were able to accumulate on their own in a lifetime.

In particular, a closer look at the evidence left by the expanding groups of scribal specialists may provide an insight into the ways in which people could become affiliated to bureaucratic organizations. Through the help of scribal specialists, people were likely able to preserve their wealth over long periods of time. Therefore, documents became essential means for the preservation of individual and family resources, and the abundance of scribal signatures on these documents can provide an insight into the ways in which these organizations gathered new recruits. Eventually, the increasing number of abnormal hieratic documents that are being made available to the academic community will make it possible to calculate an estimate of the number of scribes present at least in the Theban area at one time, and find out how many of these scribes belonged to families of scribes, the extent to which they were able to move between different communities, and hypothesize ways in which new recruits joined these groups of specialists.

With the removal of the restrictions imposed by the royal authorities of the New Kingdom, one envisions a society in which different families were constantly at odds with one another and with different organizations. Everyone was attempting to advance their position in society by accumulating more wealth, commissioning more brand new commodities in order to maintain their prestige, and (among the wealthiest people) finding new ways of displaying prestige in the competitive arena of the elites, thus exhausting the available resources. By so doing, the elites perpetuated dynamics of "value extraction" and "value destruction" (Mazzucato 2019), which made Egyptian society vulnerable to subsequent foreign invasions and weakened the position of the local elites in the long run, thus laying the foundations for another episode of collapse. These dynamics would require further investigation, especially within a comparative framework that would include other

societies in the Mediterranean and beyond. Were some societies more prone to collapse than others? To what extent did dynamic institutions predispose a society to growth? These are questions that may help us address some of the issues we are facing in our modern globalized economy.

Illustrations



Fig. 3.1 Detail of the inner coffin of Pahoreniset, Turin C. 7715. Dynasty 21 (photo taken by Remy Hiramoto with permission of the Museo Egizio, Torino).

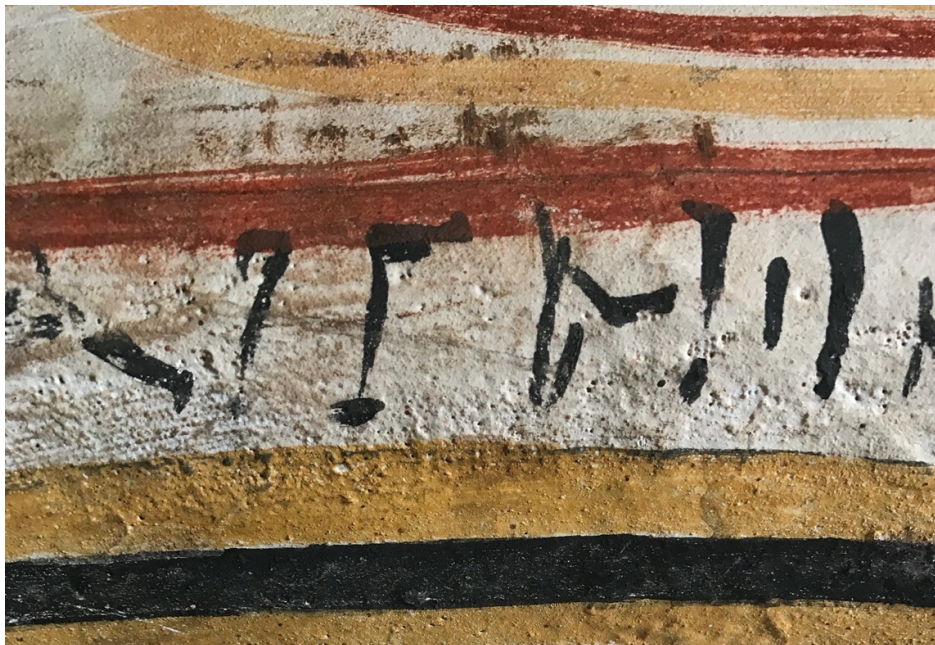


Fig. 3.2 Detail of the inner coffin of Ankhshepenwepet, MMA 25.3.202a,b. Dynasty 25/26 (photo taken by the author with permission of The Metropolitan Museum of Art).



Fig. 3.3 Detail of the exterior of the lid of the middle coffin of Padiese, Leiden AMM 19-c. Dynasty 25/26 (© National Museum of Antiquities, Leiden).



Fig. 3.4 Interior of the inner coffin of Takhebkenem, BM EA6691. Dynasty 25/26 (© The Trustees of the British Museum).



Fig. 3.5 Exterior of the box of the inner coffin of Kek, Leiden AMM 4-c. Dynasty 25/26 (© National Museum of Antiquities, Leiden).

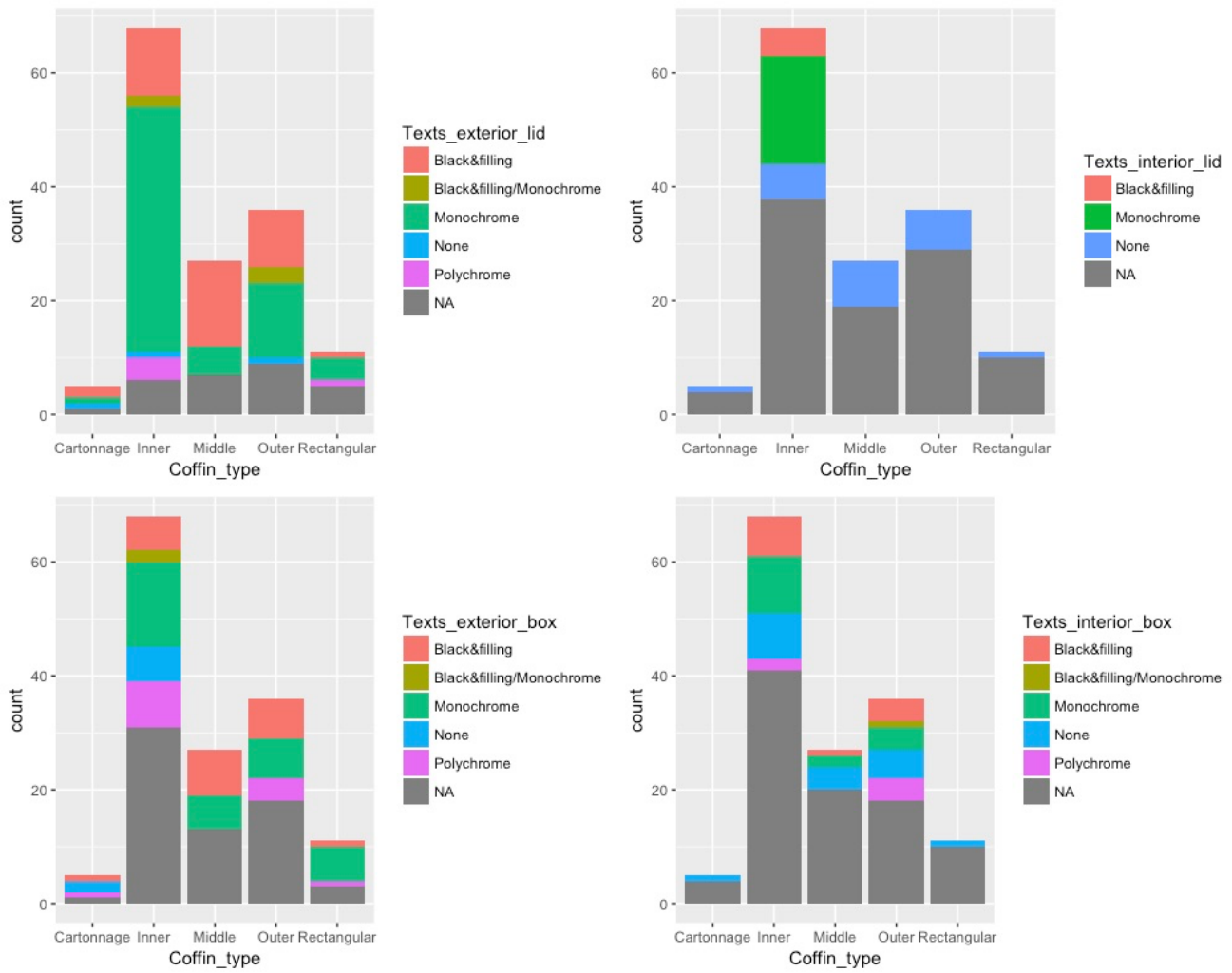


Fig. 3.6 Histograms illustrating the frequency of different techniques used to apply texts on different areas of coffins of the 25th and 26th Dynasties.

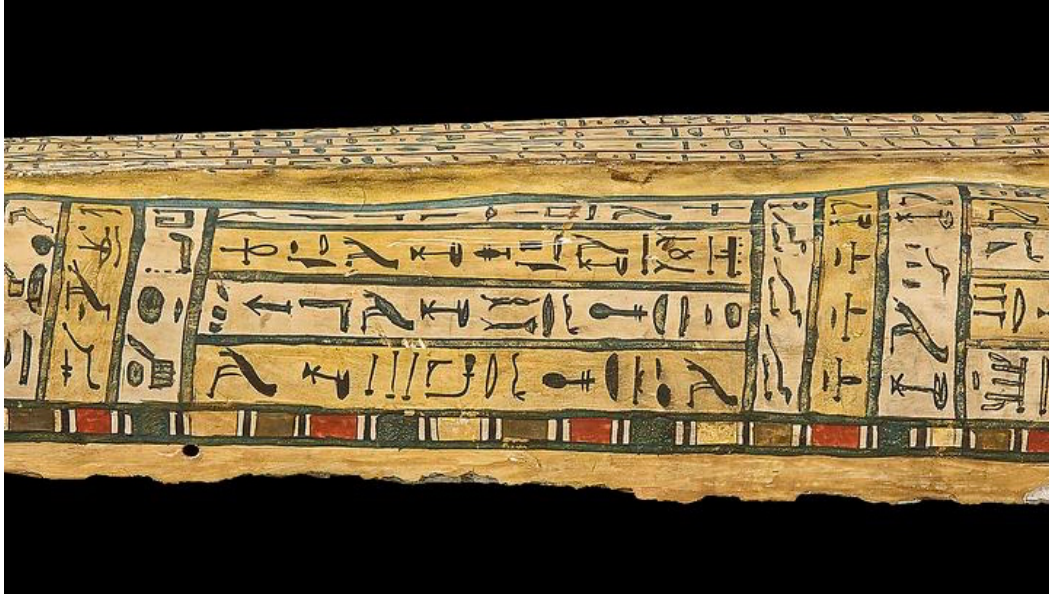


Fig. 3.7 Detail of the inner coffin of Nestawedjat, BM EA22812,a. Dynasty 25/26 (© The Trustees of the British Museum).



Fig. 3.8 Box of the inner coffin of Haty, Liverpool 39.4042.5A-B. Dynasty 25/26 (Courtesy of National Museums Liverpool (World Museum)).

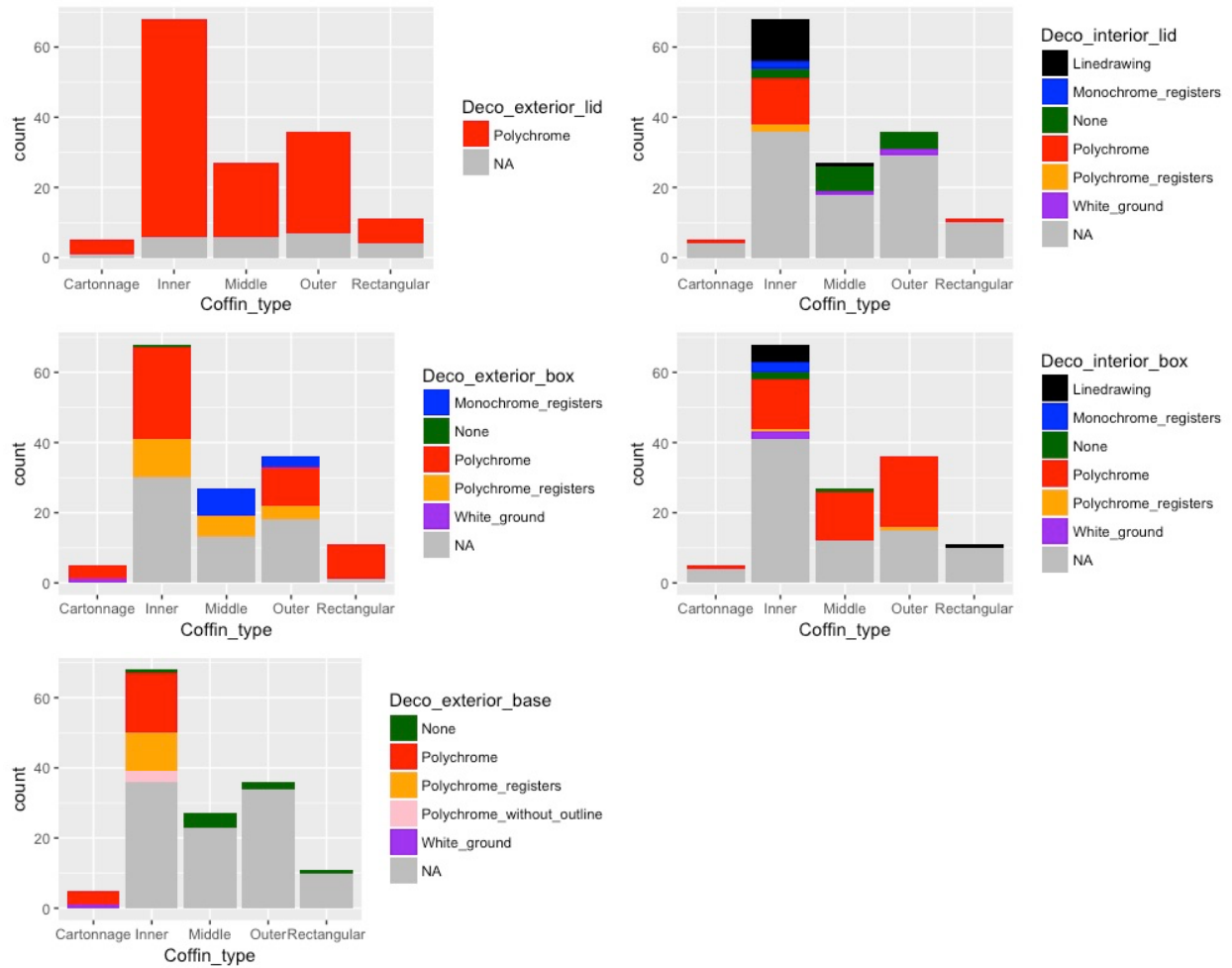


Fig. 3.9 Histograms illustrating the frequency of different techniques used to apply the decorative program on different areas of coffins of the 25th and 26th Dynasties.



Fig. 3.10 Interior of the box of the inner coffin of Ankhshenpepet, MMA 25.3.202a,b. Dynasty 25/26 (© The Metropolitan Museum of Art).



Fig. 3.11 Exterior of the box of the inner coffin of Ankhshepenwepet, MMA 25.3.202a,b. Dynasty 25/26 (© The Metropolitan Museum of Art).



Fig. 3.12 Interior of the lid of the inner coffin of Besenmut, BM EA22940. Dynasty 25/26 (© The Trustees of the British Museum).



Fig. 3.13 Footboard of the inner coffin of Ity, Leiden H.III.VVV App.-1. Dynasty 25/26 (© National Museum of Antiquities, Leiden).



Fig. 3.14 Interior of the inner coffin of Irteru, BM EA6695. Dynasty 25/26 (photo taken by the author with permission of the British Museum).



Fig. 3.15-3.16 Details of the interior surface of the outer box of Mentuirdis, Turin S. 05221. Dynasty 25/26 (© Museo Egizio, Torino).



Fig. 3.17 VIL image of the exterior surface of the middle coffin of Mentuirdis, Turin S.05220. Dynasty 25/26 (© Museo Egizio, Torino).



Fig. 3.18 Middle coffin of Amenirirt, BM EA22811. Dynasty 25/26 (photo taken by the author with permission of the British Museum).



Fig. 3.19 Interior of the middle coffin of Amenirirt, BM EA22811. Dynasty 25/26 (photo taken by the author with permission of the British Museum).

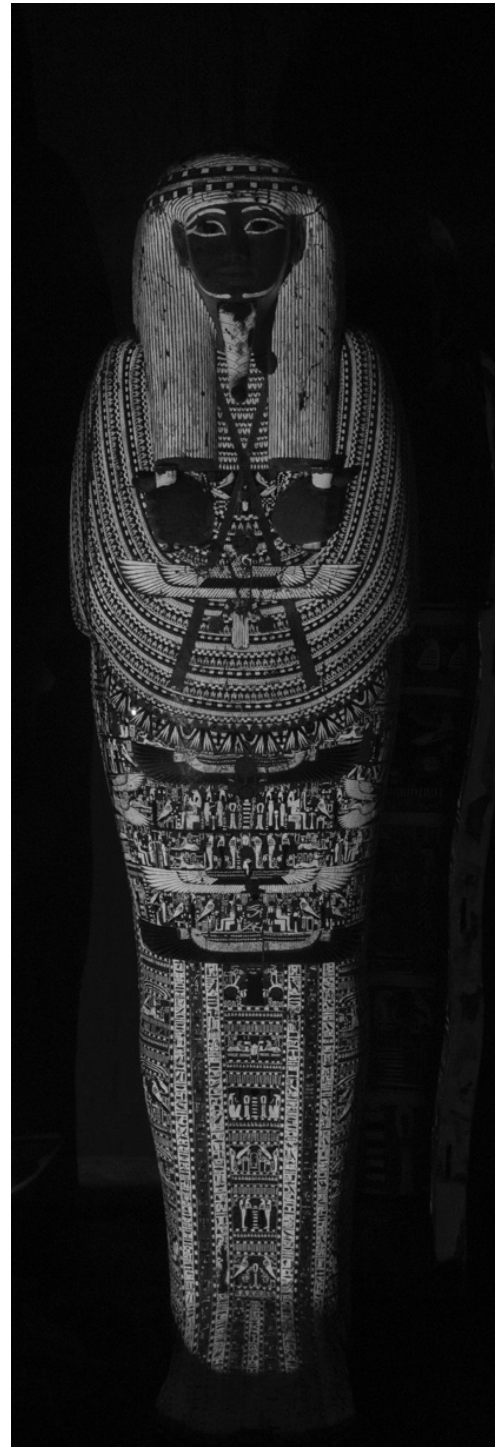


Fig. 3.20-3.21 Left: VIL image of the exterior of the lid of the inner coffin of Kek, Leiden AMM 4-c. Dynasty 25/26. Right: VIL image of the exterior of the lid of the inner coffin of Djedmontefankh, Leiden AMM 18-h. Dynasty 25/26 (photos taken by Paolo Triolo with permission of the National Museum of Antiquities, Leiden).

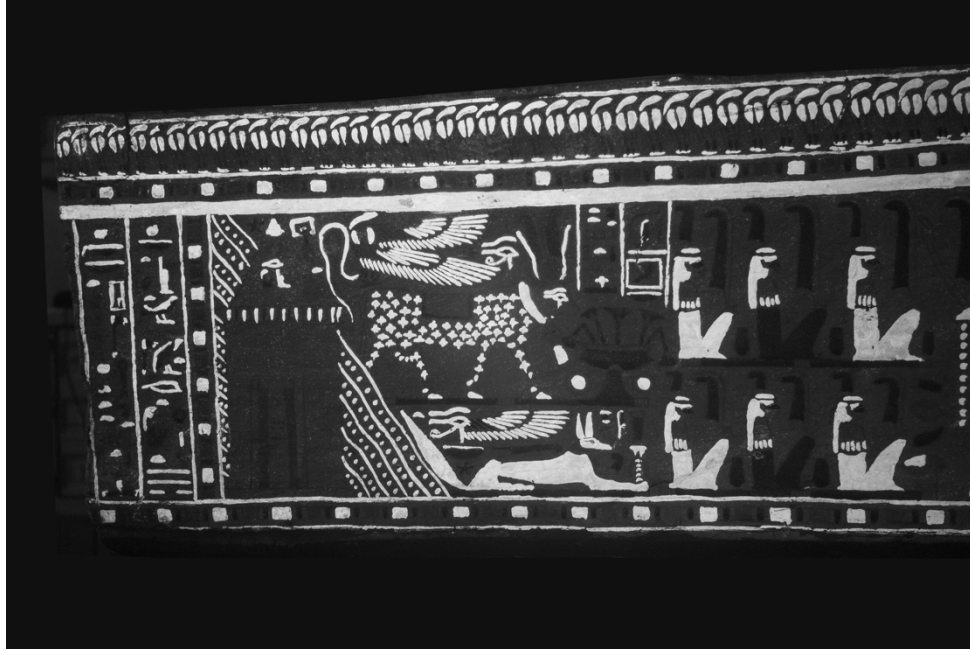


Fig. 3.22 VIL image of the lower left side of the box of the inner coffin of Tabakenkhonsu, Turin C.2226. Dynasty 21 (© Museo Egizio, Torino).



Fig. 3.23-3.24 Details of the lid and box of the outer coffin of Takhebkenem, BM EA6690A. Dynasty 25/26 (© The Trustees of the British Museum).

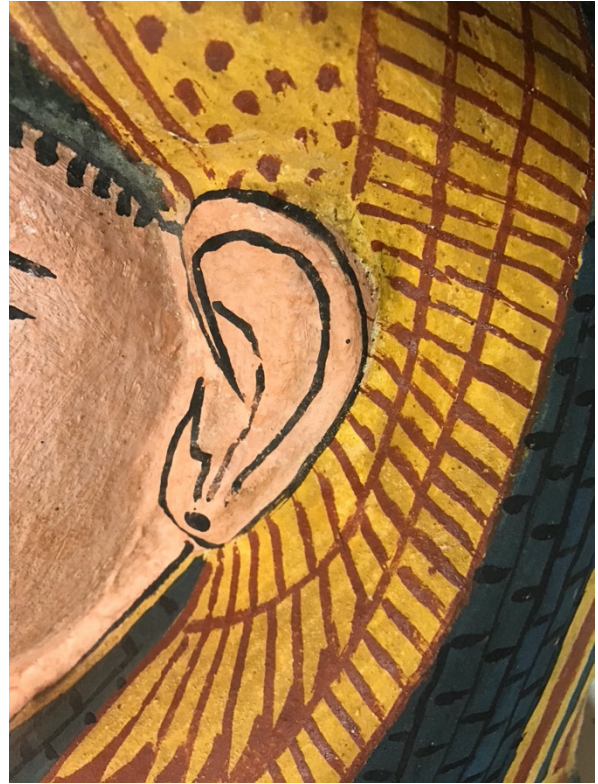


Fig. 3.25-3.26 Details of the head end of the inner coffin of Ankhshenwepet, MMA 25.3.202a,b. Dynasty 25/26 (photos taken by the author with permission of The Metropolitan Museum of Art).



Fig. 3.27-3.28 Top of the head and footboard of the inner coffin of Ankhshenwepet, MMA 25.3.202a,b. Dynasty 25/26 (© The Metropolitan Museum of Art).

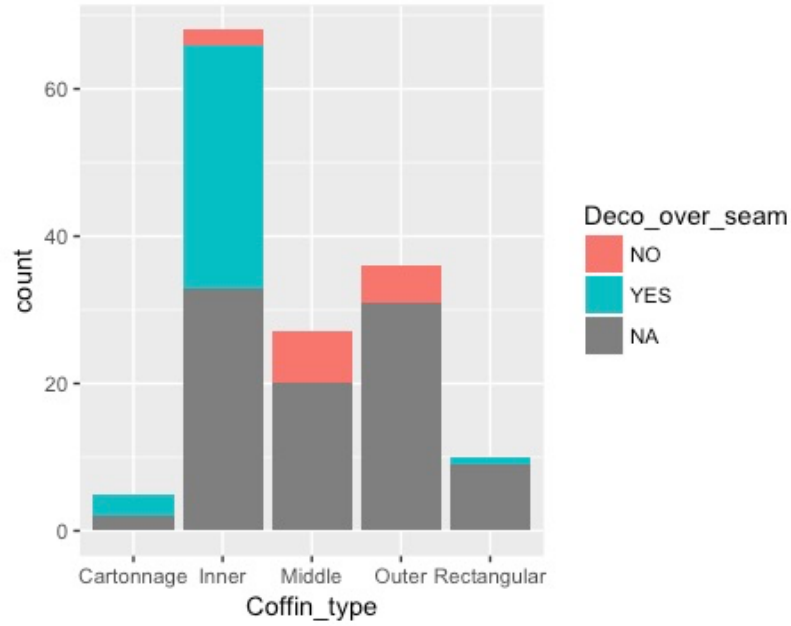


Fig. 3.29 Histogram illustrating the frequency of decorations being applied after closure on coffins of Dynasties 25 and 26.

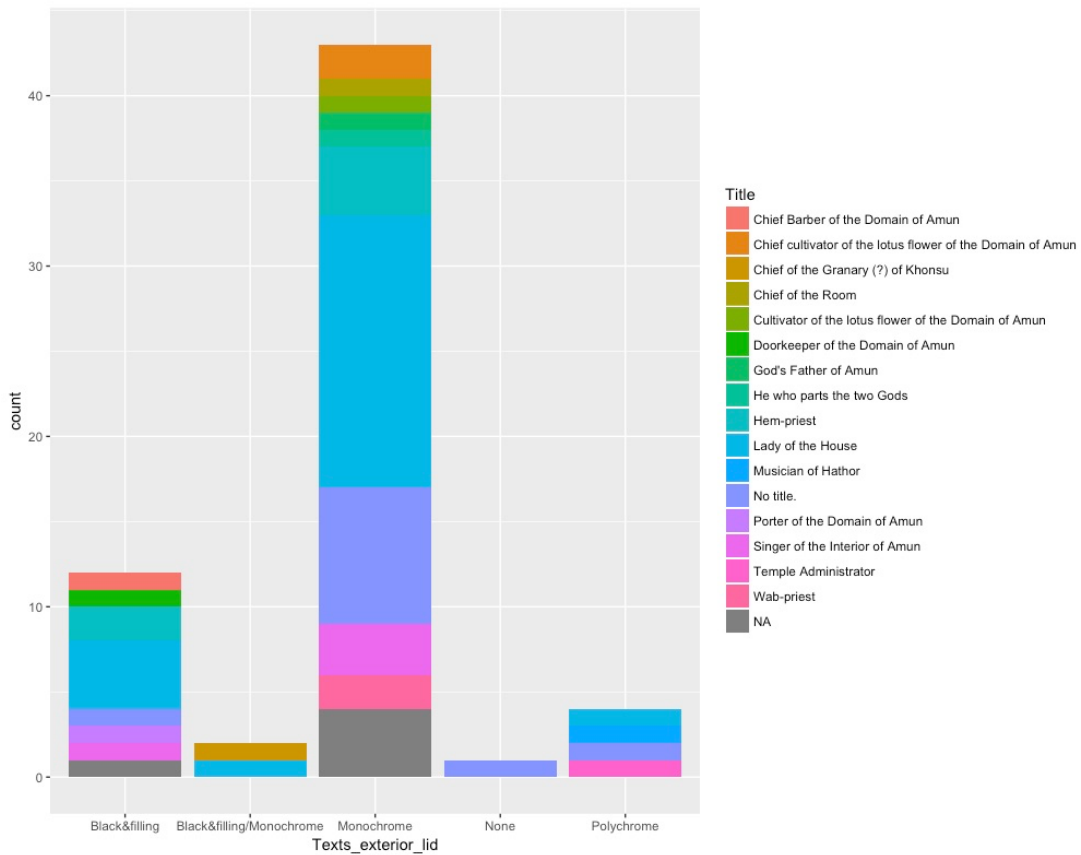


Fig. 3.30 Histogram illustrating the absence of correlation between the energy expended on the texts applied to the lids of coffins from Dynasties 25 and 26 and the titles of the deceased.

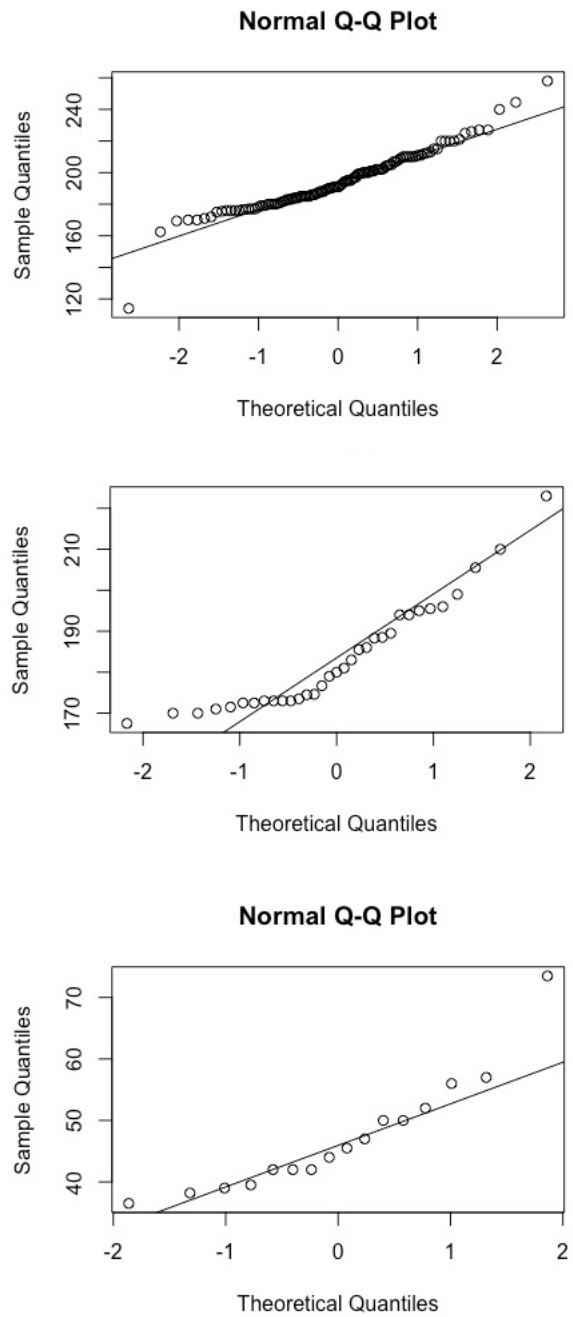


Fig. 3.31-3.33 Q-Q plot illustrating the approximately normal distribution of the total length (top), as well as the length of the interior (middle) and maximum width of the interior (bottom) of coffins from Dynasties 25 and 26.

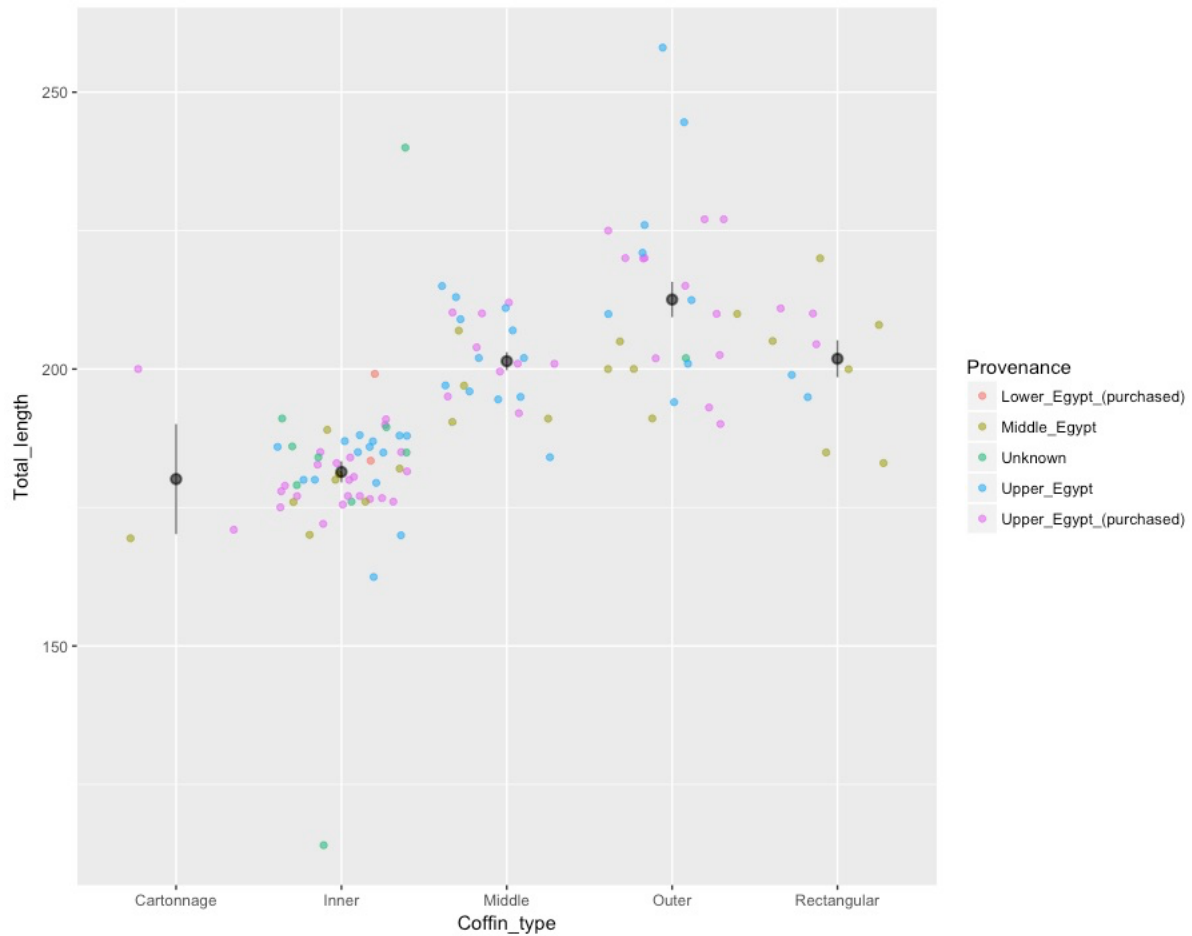


Fig. 3.34 Scatterplot illustrating the range of total length of different types of coffins from Dynasties 25 and 26.

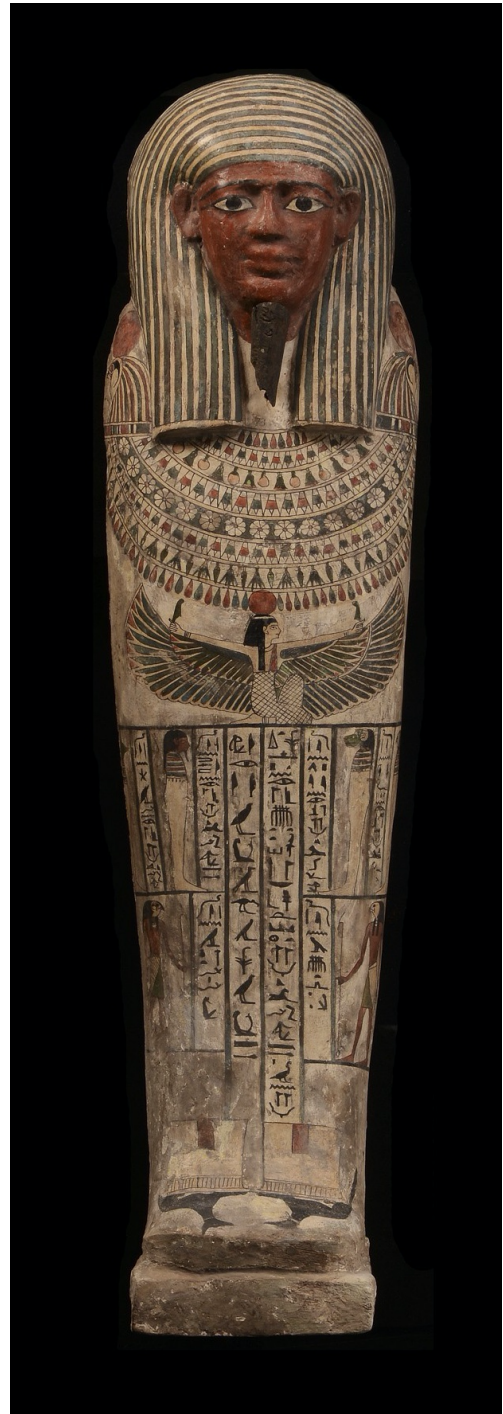


Fig. 3.35-3.36 Left: inner coffin of Paef-tja-neith, AMM 5-e. Dynasty 25/26. Right: inner coffin of Qeref, Leiden AMM 12-b. Dynasty 25-26 (© National Museum of Antiquities, Leiden).

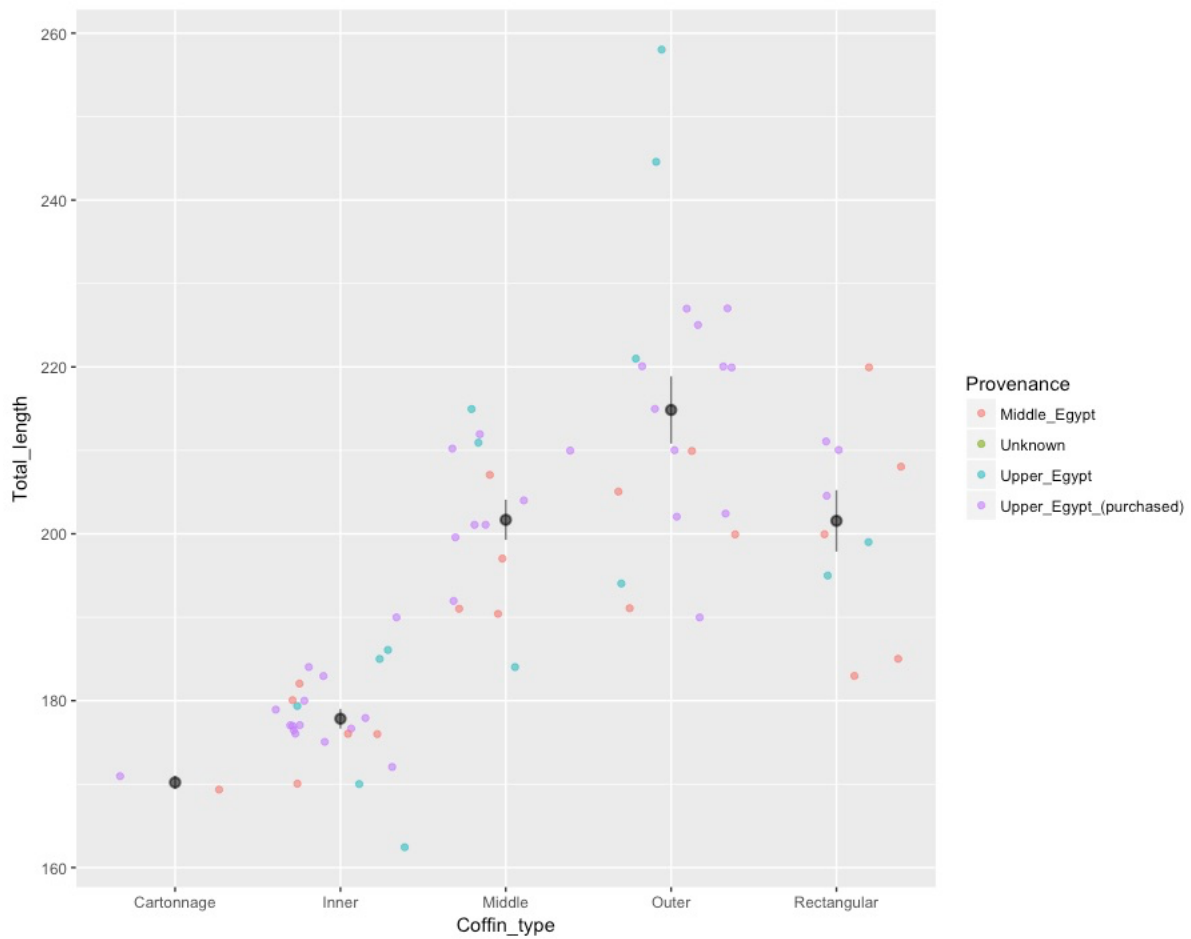


Fig. 3.37 Scatterplot illustrating the range of total length of different types of coffins from known coffin sets dated to Dynasties 25 and 26.

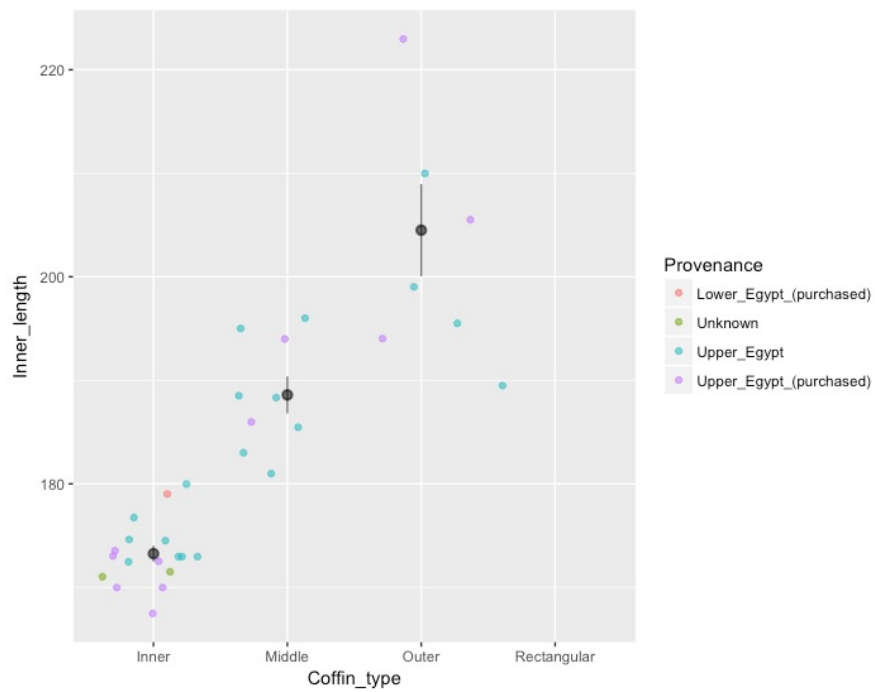
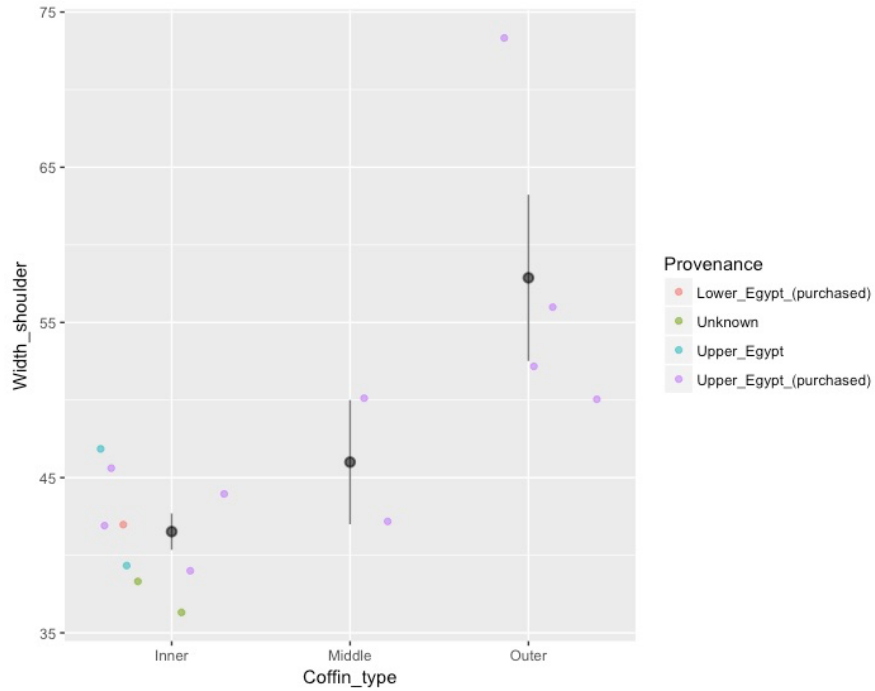


Fig. 3.38-3.39 Scatterplot illustrating the range of length and maximum width of the interior of different types of coffins dated to Dynasties 25 and 26.

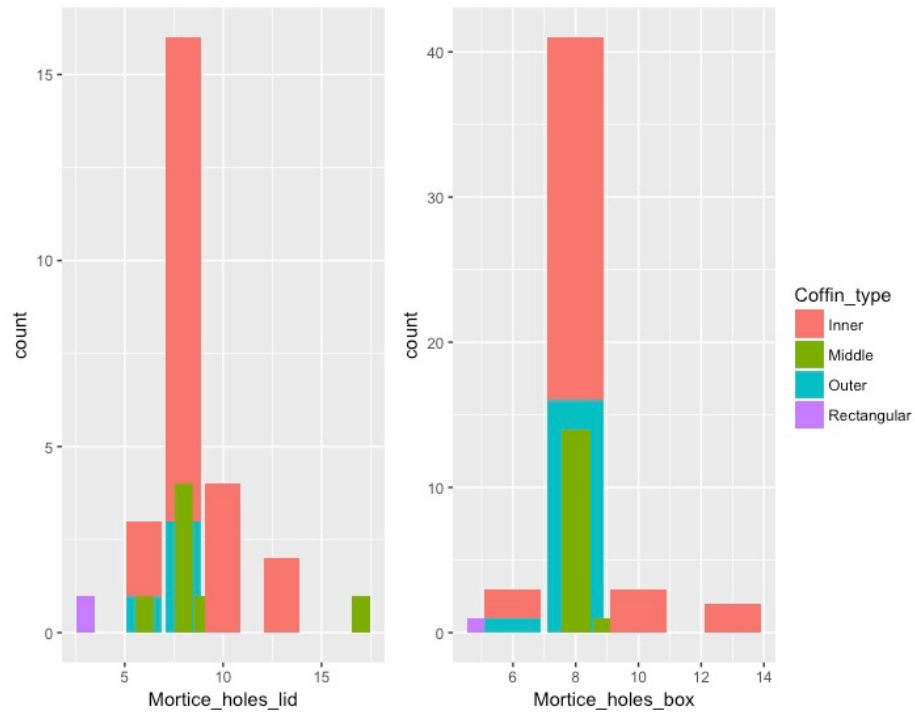


Fig. 3.40 Histograms illustrating the distribution of mortice holes on boxes and lids of different types of coffins dated to Dynasties 25 and 26.



Fig. 3.41-3.42 Details of the lid of the inner coffin of Paëftjauneith, AMM 5-e. Dynasty 25/26 (© National Museum of Antiquities, Leiden).



Fig. 3.43 Detail of the lid of the inner coffin of Ankhshenpepet, MMA 25.3.202a,b. Dynasty 25/26 (photo taken by the author with permission of The Metropolitan Museum of Art).

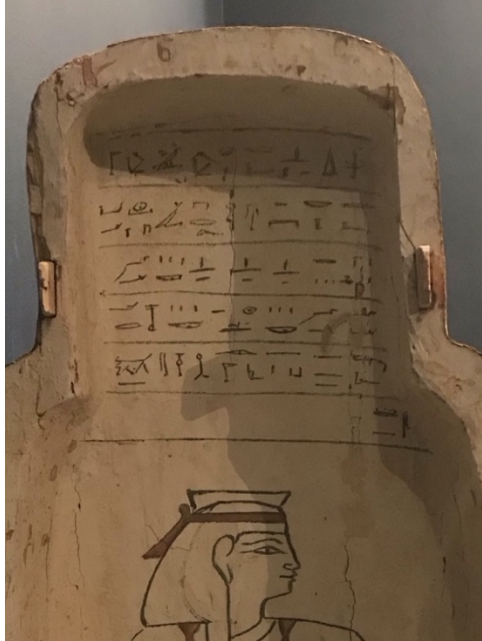
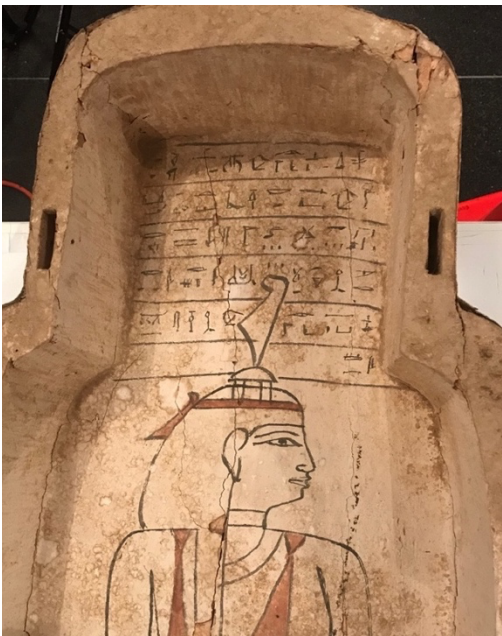


Fig. 3.44-3.45 Details of the interior of the box (left) and the lid (right) of the coffin of Ankhshenpepet, MMA 25.3.202a,b. Dynasty 25/26 (photos taken by the author with permission of The Metropolitan Museum of Art).



Fig. 3.46 Detail of the box of the coffin of Ta-aati, Manchester 10881.b, showing changes in the direction of the drip of black paint. Dynasty 25/26 (Courtesy of Manchester Museum, University of Manchester).



Fig. 3.47 Detail of the box of the middle coffin of Mentuirdis, Turin S.05220. Dynasty 25/26 (© Museo Egizio, Torino).



Fig. 3.48 Outer coffin of Seshepenmehyt, BM EA22814A. Dynasty 25/26 (© The Trustees of the British Museum).

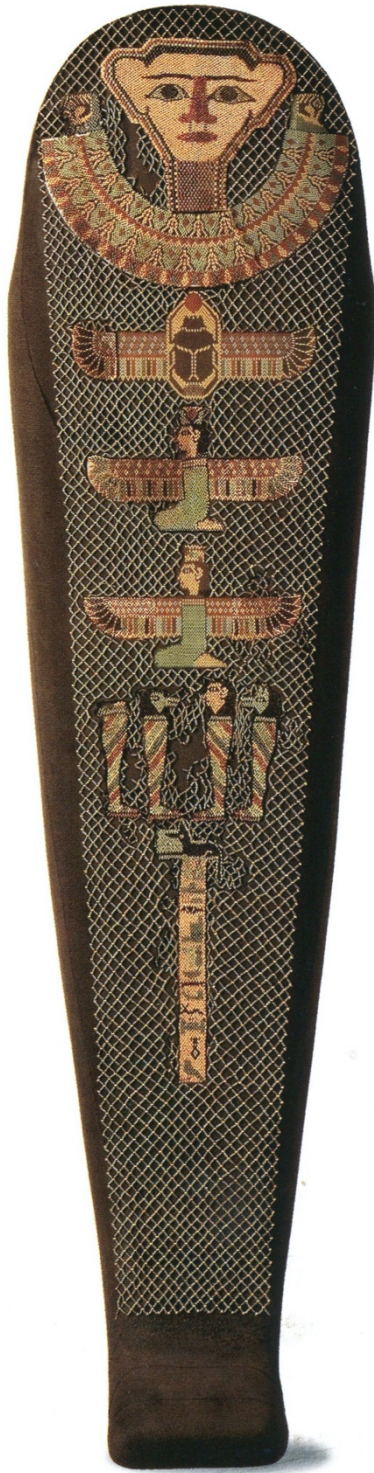


Fig. 4.1 Freiburg Ae 150 (El-Hibeh, Ptolemaic Period). After Strecker and Heinrich (2007: 224).



Fig. 4.2 Florence 10505, 10727 and 10728 (El-Hibeh, Late Period-Ptolemaic Period). Fragments of a beadwork face, an inscribed band, and a collar made of beadwork. The beadwork face was found inside a coffin that has been dated to the Late Period. After Botti (1958: pl. C, fig. 2-4).



Fig. 4.3-4.6 From left to right: Amulets depicting sons of Horus from mummy nets Turin S. 05299, Turin S. 05296, Turin S. 05302, and Turin S. 05346 from tombs QV43 and QV44. Dynasties 25-26 (© Museo Egizio, Torino).



Fig. 4.7-4.8 Left: detail of the beadwork collar and face of Turin S.05290 from tombs QV43 or QV44. Dynasty 25/26 (© Museo Egizio). Right: detail of the tubular beads and ring beads forming the network of Turin S. 05290 (photo taken by the author with permission of the Museo Egizio, Torino).



Fig. 4.9 Beadwork collar from mummy net Manchester 2360 retrieved in el-Lahun. Late Period (Courtesy of Manchester Museum, University of Manchester).

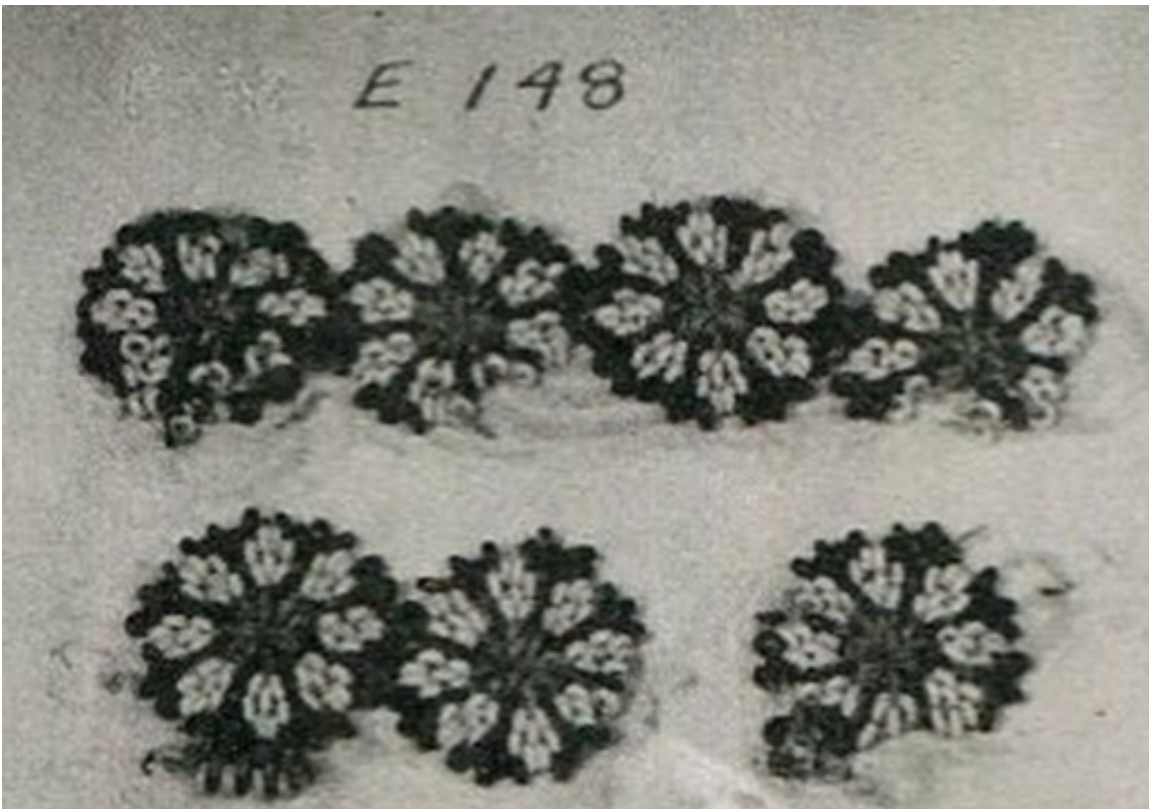


Fig. 4.10 Fragments of beadwork rosettes from burial in Abydos. Late Period. After Garstang (1901: pl. 22, fig. E148).



Fig. 4.11-4.12 Left: fragment of beadwork rosette from burial in el-Hiba (Florence 10729 (11-12)). Late Period-Ptolemaic Period (photo taken by the author with permission of the Museo Egizio, Firenze). Right: fragments of beadwork rosettes from a burial in Qubbet el-Hawa. Late Period (inventory number unknown; photo taken by the author with permission of the Ägyptisches Museum, University of Bonn).



Fig. 4.13-4.14 Left: detail of mummy net from a burial in Saqqara. Dynasty 25/26. After Gosford (2014: 536). Right: detail of mummy net Leiden AMM 5 from Lower Egypt. Dynasty 26 (© National Museum of Antiquities, Leiden).

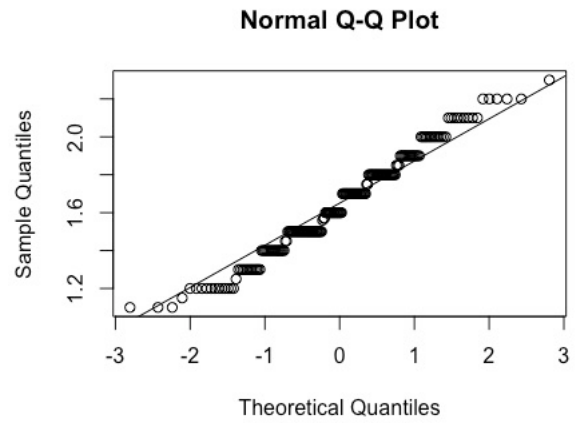
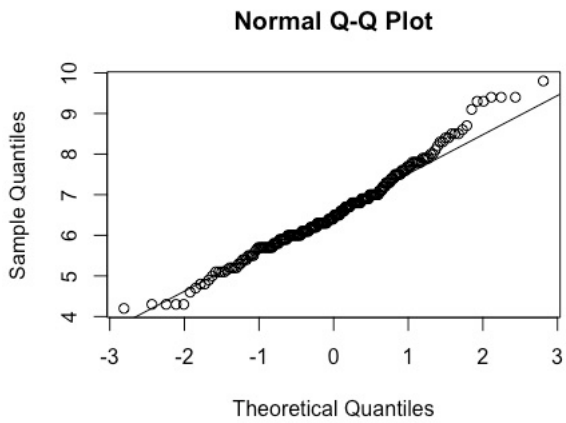


Fig. 4.15-4.16 Distribution of length (left) and width (right) of faience amulets depicting the sons of Horus belonging to mummy nets dated to the 25th and 26th Dynasties.

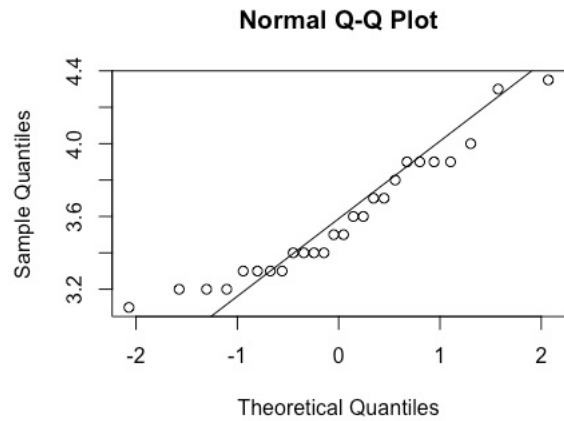
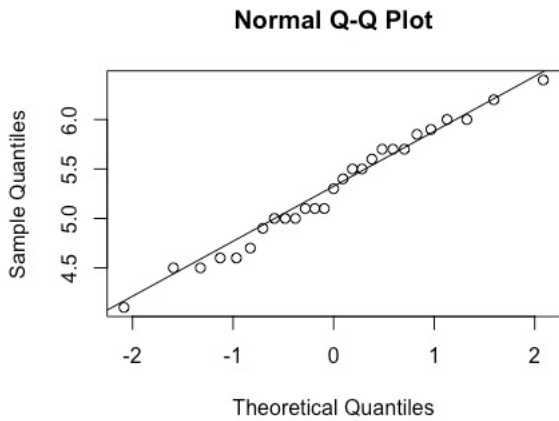


Fig. 4.17-4.18 Distribution of length (left) and width (right) of faience scarabs belonging to mummy nets dated to the 25th and 26th Dynasties.

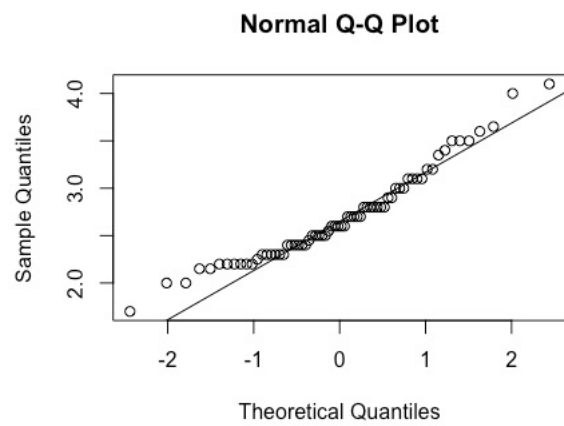
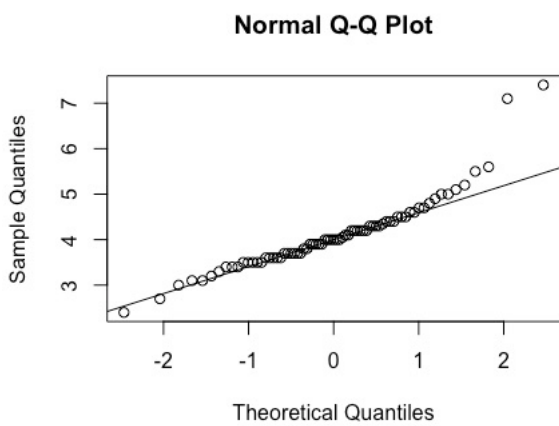


Fig. 4.19-4.20 Distribution of length (left) and width (right) of faience scarab wings belonging to mummy nets dated to the 25th and 26th Dynasties.

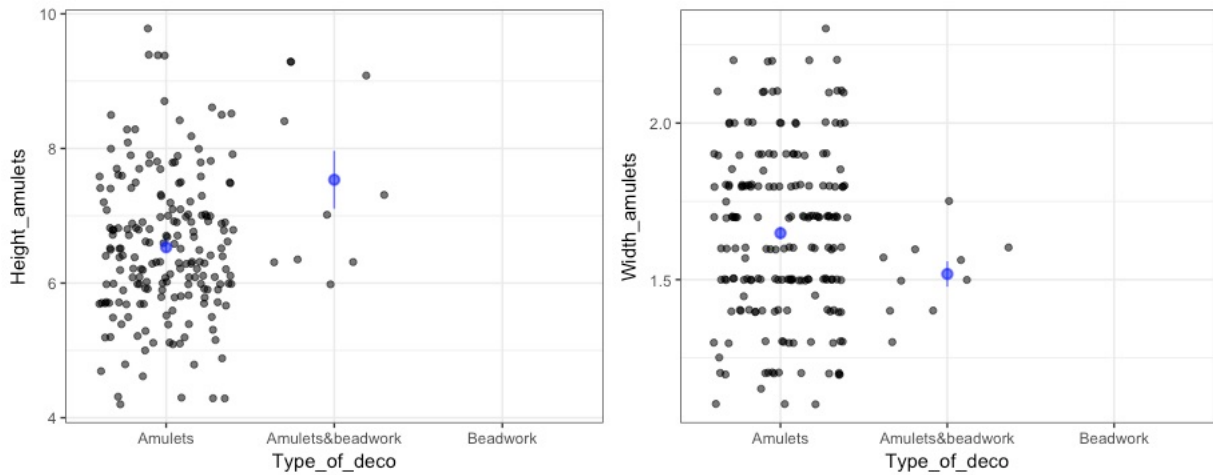


Fig. 4.21-4.22 Scatterplot showing the range of length (left) and width (right) of faience amulets depicting the four sons of Horus belonging to mummy nets with different types of decoration.

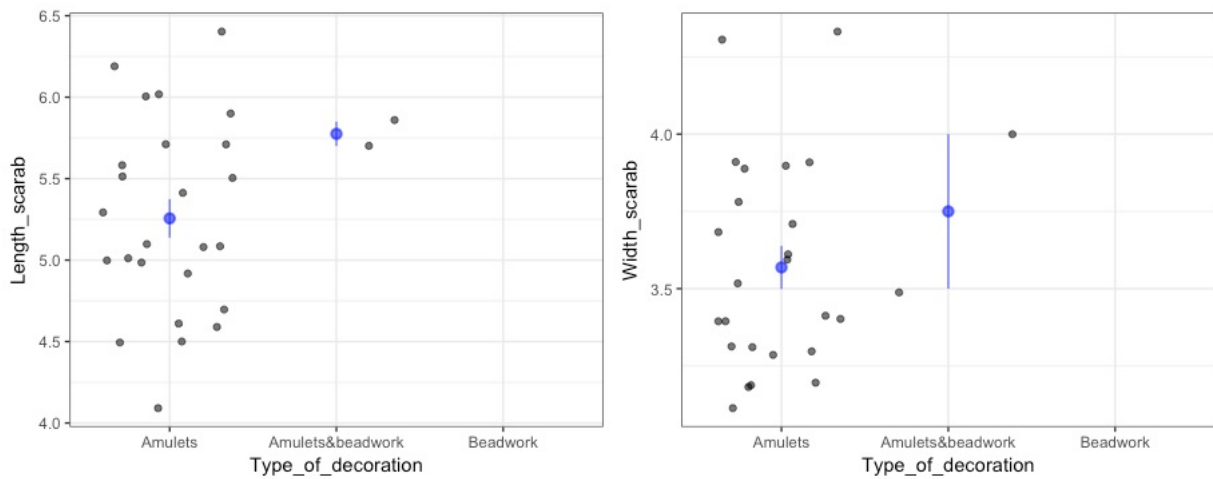


Fig. 4.23-4.24 Scatterplot showing the range of length (left) and width (right) of faience scarabs belonging to mummy nets with different types of decoration.

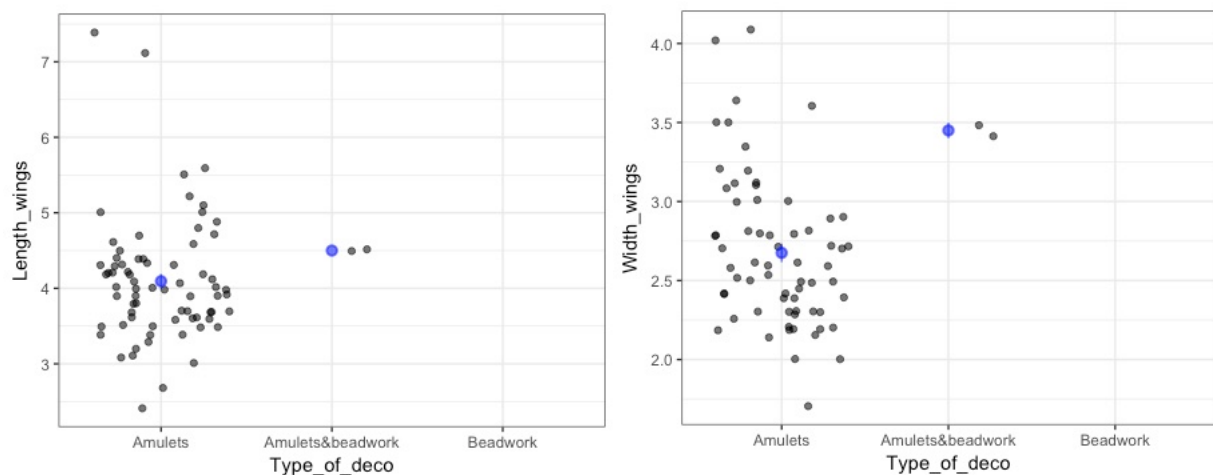


Fig. 4.25-4.26 Scatterplot showing the range of length (left) and width (right) of scarab wings belonging to mummy nets with different types of decoration.

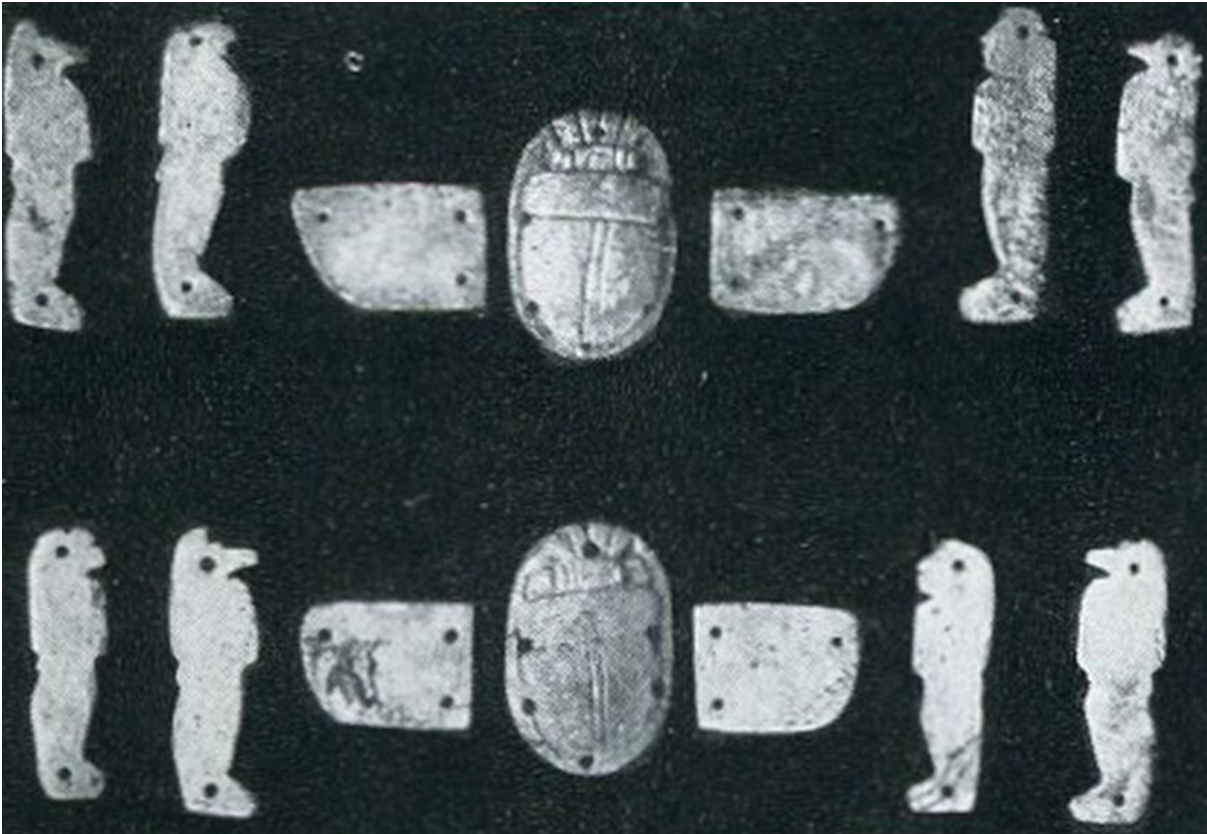


Fig. 4.27 Amulets retrieved from tombs in Abydos that have been broadly dated to a period after the 18th Dynasty. After Peet (1914: pl. 38, fig. 10).



Fig. 4.28-4.29 Left: amulets belonging to the mummy net Turin S. 05300 from the Valley of the Queens. Dynasty 25/26 (© Museo Egizio, Torino). Right: amulet depicting one of the sons of Horus from a burial in Qubbet el-Hawa (BoSAe QH 206/29 1503). Late Period (photo taken by the author with permission of the Ägyptisches Museum, University of Bonn).



Fig. 4.30-4.31 Amulets depicting one of the sons of Horus belonging to mummy nets Turin S. 05299 and Turin S. 05406 from QV 43 and QV 44. Dynasties 25/26 (© Museo Egizio, Torino).

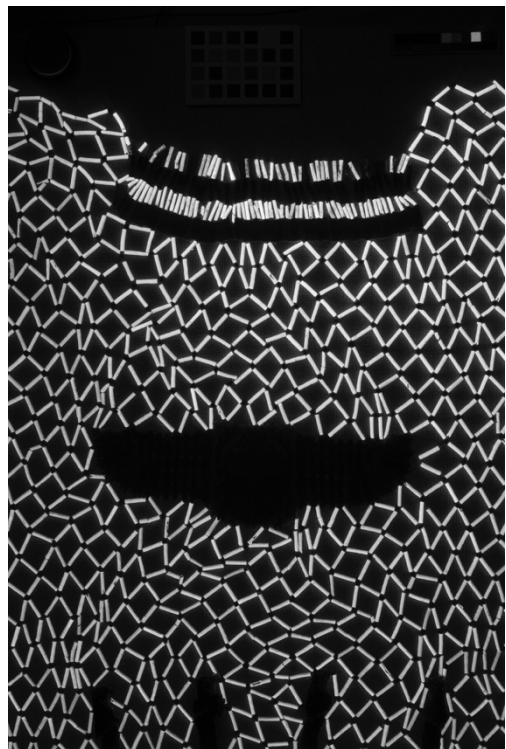


Fig. 4.32-4.33 Left: detail of the mummy net of Tabakenkhonsu (MMA 96.4.5), showing the beadwork decorative pieces. Right: VIL image of the same area of the mummy net. Dynasty 25/26 (© The Metropolitan Museum of Art).

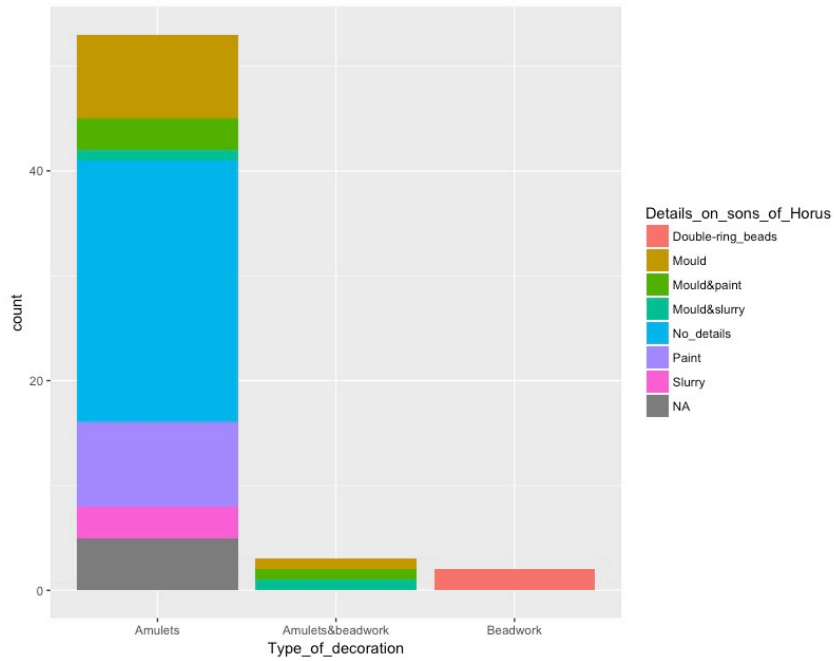


Fig. 4.34 Histogram displaying the frequency of different techniques used to produce amulets depicting the sons of Horus on mummy nets from QV 43 and QV 44, dated to the 25th and 26th Dynasties.

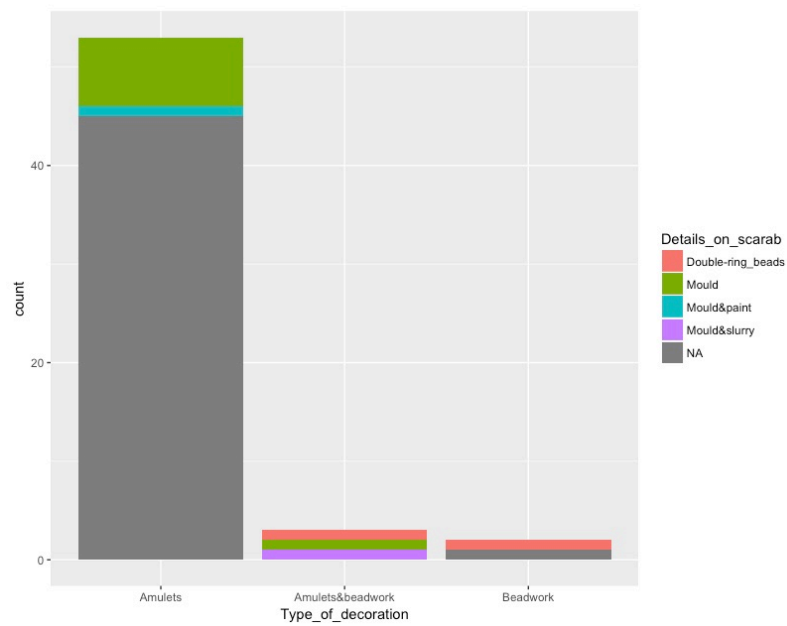


Fig. 4.35 Histogram displaying the frequency of different techniques used to produce faience scarabs belonging to mummy nets from QV 43 and QV 44, dated to the 25th and 26th Dynasties.

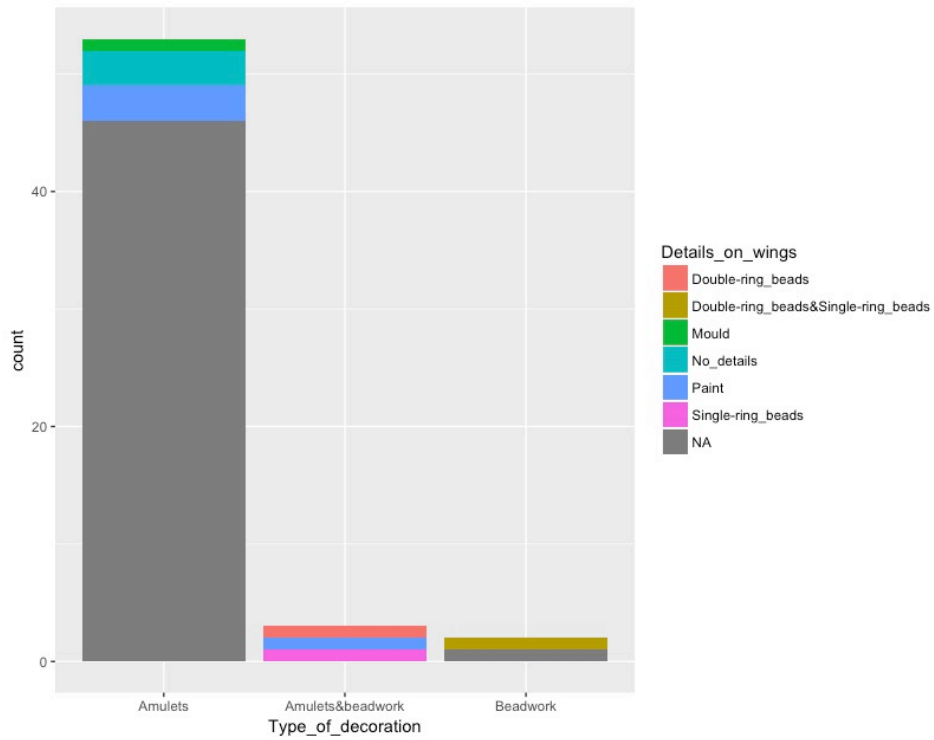


Fig. 4.36 Histogram displaying the frequency of different techniques used to produce faience scarab wings belonging to mummy nets from QV 43 and QV 44, dated to the 25th and 26th Dynasties.

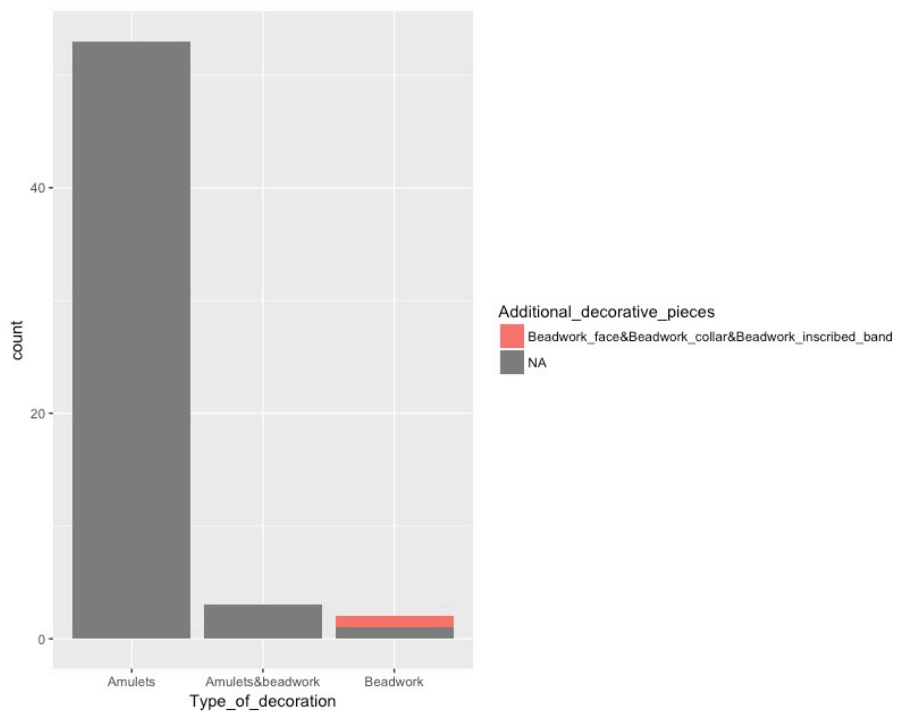


Fig. 4.37 Histogram illustrating the frequency of decorative pieces, in addition to the four sons of Horus and the winged scarab, on mummy nets from QV 43 and QV 44, dated to the 25th and 26th Dynasties.



Fig. 4.38 Ptah-Sokar-Osiris statue belonging to Ankhshepenwepet (MMA 25.3.204), from Deir el-Bahari. Dynasty 25/26 (© The Metropolitan Museum of Art).



Fig. 4.39 Ptah-Sokar-Osiris statue belonging to Nebsaiset (Fitzwilliam E.23.1887), from Akhmim. Dynasty 25/26 (photo taken by the author with permission of the Fitzwilliam Museum, Cambridge).

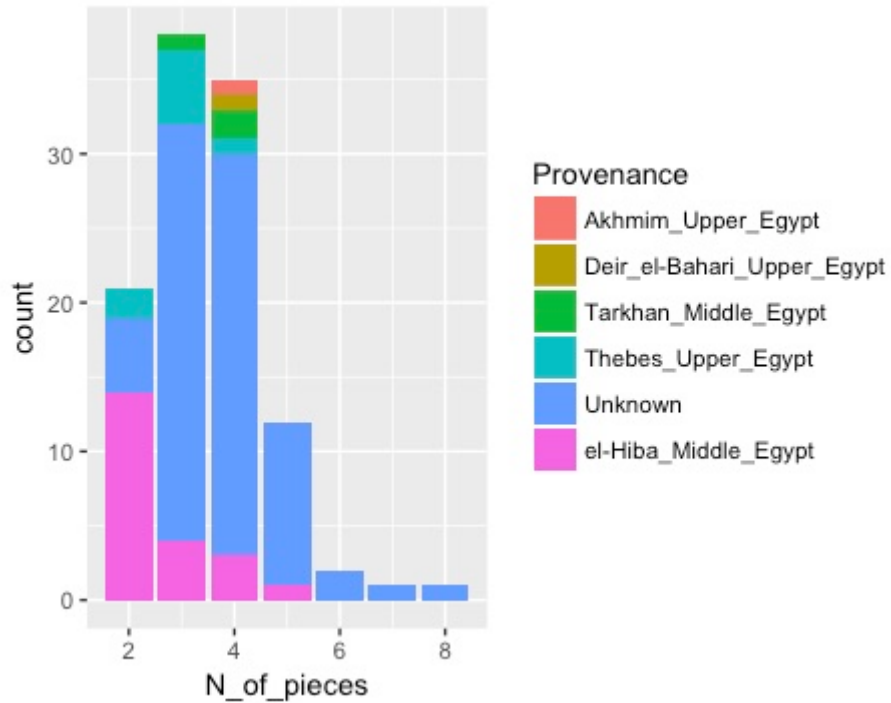


Fig. 4.40 Histogram illustrating the frequency of different numbers of modules used to assemble Ptah-Sokar-Osiris statues.



Fig. 4.41 Stand of the Ptah-Sokar-Osiris statue Turin C. 2468, provenance unknown. Dynasty 25/26 (photo taken by the author with permission of the Museo Egizio, Torino).

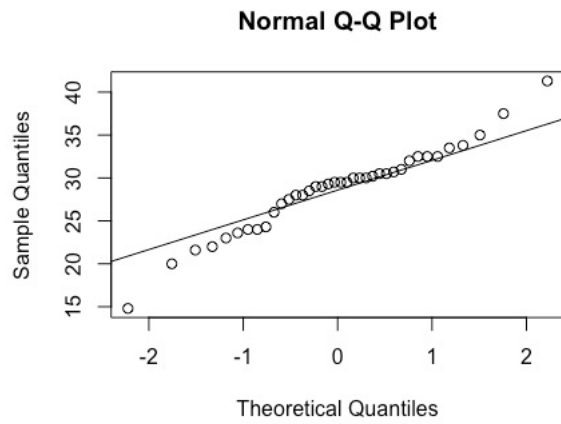
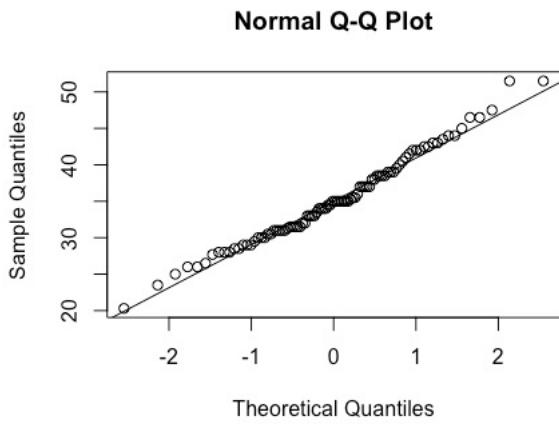


Fig. 4.42-4.43 Distribution of height of statues (left) and length of stands (right) of Ptah-Sokar-Osiris figures.

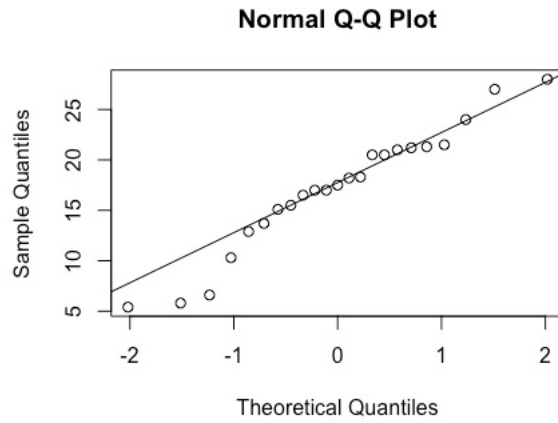
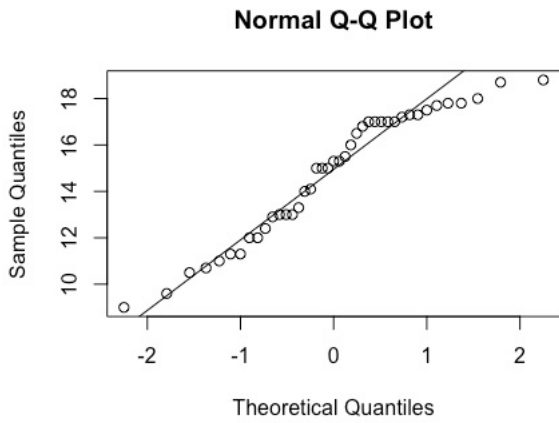


Fig. 4.44-4.45 Distribution of height of crowns (left) and width of horns (right) on Ptah-Sokar-Osiris figures.

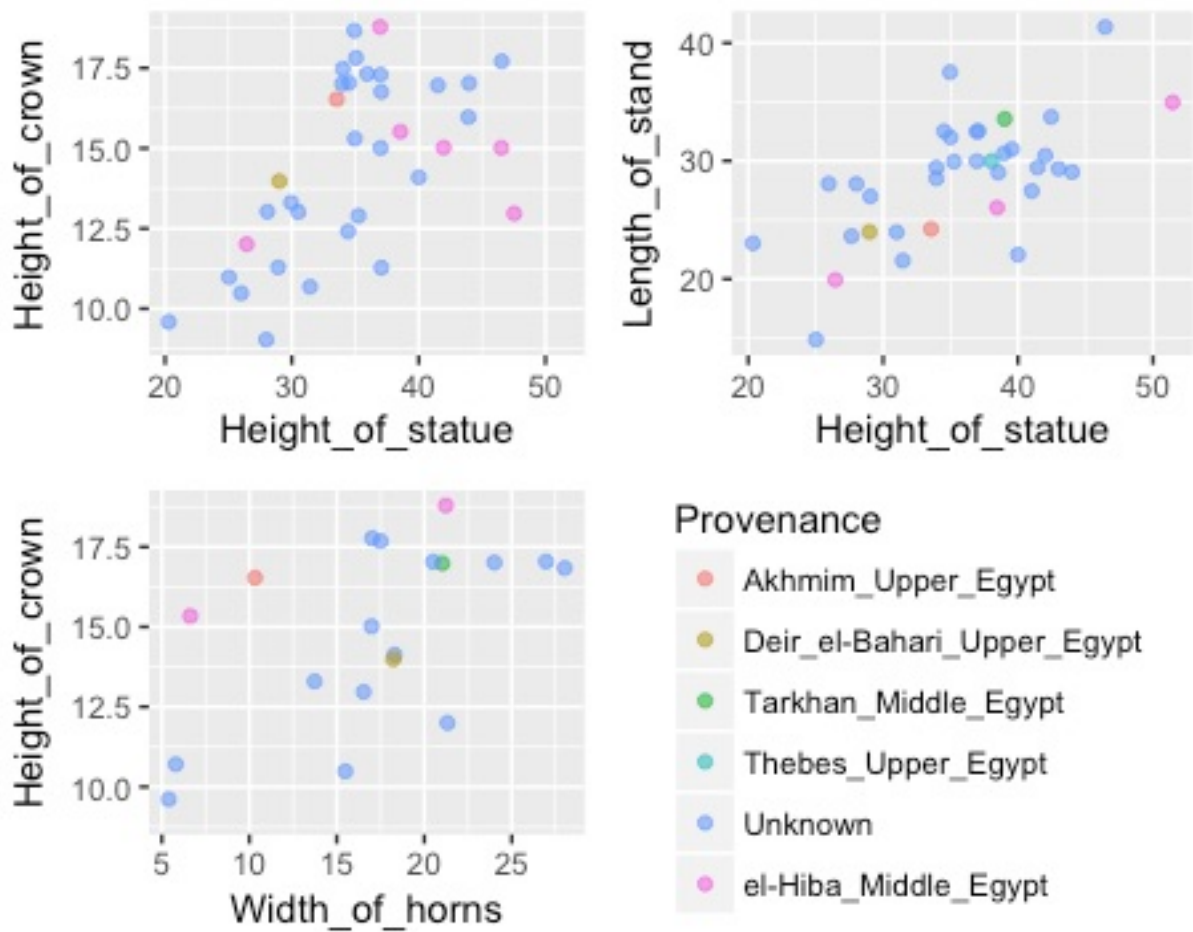


Fig. 4.46 Scatterplots assessing the correlation between height of statues and height of crown, as well as height of statue and length of stands, and height of crowns and width of horns.

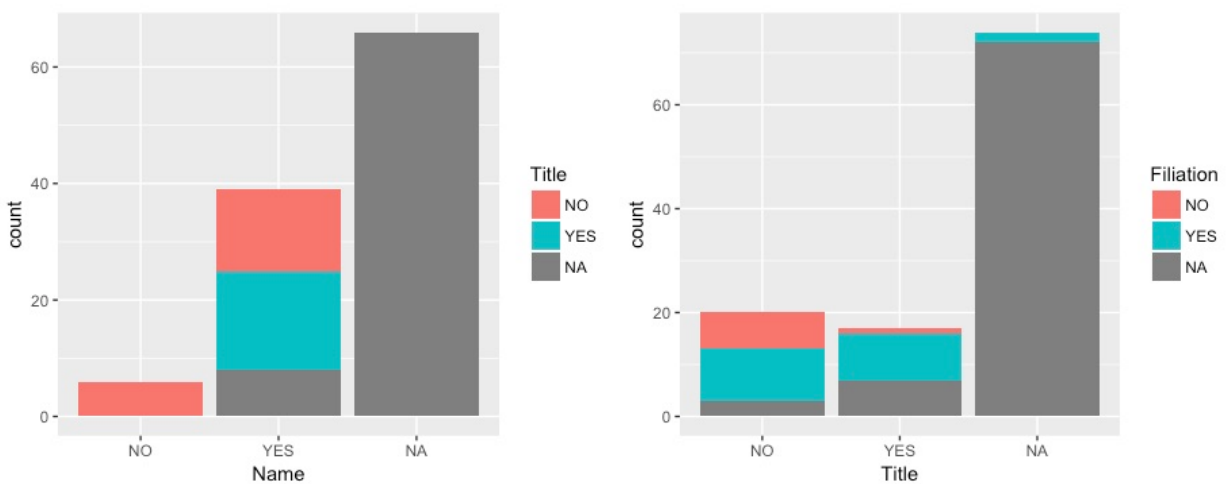


Fig. 4.47-4.48 Histograms illustrating the frequency of names and titles (left) and titles and filiations (right) on Ptah-Sokar-Osiris figures.

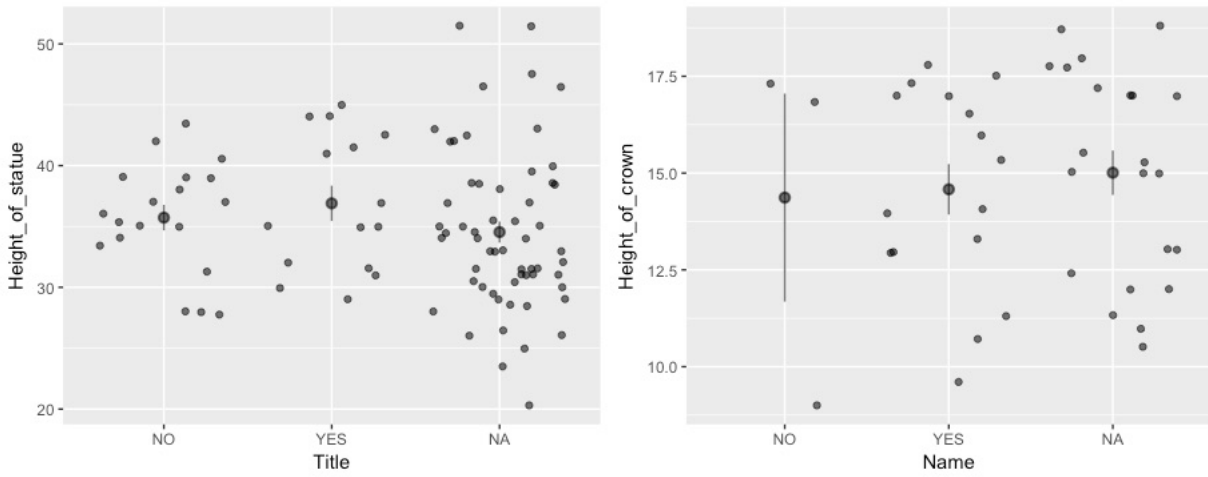


Fig. 4.49-4.50 Scatterplots assessing the correlation between the height of statues and crowns and the titles of the deceased.

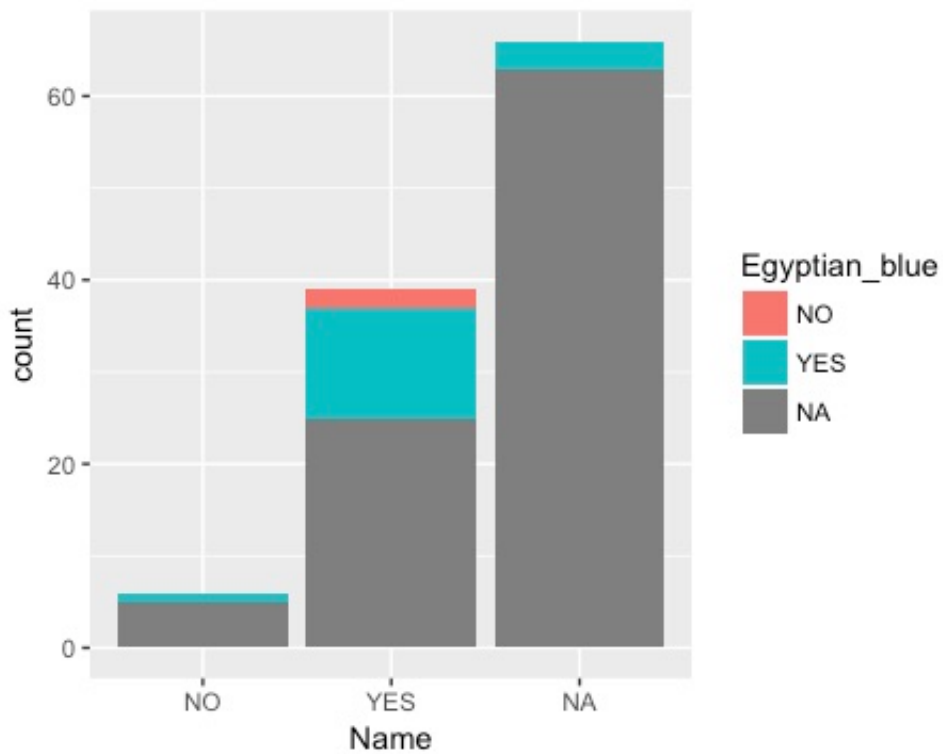


Fig. 4.51 Histogram illustrating the occurrence of Egyptian blue on Ptah-Sokar-Osiris statues that bear standardized as well as individualized inscriptions and have been analyzed with Visible Induced Luminescence (VIL).



Fig. 4.52 Detail of the lid of one of the shabti boxes of Ankhshepenwepet (MMA 25.3.207.1a,b) from Deir el-Bahari. Dynasty 25/26 (photo taken by the author with permission of The Metropolitan Museum of Art).



Fig. 4.53-4.54 Left: interior of the lid of one of the shabti boxes of Ankhshepenwepet (MMA 25.3.207.1a,b). Right: interior of one of the shabti boxes of Ankhshepenwepet (MMA 25.3.206.1a,b). From Deir el-Bahari. Dynasty 25/26 (photos taken by the author with permission of The Metropolitan Museum of Art).

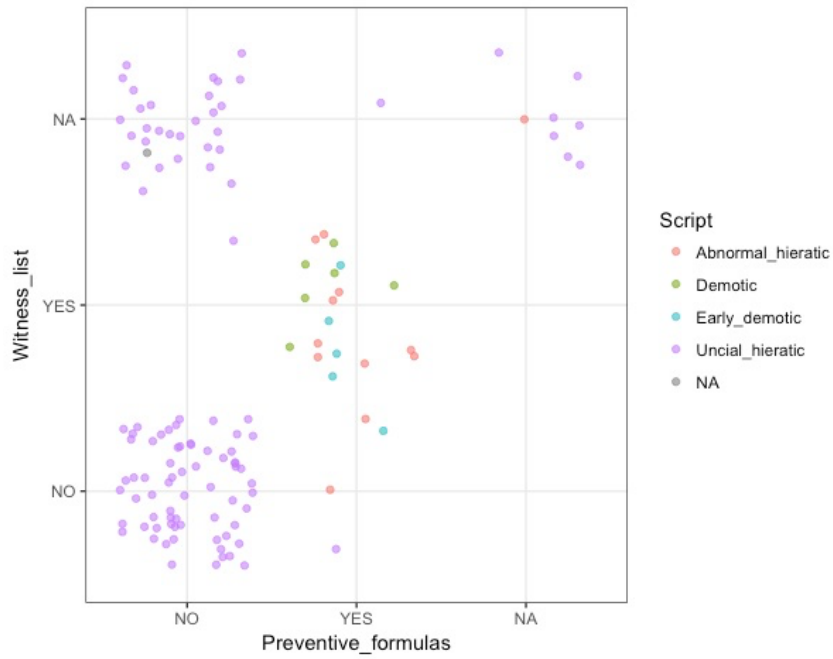


Fig. 5.1 Scatter plot illustrating the frequency of witness lists and preventive formulas in documents of private transactions dated to the New Kingdom and the 25th and 26th Dynasties.

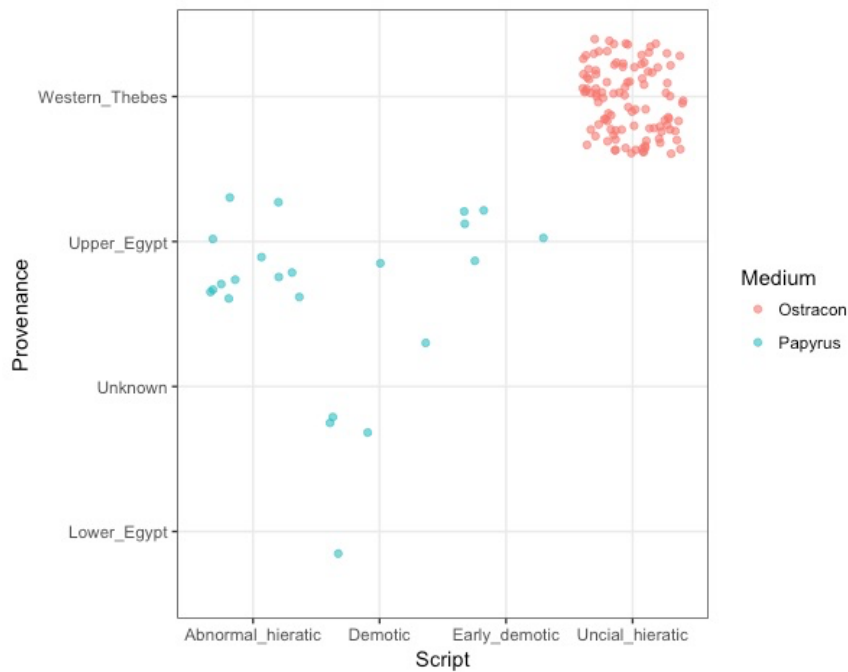


Fig. 5.2 Scatter plot illustrating the diachronic distribution of ostraca and papyri recording private transactions dated to the New Kingdom and the 25th and 26th Dynasties.

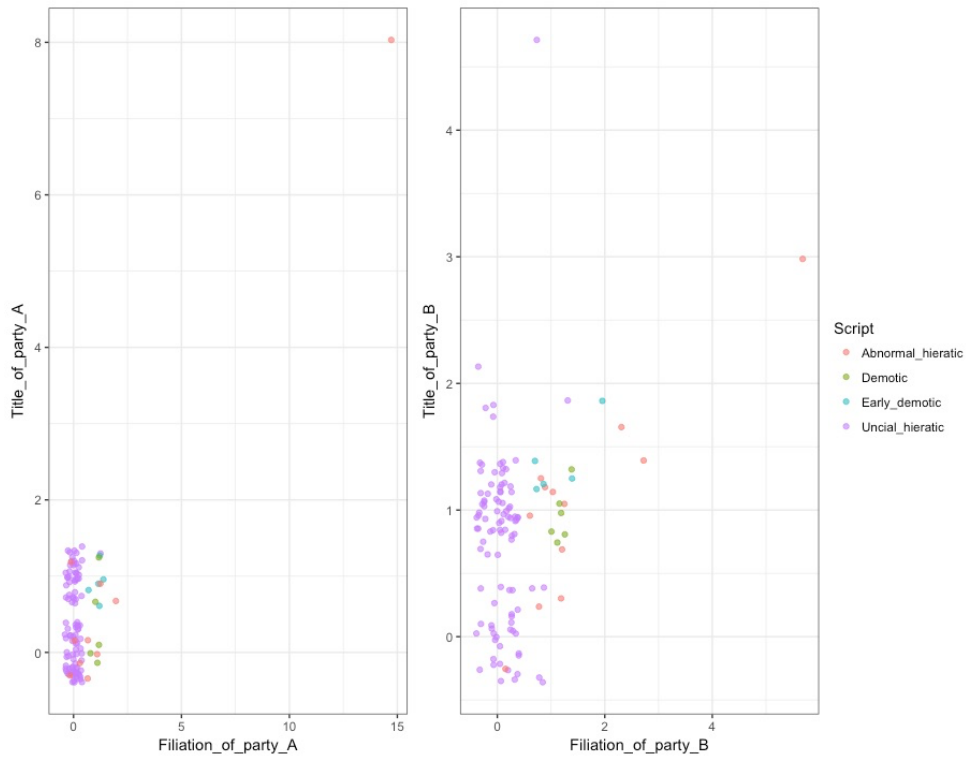


Fig. 5.3 Scatter plot illustrating the frequency of titles and filiations of Party A and Party B in documents of private transactions dated to the New Kingdom and the 25th and 26th Dynasties.

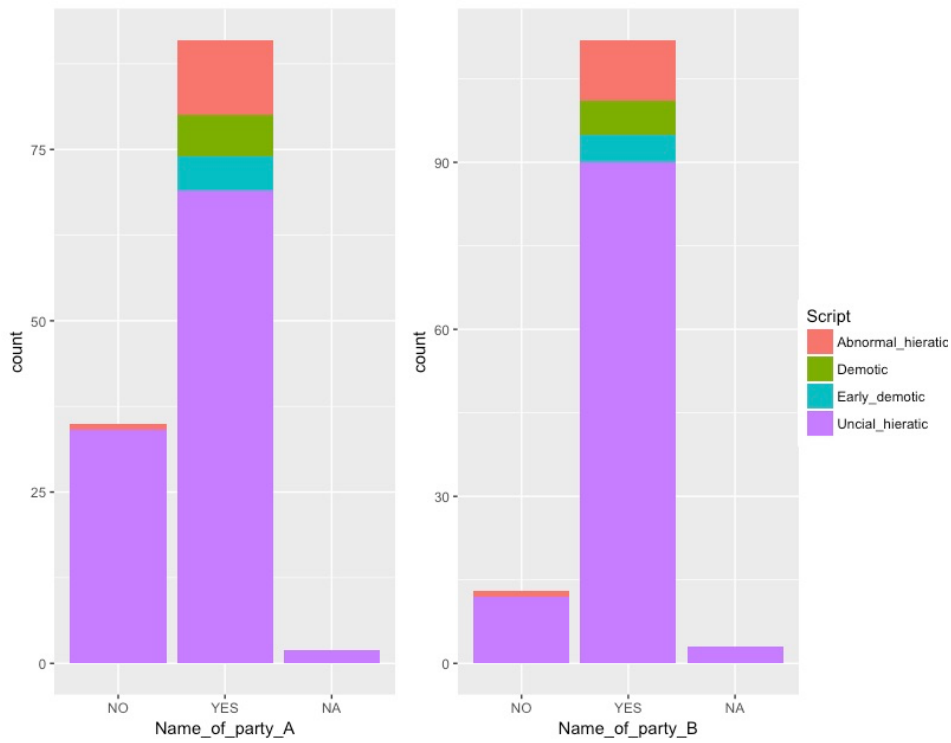


Fig. 5.4 Histograms illustrating the frequency of the names of Party A and Party B in documents of private transactions dated to the New Kingdom and the 25th and 26th Dynasties.

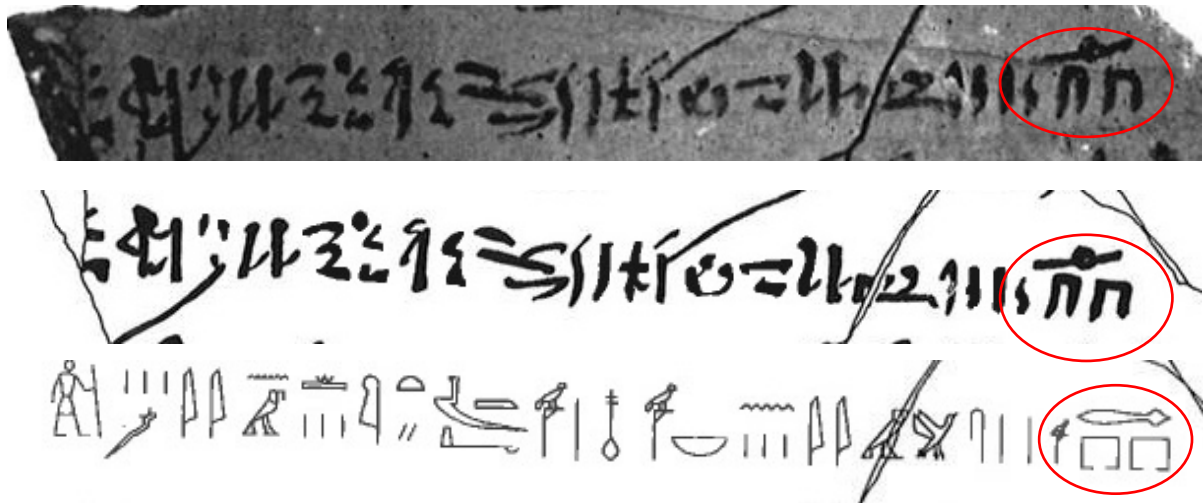


Fig. 5.5 Line 2 of O. DeM 10369 (verso): original, transcription and transliteration. The word for ‘pharaoh (*pr ꜥ3*)’ is in the red circle. Uncial hieratic, Dynasty 20. After Grandet (2017: 391).

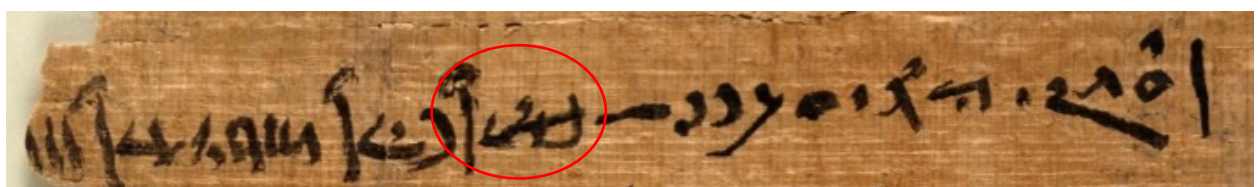


Fig. 5.6 Line 1 of P. Louvre E 7847. The word for ‘pharaoh (*pr ꜥ3*)’ is in the red circle. Abnormal hieratic, Dynasty 26. After Donker van Heel (2013: 8).

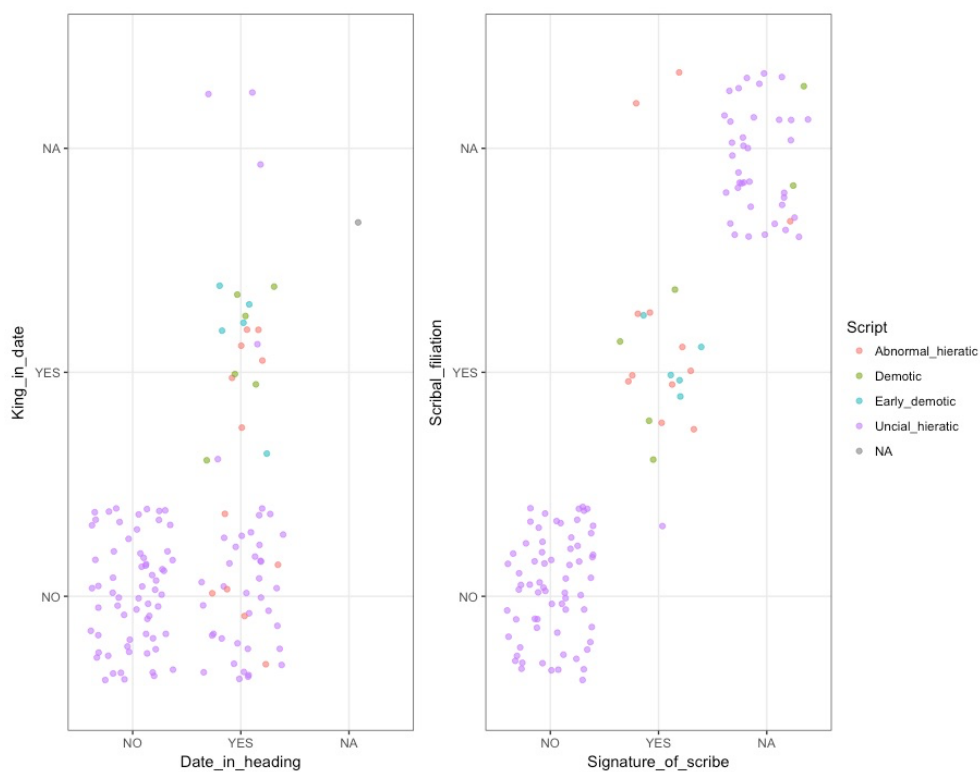


Fig. 5.7-5.8 Left: scatter plot illustrating the frequency of dates, with and without royal titulary, in documents of private transactions dated to the New Kingdom and the 25th and 26th Dynasties. Right: scatter plot illustrating the frequency of scribal signatures, with and without filiations, in documents of private transaction dated to the New Kingdom and the 25th and 26th Dynasties.

References

- Agut-Labordère, Damien. 2012. "La Vache et les policiers': pratique de l'investissement dans l'Égypte tardive." In *Transferts Culturels et droits dans le monde grec et hellénistique*, ed. Bernard Legras: 269-281. Paris: Éditions de la Sorbonne.
- _____. 2014. "The Saite Period: The Emergence of a Mediterranean Power." In *Ancient Egyptian Administration*, ed. Juan Carlos Moreno García: 965-1027. Leiden: Brill.
- Allam, Schafik. 1973. *Hieratische Ostraka und Papyri aus der Ramessidenzeit*. Tübingen: Selbstverl. d. Hrsg.
- Allen, Hamilton F. 1917. "A Chip of Wood, or Egyptian Mummy-Labels." *Art and Archaeology* 5 (1), 6-12.
- Allon, Niv. 2019. *Writing, Violence, and the Military: Images of Literacy in Eighteenth Dynasty Egypt (1550-1295 BCE)*. Oxford: Oxford University Press.
- Almásy-Martin, Adrienn. 2019. "Some remarks on bilingual mummy labels in the Louvre." In *New approaches in Demotic studies: Acts of the 13th International Conference of Demotic Studies*, ed. Franziska Naether: 15-38. Berlin; Boston: de Gruyter.
- Appadurai, Arjun. 1986. "Introduction: Commodities and the Politics of Value." In *The Social Life of Things: Commodities in Cultural Perspective*, ed. Arjun Appadurai: 3-63. Cambridge: Cambridge University Press.
- Arbuckle MacLeod, Caroline J. 2019. "Coffins and Sarcophagi." In *All Things Ancient Egypt: An Encyclopedia of the Ancient Egyptian World*, ed. Lisa Sabbahy: 92-96. Santa Barbara, CA: ABC-CLIO Press.
- _____ and Kathlyn M. Cooney. 2019. "The Layered Life of JE26204: The Construction and Reuse of the Coffins of Henuttawy." *Journal of Egyptian Archaeology* 105 (2): 285-296.

- Archidona Ramirez, Juan José. 2019. "Papyrus Louvre E 7860: a land lease from the reign of Apries." *Revue d'égyptologie* 69: 1-13.
- _____. 2020. "Papyrus Vatican 38595: A Lease of a Man from the North During the Reign of Py." *Bollettino dei Monumenti, Musei e Gallerie Pontificie* 36: 31-46.
- _____. Forthcoming. "The Dilemma of the Scribe N.N. son of Hor: What to Use in an Abnormal Hieratic Text, Buchschrift or Geschäftsschrift?." In *The Archive of the Theban Choachyte Petebaste Son of Peteamunip (Floruit 7th Century BCE): Abnormal Hieratic Papyrus Louvre E 3228 A-H*, ed. Koenraad Donker van Heel.
- Assmann, Jan. 2001. *The Search for God in Ancient Egypt*. Trans. David Lorton. London: Cornell University Press.
- _____. 2003. *The Mind of Egypt: History and Meaning in the Time of the Pharaohs*. Trans. Andrew Jenkins. Cambridge, MA; London: Harvard University Press.
- _____. 2004. "Theological Responses to Amarna." In *Egypt, Israel, and the Ancient Mediterranean World: Studies in Honor of Donald B. Redford*, ed. Gary N. Knoppers and Antoine Hirsch: 179-191. Leiden; Boston: Brill.
- Aston, David A. 2009. *Burial Assemblages of Dynasty 21-25*. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- Bács, Tamás A. 2015. "Some Aspects of Tomb Reuse during the Twentieth Dynasty." In *Joyful in Thebes: Egyptological Studies in Honor of Betsy M. Bryan*, ed. Richard Jasnow and Kathlyn M. Cooney: 1-9. Atlanta: Lockwood Press.
- Baines, John. 1987. "Practical Religion and Piety." *The Journal of Egyptian Archaeology* 73: 79-98.
- _____. 1990. "Restricted Knowledge, Hierarchy, and Decorum: Modern Perceptions and Ancient Institutions." *Journal of the American Research Center in Egypt* 27: 1-23.
- _____. 2007. *Visual and Written Culture in Ancient Egypt*. Oxford: Oxford University Press.

- _____ and Froot. 2011. "Piety, Change and Display in the New Kingdom." In *Ramesseide Studies in Honour of K. A. Kitchen*, ed. Mark Collier and Steven Snape: 1-17. Bolton: Rutherford Press.
- _____ and Peter Lacovara. 2002. "Burial and the Dead in Ancient Egyptian Society: Respect, Formalism, Neglect." *Journal of Social Archaeology* 2(1): 5-36.
- _____, Koenraad Donker van Heel and Hans-Werner Fischer-Elfert. 1998. "Abnormal Hieratic in Oxford: Two New Papyri." *Journal of Egyptian Archaeology* 84: 234-236.
- Bakry, Hassan S. K. 1967. "Psammetichus II and His Newly-Found Stela at Shellâl." *Oriens Antiquus* 6: 225-244.
- Bianchi, Robert S. 1998. "Symbols and Meanings." In *Gifts of the Nile: Ancient Egyptian Faience*, ed. Florence D. Friedman: 22-31. London: Thames and Hudson.
- Bierbrier, Morris L. 1975. *The Late New Kingdom in Egypt (c. 1300-664 B.C.): A Genealogical and Chronological Investigation*. Warminster, UK: Aris & Phillips.
- Blanton, Richard E. and Lane Fargher. 2008. *Collective Action in the Formation of Pre-Modern States*. New York: Springer.
- Bleiberg, Edward. 1988. "The Redistributive Economy in New Kingdom Egypt: An Examination of *B3kw(t)*." *Journal of the American Research Center in Egypt* 25: 157-168.
- _____. 1996. *The Official Gift in Ancient Egypt*. Norman: University of Oklahoma Press.
- Bothmer, Bernard V. 1960. *Egyptian Sculpture of the Late Period, 700 B.C. to A.D. 100*. New York: Arno Press.
- Broekman, Gerald P.F., Robert J. Demarée, and Olaf E. Kaper, eds. 2009. *The Libyan Period in Egypt: Historical and Cultural Studies into the 21st-24th Dynasties. Proceedings of a Conference at Leiden University, 25-27 October 2007*. Egyptologische Uitgaven 23. Leiden: Netherlands Instituut voor het Nabije Oosten.

- Bosse-Griffiths, Kate. 1978. "Some Egyptian Bead-work Faces in the Wellcome Collection at University College, Swansea." *Journal of Egyptian Archaeology* 64: 99-106.
- Botti, Giuseppe. 1958. *Le Casse di Mummie e i Sarcofagi da El Hibeh nel Museo Egizio di Firenze*. Firenze: L. S. Olschki.
- Bourdieu, Pierre. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.
- Braudel, Fernand. 1995. *The Mediterranean and the Mediterranean World in the Age of Philip II*. Trans. Siân Reynolds. Berkeley: University of California Press.
- Bresson, Alain. 2000. *La Cité Marchande*. Paris: Boccard.
- _____. 2013. "Capitalism and the Ancient Greek Economy." In *The Cambridge History of Capitalism*, ed. Larry Neal and Jeffrey G. Williamson: 43-74. Cambridge: Cambridge University Press.
- Buhl, Marie-Louise. 1959. "The Late Egyptian Anthropoid Stone Sarcophagi." PhD diss., University of Copenhagen.
- Buzon, Michele R. and Antonio Simonetti. 2013. "Strontium Isotope ($^{87}\text{Sr}/^{86}\text{Sr}$) Variability in the Nile Valley: Identifying Residential Mobility during Ancient Egyptian and Nubian Sociopolitical Changes in the New Kingdom and Napatan Periods." *American Journal of Physical Anthropology* 151: 1-9.
- _____, Stuart T. Smith and Antonio Simonetti. 2016. "Entanglement and the Formation of the Ancient Nubian Napatan State." *American Anthropologist* 118(2): 284-300.
- Cannata, Maria. 2009. "God's Seal-Bearers, Lector-Priests and Choachytes: Who's Who at Memphis and Hawara." In *Actes du IXeme congrès international des études démotiques*, ed. Ghislaine Widmer and Didier Devauchelle : 57-68. Cairo: Institut français d'archéologie orientale.

- Carballo, David M., ed. 2013. *Cooperation and Collective Action: Archaeological Perspectives*. Boulder: University Press of Colorado.
- Carr, Christopher. 1995. "Mortuary Practices: Their Social, Philosophical-Religious, Circumstantial, and Physical Determinants." *Journal of Archaeological Method and Theory* 2(2): 105-200.
- Carsten, Peust. 2004. "Der Vorfall des Rawer." In *Text zum Rechts- und Wirtschaftsleben*, ed. Bernd Janowski and Gernot Wilhelm: 218-219. Gütersloh: Gütersloher Verlagshaus.
- Carter, Tristan. 2007. "The Theatrics of Technology: Consuming Obsidian in the Early Cycladic Burial Area." In *Rethinking Craft Specialization in Complex Societies: Archaeological Analyses of the Social Meaning of Production*, ed. Zachary X. Hruby and Rowan K. Flad: 88-107. Arlington, VA: American Anthropological Association.
- Černý, Jaroslav. 1927. "Le culte d'Amenophis Ier chez les ouvriers de la nécropole thébaine." *Bulletin de l'institut français d'archéologie orientale* 27, 179-281.
- _____. 1935a. *Catalogue général des antiquités Égyptiennes du Musée du Caire. Tome II (nos 25501 à 25832)*. Cairo: Institut français d'archéologie orientale.
- _____. 1935b. *Catalogue des ostraca hiératiques non littéraires de Deir el-Médineh. Tome I (nos 1 à 113)*. Cairo: Institut français d'archéologie orientale.
- _____. 1951. *Catalogue des ostraca hiératiques non littéraires de Deir el-Médineh. Tome V (nos 340 à 456)*. Cairo: Institut français d'archéologie orientale.
- _____. 1970. *Catalogue des ostraca hiératiques non littéraires de Deir el-Médineh. Tome VII (nos 624 à 705)*. Cairo: Institut français d'archéologie orientale.
- _____. 1973. *A Community of Workmen at Thebes in the Ramesside Period*. Cairo: Institut français d'archéologie orientale.
- _____ and Alan H. Gardiner. 1957. *Hieratic Ostraca, Volume I*. Oxford, Griffith Institute: Oxford University Press.

- Chapman, Robert. 2003. *Archaeologies of Complexity*. London: Routledge.
- Chauveau, Michel. 2000. "La Première Mention du statère d'argent en Égypte." *Transeuphratène* 20: 134-143.
- Clanchy, Michael T. 1993. *From Memory to Written Record: England 1066-1307*. Oxford: Blackwell.
- Cooney, Kathlyn M. 2007. *The Cost of Death: Social and Economic Value of Ancient Egyptian Funerary Art in the Ramesside Period*. Leiden: Nederlands Instituut voor het Nabije Oosten.
- _____. 2011. "Changing Burial Practices at the End of the New Kingdom: Defensive Adaptations in Tomb Commissions, Coffin Commissions, Coffin Decoration, and Mummification." *Journal of the American Research Center in Egypt* 47: 3-44.
- _____. 2012. "Objectifying the Body: The Increased Value of Ancient Egyptian Mummy during the Socioeconomic Crisis of Dynasty 21." In *The Construction of Value in the Ancient World*, ed. John K. Papadopoulos and Gary Urton: 139-159. Los Angeles: Cotsen Institute of Archaeology Press.
- _____. 2015. "Placating the Dead: Evidence of Social Crisis in Three Texts from Western Thebes." In *Joyful in Thebes: Egyptological Studies in Honor of Betsy M. Bryan*, ed. Richard Jasnow and Kathlyn M. Cooney: 79-89. Material and Visual Culture of Ancient Egypt 1. Atlanta: Lockwood Press.
- _____. 2017. "Coffin Reuse: Ritual Materialism in the Context of Scarcity." In *Proceedings: First Vatican Coffin Conference. 19-22 June 2013. Volume I*, ed. Alessia Amenta and H elene Guichard: 101-112. Citt  del Vaticano: Edizioni Musei Vaticani.
- _____. 2018a. "Coffin Reuse in Dynasty 21: A Case Study of the Coffins in the British Museum." In *Ancient Egyptian Coffins: Craft Traditions and Functionality*, ed. John H. Taylor and Marie Vandenberg: 295-322. Leuven: Peeters.

- _____. 2018b. "The End of the New Kingdom in Egypt: How Ancient Egyptian Funerary Materials Can Help Us Understand Society in Crisis." In *The Ramesside Period in Egypt: Studies into Cultural and Historical Processes of the 19th and 20th Dynasties. Proceedings of the International Symposium Held in Heidelberg, 5th to 7th June 2015*, ed. Sabine Kubisch and Ute Rummel: 63-87. Deutsches Archäologisches Institut Abteilung Kairo 41. Berlin: de Gruyter.
- _____. 2019. "Patterns of Coffin Reuse from Dynasties 19 to 22." In *Ancient Egyptian Coffins: Past – Present – Future*, ed. Helen Strudwick and Julie Dawson: 96-108. Oxford: Oxbow Books.
- _____. 2021. *Coffin Commerce: How Funerary Materiality Formed Ancient Egypt*. Cambridge: Cambridge University Press.
- _____. Forthcoming a. "Coffins as Tombs and Tombs as Coffins: Style Development, Style Choice, Innovation, and the Display of Social Power." In *Proceedings of the 2016 Theban Workshop on Tombs and Tomb Painting, Johns Hopkins University*, ed. Betsy Bryan.
- _____. Forthcoming b. "Egypt under the Ramesside Dynasty." In *Oxford History of Ancient Egypt*, ed. Nadine Moeller, Daniel T. Potts and Karen Radner. Oxford: Oxford University Press.
- Corcoran, Lorelei H. 1995. *Portrait Mummies from Roman Egypt (I-IV centuries A.D.), with a Catalogue of Portrait Mummies in Egyptian Museums*. Chicago: Oriental Institute of the University of Chicago.
- Crum, Walter E and Georg Steindorff. 1912. *Koptische Rechtsurkunden des Achten Jahrhunderts aus Djême (Theben)*. Leipzig: J. C. Hinrichs.

- Crumley, Carole L. 1995. "Heterarchy and the Analysis of Complex Society." In *Heterarchy and the Analysis of Complex Societies*, ed. Carole Crumley, Robert M. Ehrenreich and Janet E. Levy: 1-5. Arlington, VA: American Anthropological Association.
- Cruz-Uribe, Eugene. 1985. *Saite and Persian Demotic cattle documents: a study in legal forms and principles in ancient Egypt*. American Studies in Papyrology 26. Chico, CA: Scholars Press.
- D'Amicone, Elvira. 2009. *Sarcófagos del Antiguo Egipto: Jardineros de Amón en al Valle de las Reinas*. Barcelona: Fundació Arqueològica Clos.
- _____. 2011. *Moda y Belleza en el Antiguo Egipto*. Barcelona: Fundació Arqueològica Clos.
- _____ and Elena Fontanella. 2007. *Nefer: La Donna nell'Antico Egitto*. Milano: F. Motta.
- D'Alfonso, Lorenzo. 2020. "An Age of Experimentation: New Thoughts on the Multiple Outcomes Following the Fall of the Hittite Empire after the Results of the Excavations at Niğde-Kinik Höyük (South Cappadocia)." In *Anatolia Between the 13th and the 12th Century BCE*, ed. Stevano de Martino and Elena Devecchi: 95-116. Eothen 23. Firenze: LoGisma Editore.
- Dallibor, Klaus. 2005. *Taharqo – Pharao aus Kusch: ein Beitrag zur Geschichte und Kultur der 25. Dynastie*. Achet A6. Berlin: Achet.
- Darnell, John C. and Colleen Manassa. 2007. *Tutankhamun's Armies: Battle and Conquest during Ancient Egypt's Late Eighteenth Dynasty*. Hoboken, N.J.: John Wiley & Sons.
- Davies, Benedict G. 2018. *Life within the Five Walls: A Handbook to Deir El-Medina*. Wallasey: Abercromby Press.
- Davies, Norman de Garis. 1902. *The Rock Tombs of Deir el-Gebrâwi: Part I – Tomb of Aba and Smaller Tombs of the Southern Group*. Archaeological Survey of Egypt 11. London: Egypt Exploration Fund.

- Dawson, Julie, Jennifer Marchant, Eleanor von Aderkas, Caroline R. Cartwright and Rebecca Stacey. 2016. "Egyptian Coffins. Materials, Construction and Decoration." In *Death on the Nile*, ed. Helen Strudwick and Julie Dawson: 75-111. London: GILES.
- Demarée, Robert J. 2002. *Ramesside Ostraca*. London: The British Museum Press.
- Depauw, Mark and Mark Smith. 2004. "Visions of Ecstasy: Cultic Revelry before the Goddess Ai / Nehemanit. Ostraca Faculteit Letteren (K.U.Leuven) dem. 1-2." In *Res Severa Verum Gaudium: Festschrift für Karl-Theodor Zauzich zum 65. Geburtstag am 8. Juni 2004*, ed. Karl-Theodor Zauzich and Friedhelm Hoffmann: 67-93. Leuven: Peeters.
- di Renzo Villata, Maria Gigliola. 2009. "Per una Storia del Notariato nell'Italia Centro-Settentrionale." In *Handbuch zur Geschichte des Notariats der Europäischen Traditionen*, ed. Mathias Schmoeckel and Werner Schubert: 15-64. Baden-Baden: Nomos Verlagsgesellschaft.
- Dobres, Marcia-Anne and John E. Robb, eds. 2000. *Agency in Archaeology*. New York: Routledge.
- Donker van Heel, Koenraad. 1992. "Use and Meaning of the Egyptian Term wAH-mw." In *Village Voices: Proceedings of the Symposium 'Texts from Deir el-Medîna and Their Interpretation,' Leiden, May 31 - June 1, 1991*, ed. Robert J. Demarée and Arno Egberts: 19-30. Leiden: Centre of Non-Western Studies, Leiden University.
- _____. 1995. "Abnormal Hieratic and Early Demotic Texts Collected by the Theban Choachytes in the Reign of Amasis: Papyri from the Louvre Eisenlohr Lot." PhD diss., Leiden University.
- _____. 1997. "Papyrus Louvre E 7852: A Land Lease from the Reign of Taharka." *Revue d'égyptologie* 48: 81-93.

- _____. 1998. "Papyrus Louvre E 7856 verso and recto: Leasing Land in the Reign of Taharka." *Revue d'égyptologie* 49: 91-105.
- _____. 1999. Papyrus Louvre E 7851 Recto and Verso: Two More Land Leases from The Reign of Taharka." *Revue d'égyptologie* 50: 135-147.
- _____ and Joost Golverdingen. 2013. *An Abnormal Hieratic Reading Book Containing Texts from the British Museum (London), the Brooklyn Museum (New York), the Egyptian Museum (Cairo), the Louvre (Paris), the Museo Egizio (Turin), the Nationalbibliothek (Vienna), Queen's College (Oxford) and the Rijksmuseum van Oudheden (Leiden). Fascicle II: Papyri from Paris*. Leiden: Leids Papyrologisch Instituut.
- _____. 2014. *Mrs. Tsenhor: A Female Entrepreneur in Ancient Egypt*. Cairo: The American University in Cairo Press.
- _____. 2015. "P. Louvre E 3228: Some Late Cursive (Abnormal) Hieratic Gems from the Louvre." *Journal of Egyptian Archaeology* 101: 320-325.
- _____. 2017-2018. "Delta Donations for Doorkeepers, Why?" *Journal of the Society for the Study of Egyptian Antiquities* 44: 205-218.
- _____. 2018. "Some Abnormal Hieratic Trifles." In *Hieratic, Demotic and Greek Studies and Text Editions: Of Making Many Books There is No End*, ed. Koenraad Donker van Heel, Francisca A. J. Hoogendijk and Cary J. Martin: 9-14. Leiden; Boston: Brill.
- _____. 2019. "Choachytes Lower Middle Class? No Way José!" In *En Détail- Philologie und Archäologie im Diskurs. Festschrift für Hans-Werner Fischer-Elfert*, ed. Marc Brose, Peter Dils, Franziska Naether, Lutz Popko and Dietrich Raue: 297-307. Berlin; Boston: De Gruyter.
- _____. 2020. "Some Issues in and Perhaps a New Methodology for Abnormal Hieratic." In *The Oxford Handbook of Egyptian Epigraphy and Paleography*, ed. Vanessa Davies and Dimitri Laboury: 590-604. New York: Oxford University Press.

- _____. 2021. *Dealing with the Dead in Ancient Egypt: The Funerary Business of Petebaste*. Cairo: The American University in Cairo Press.
- _____ and Cary J. Martin. 2021. "Dead People are Money! The Abnormal Hieratic Papyrus Louvre N 2432 Revisited, and a Note on the Introduction of Demotic in Sixth Century BCE Thebes." In *Text Editions of (Abnormal) Hieratic, Demotic, Greek, Latin and Coptic Papyri and Ostraca: Some People Love Their Friends Even When They Are Far Away. Festschrift in Honour of Francisca A.J. Hoogendijk*, ed. Joanne Vera Stolk and Guus A.J.C. van Loon. Leiden; Boston: Brill.
- _____, ed. Forthcoming. *The Archive of the Theban Choachyte Petebaste Son of Peteamunip (Floruit 7th Century BCE): Abnormal Hieratic Papyrus Louvre E 3228 A-H*.
- Dorman, Peter F. 1991. *The Tombs of Senenmut: The Architecture and Decoration of Tombs 71 and 353*. Publications of the Metropolitan Museum of Art Egyptian Expedition 24. New York: Metropolitan Museum of Art.
- Dunand, Françoise and Christiane Zivie-Coche. 2002. *Gods and Men in Egypt: 3000 BCE to 395 CE*. Trans. David Lorton. Ithaca, NY; London: Cornell University Press.
- Eichler, Selke. 1990. "Untersuchungen zu den Wasserträgern von Deir el-Medineh I." *Studien zur Altägyptischen Kultur* 17: 135-175.
- Edwards, Iorwerth E. S. 1971. "Bill of Sale for a Set of Ushabtis." *Journal of Egyptian Archaeology* 57: 120-124.
- Effland, Ute, Julia Budka and Andreas Effland. 2010. "Studien zum Osiriskult in Umm el-Qaab/Abydos: Ein Vorbericht." *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 66: 19-91.
- Elias, Paul J. 1993. "Coffin Inscription in Egypt after the New Kingdom: A Study of Text Production and Use in Elite Mortuary Preparation." PhD diss., University of Chicago.

- Endesfelder, Erika. 1967. "Drei Neuägyptische Hieratische Ostraka." *Forschungen und Berichte [Staatliche Museen zu Berlin]* 8: 65-69.
- Eschenbrenner-Diemer, Gersande. 2017. "From the Workshop to the Grave: The Case of Wooden Funerary Models." In *Company of Images: Modelling the Imaginary World of Middle Kingdom Egypt (2000-1500 BC). Proceedings of the International Conference of the EPOCHS Project Held 18th-20th September 2014 at UCL, London*, ed. Gianluca Miniaci, Marilina Betrò and Stephen Quirke: 133-191. Leuven: Peeters.
- Evans, Robert K. 1978. "Early Craft Specialization: An Example for the Balkan Chalcolithic." In *Social Archaeology: Beyond Subsistence and Dating*, ed. Charles L. Redman, Mary Jane Berman, Edward V. Curtin, William T. Langhorne, Jr., Nina M. Versaggi and Jeffery C. Wanser: 113-129. New York: Academic Press.
- Eyre, Christopher. 2011. "Patronage, Power, and Corruption in Pharaonic Egypt." *International Journal of Public Administration* 34(11): 701-711.
- _____. 2013. *The Use of Documents in Pharaonic Egypt*. Oxford: Oxford University Press.
- Faulseit, Ronald K. 2016. "Collapse, Resilience, and Transformation in Complex Societies: Modeling Trends and Understanding Diversity." In *Beyond Collapse: Archaeological Perspectives on Resilience, Revitalization, and Transformation in Complex Societies*, ed. Ronald K. Faulseit: 3-26. Carbondale, IL: Southern Illinois University Press.
- Fazzini, Richard A. 1988. *Egypt Dynasty XXII-XXV*. Iconography of Religions 16, Volume 10. Leiden: Brill.
- Finley, Moses I. 1999. *The Ancient Economy*. Berkeley: University of California Press.
- Flad, Rowan K. 2012. "Bronze, Jade, Gold, and Ivory: Valuable Objects in Ancient Sichuan." In *The Construction of Value in the Ancient World*, ed. John Papadopoulos and Gary Urton: 306-335. Los Angeles: Cotsen Institute of Archaeology Press.

- Gabler, Kathrin. 2018. *Who's Who in Deir el-Medina: Untersuchungen zur Organisation, Prosopographie und Entwicklung des Versorgungspersonals für die Arbeitersiedlung und das Tal der Könige*. Egyptologische Uitgaven 31. Leuven: Peeters.
- Gardner, Ernest A. 1888. Naukratis. Part II. Memoirs of the Egypt Exploration Fund 6. London: Trübner & Co.
- Garstang, John. 1901. *El Arábah: A Cemetery of the Middle Kingdom; Survey of the Old Kingdom Temenos; Graffiti from the Temple of Sety*. London: B. Quaritch.
- Gelderblom, Oscar. 2013. *Cities of Commerce: The Institutional Foundation of International Trade in the Low Countries, 1250-1650*. Princeton: Princeton University Press.
- Gero, Joan M. and Margaret W. Conkey. 1991. *Engendering Archaeology: Women and Prehistory*. Oxford: Blackwell.
- Giddens, Anthony. 1984. *The Constitution of Society: Outline of the Theory of Structuration*. Cambridge, MA: Polity Press.
- Goedicke, Hans and Edward F. Wente. 1962. *Ostraka Michaelides*. Wiesbaden: Harrassowitz.
- Goffman, Erving. 1966. *Behavior in Public Spaces: Notes on the Social Organization of Gatherings*. New York: Free Press.
- Goldwasser, Orly. 1991. "An Egyptian Scribe from Lachish and the Hieratic Tradition of the Hebrew Kingdoms." *Tel Aviv* 18: 248-253.
- _____. 2006. Canaanites Reading Hieroglyphs. Part I – Horus is Hathor? Part II – The Invention of the Alphabet in Sinai." *Ägypten und Levante* 9: 121-160.
- _____. 2010. "How the Alphabet was Born from Hieroglyphs." *Biblical Archaeology Review* 36/2: 38-51.
- _____. 2012. The Miners Who Invented the Alphabet – A Response." *Journal of Ancient Egyptian Interconnections* 4/3: 9-22.

- Grandet, Pierre. 2000. *Catalogue des ostraca hiératiques non littéraires de Deir el Médineh VIII* (Nos. 706-830). Documents de fouilles de l'Institut français d'archéologie orientale 39. Cairo: Institut français d'archéologie orientale.
- _____. 2017. *Catalogue des ostraca hiératiques non littéraires de Deir el Médineh XII* (Nos. 10276-10405). Documents de fouilles de l'Institut français d'archéologie orientale 50. Cairo: Institut français d'archéologie orientale.
- Van Gompel, Steffie and Petra Hogenboom. 2018. "P. Louvre E 7859: An Abnormal Hieratic Challenge." In *Hieratic, Demotic and Greek Studies and Text Editions: Of Making Many Books there Is No End. Festschrift in Honour of Sven P. Vleeming*, ed. Koenraad Donker van Heel, Francisca A. J. Hoogendijk and Cary J. Martin: 115-122. *Papyrologica Lugduno-Batava* 34. Leiden; Boston: Brill.
- Gosford, Kate. 2014. "Three Burial Assemblages of the Saite Period from Saqqara." In *Thebes in the First Millennium BC*, ed. Elena Pischikova, Julia Budka and Kenneth Griffin: 529-546. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Gozzoli, Roberto B. 2006. *The Writing of History in Ancient Egypt during the First Millennium BC (ca. 1070-180): Trends and Perspectives*. London: Golden House Publications.
- Graeber, David. 2001. *Toward an Anthropological Theory of Value: The False Coin of Our Own Dreams*. New York: Palgrave.
- Greif, Avner. 2006. *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade*. Cambridge: Cambridge University Press.
- Griffith, Francis L. 1972. *Catalogue of the Demotic Papyri in the John Rylands Library, Manchester, with Facsimiles and Complete Translations*. Hildesheim; New York: G. Olms.
- Grimal, Nicolas. 1997. *A History of Ancient Egypt*. Oxford: Blackwell.

- Guzzon, Edoardo. 2017. "The Wooden Coffins of the Late Third Intermediate Period and Late Period Found by Schiaparelli in the Valley of the Queens (QV 43 and QV 44)." In *Proceedings: First Vatican Coffin Conference. 19-22 June 2013. Volume II*, ed. Alessia Amenta and H elene Guichard: 191-197. Citt a del Vaticano: Edizioni Musei Vaticani.
- _____. 2018. "Examining the Coffins from the Collective Tomb Found by Ernesto Schiaparelli in the Valley of the Queens: an Essay on Epigraphic and Stylistic 'Clustered Features' as Evidence for Workshops." In *Ancient Egyptian Coffins: Craft Tradition and Functionality*, ed. John H. Taylor and Marie Vandenberg: 337-347. Leuven: Peeters.
- Hagen, Fredrik. 2018. "Archives in Ancient Egypt, 2500-1000 BCE." In *Manuscripts and Archives: Comparative Views on Record-Keeping*, ed. Alessandro Bausi, Christian Brockmann, Michael Friedrich and Sadine Kienitz: 71-170. Berlin; Boston: De Gruyter.
- Haring, Ben J. J. 1997. *Divine Households: Administrative and Economic Aspects of the New Kingdom Royal Memorial Temples in Western Thebes*. Egyptologische Uitgaven 12. Leiden: Nederlands Instituut Voor Het Nabije Oosten.
- _____. 2003. "From Oral Practice to Written Record in Ramesside Deir el-Medina." *Journal of the Economic and Social History of the Orient* 46 (3): 249-272.
- _____. 2013. "The Rising Power of the House of Amun in the New Kingdom." In *Ancient Egyptian Administration*, ed. Juan Carlos Moreno Garc a: 607-637. Leiden: Brill.
- _____. 2018. *From Single Sign to Pseudo-Script: An Ancient Egyptian System of Workmen's Identity Marks*. Culture and History of the Ancient Near East 93. Leiden; Boston: Brill.
- Hatton, Gareth D., Andrew J. Shortland and Michael S. Tite. 2008. "The Production Technology of Egyptian Blue and Green Frits from Second Millennium BC Egypt and Mesopotamia." *Journal of Archaeological Science* 35: 1591-1604.

- Hayes, Laurie 1995. "Mummy Labels: How the Dead Were Identified." *Ancient: A Review of Antiquity* 45: 10-11.
- Helck, Wolfgang. 1963. *Materialien zur Wirtschaftsgeschichte des Neuen Reiches (Teil IV): III. Eigentum und Besitz an verschiedenen Dingen des täglichen Lebens. Kapitel A-O*. Akademie der Wissenschaften und der Literatur (Mainz): Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse 1963 (2). Mainz; Wiesbaden: Akademie der Wissenschaften und der Literatur; Franz Steiner.
- _____. 1984a. "Zum Brooklyner Orakelpapyrus." In *Grammata Demotika: Festschrift für Erich Lüdeckens zum 15. Juni 1983*, ed. Heinz-J. Thissen and Karl-Th. Zauzich: 71-74. Würzburg: Gisela Zauzich.
- _____. 1984b. "Eine Zahlungsquittung." *Zeitschrift für Ägyptische Sprache und Altertumskunde* 111: 6-10.
- _____. 2002. *Die datierten und datierbaren Ostraka, Papyri und Graffiti von Deir el-Medineh*. Wiesbaden: Harrassowitz.
- Helmbold-Doyé, Jana. 2019. "Tomb Architecture and Burial Custom of the Elite during the Meroitic Phase in the Kingdom of Kush." In *Handbook of Ancient Nubia*, ed. Dietrich Raue: 783-809. Berlin; Boston: De Gruyter.
- Helms, Mary W. 1993. *Craft and the Kingly Ideal: Art, Trade and Power*. Austin: University of Texas Press.
- Hill, Marsha. 2008. "Heights of Artistry: the Third Intermediate Period (ca. 1070-664 B.C.)." In *Gifts for the Gods: Images from Egyptian Temples*, ed. Marsha Hill and Deborah Schorsch: 51-63. London; New Haven: Yale University Press.
- _____. 2016. "Tribal Dynamics, Child Gods, Festivals, and the Faraway Goddess: Mingling in the Egyptian Delta in the Third Intermediate Period." In *Assyria to Iberia: Art and*

- Culture in the Iron Age*, ed. Joan Aruz and Michael J. Seymour: 154-167. New York: The Metropolitan Museum of Art.
- _____ and Michael J. Seymour. Forthcoming. "Tracking Necho's Lion." In planned festschrift.
- Hogarth, David G., Campbell C. Edgar and Clement Gutch. 1899. "Excavations at Naukratis." *The Annual of the British School at Athens* 5: 26-97.
- Hogarth, David G., Hilda L. Lorimer and Campbell C. Edgar. 1905. "Naukratis 1903." *Journal of Hellenistic Studies* 25: 105-136.
- Holling, Crawford S. and Lance H. Gunderson. 2002. "Resilience and Adaptive Cycles." In *Panarchy: Understanding Transformations in Human and Natural Systems*, ed. Lance H. Gunderson and Crawford S. Holling: 63-102. Washington D.C.: Island Press.
- Horden, Peregrine and Nicholas Purcell. 2000. *The Corrupting Sea: a Study of Mediterranean History*. Oxford: Blackwell.
- Hruby, Zachary X. and Rowan K. Flad. 2007. "'Specialized' Production in Archaeological Contexts: Rethinking Specialization, the Social Value of Products, and the Practice of Production." In *Rethinking Craft Specialization in Complex Societies: Archaeological Analyses of the Social Meaning of Production*, ed. Zachary X. Hruby and Rowan K. Flad: 1-19. Arlington, VA: American Anthropological Association.
- Ikram, Salima. 2003. *Death and Burial in Ancient Egypt*. Harlow: Longman.
- Inomata, Takeshi. 2001. "The Power and Ideology of Artistic Creation: Elite Craft Specialists in Classic Maya Society." *Current Anthropology* 42(2): 321-350.
- Jansen-Winkel, Karl. 2000. "Die Fremdherrschaften in Ägypten im 1. Jahrtausend v. Chr." *Orientalia* 69: 1-20.
- Janssen, Jac J. 1975. "Prolegomena to the Study of Egypt's Economic History during the New Kingdom." *Studien zur Altägyptischen Kultur* 3: 127-185.

- _____. 1982. "Gift-Giving in Ancient Egypt as an Economic Feature." *Journal of Egyptian Archaeology* 68: 253-268.
- _____. 2011. "Three Mysterious Ostraca." In *Ramesside Studies in Honour of K. A. Kitchen*, ed. Mark Collier and Steven Snape: 237-282. Bolton: Rutherford.
- Jasnow, Richard. 2010-2011. "'As for Those Who Have Called Me Evil, Mut Will Call Them Evil': Orgiastic Cultic Behavior and Its Critics in Ancient Egypt' (PSI Inv. [prov.] D 114a + PSI Inv. 3056 Verso)." *Enchoria* 32: 9-53.
- Jongman, Willem M. 2007. "Re-Constructing the Roman Economy." In *The Cambridge Economic History of the Greco-Roman World*, ed. Walter Scheidel, Ian Morris and Richard P. Saller: 75-100. Cambridge: Cambridge University Press.
- Joyce, Arthur A. 2010. *Mixtecs, Zapotecs, and Chatinos: Ancient Peoples of Southern Mexico*. West Sussex, UK: John Wiley and Sons.
- _____, L. Arnaud Bustamante and Mike N. Levine. 2001. "Commoner Power: A Case Study for the Classic Period Collapse on the Oaxaca Coast." *Journal of Archaeological Method and Theory* 8(4):343-385.
- Jursa, Michael and Juan Carlos Moreno Garcia. 2015. "The Ancient Near East and Egypt." In *Fiscal Regimes and the Political Economy of Premodern States*, ed. Andrew Monson and Walter Scheidel: 115-65. Cambridge, UK: Cambridge University Press.
- Kahl, Jochem. 2010. "Archaism." In *UCLA Encyclopedia of Egyptology, Los Angeles*, ed. Willeke Wendrich
<http://digital2.library.ucla.edu/viewItem.do?ark=21198/zz0025qh2v>.
- Kemp, Barry J. 2006. *Ancient Egypt: Anatomy of a Civilization*. London: Routledge.
- Killen, Geoffrey. 2017. *Ancient Egyptian Furniture*. Oxford; Philadelphia: Oxbow Books.
- Kitchen, Kenneth A. 1980. *Ramesside Inscriptions III*. Oxford: Blackwell.
- _____. 1983a. *Ramesside Inscriptions V*. Oxford: Blackwell.

- _____. 1983b. *Ramesside Inscriptions VI*. Oxford: Blackwell.
- _____. 1989. *Ramesside Inscriptions VII*. Oxford: Blackwell.
- _____. 2003. *Ramesside Inscriptions IV*. Oxford: Blackwell.
- _____. 2004. *The Third Intermediate Period in Egypt (1100-650 BC)*. Oxford: Oxbow Books.
- Koenig, Yvan. 1997. *Les ostraca hiératiques inédits de la Bibliothèque nationale et universitaire de Strasbourg*. Documents de fouilles de l'Institut français d'archéologie orientale 33. Cairo: Institut français d'archéologie orientale.
- Kohring, Sheila. 2011. "Social Complexity as a Multi-Scalar Concept: Pottery Technologies, 'Communities of Practice' and the Bell Beaker Phenomenon." *Norwegian Archaeological Review* 44(2): 145-163.
- _____ and Stephanie Wynne-Johns, eds. 2007. *Socializing Complexity: Structure, Integration and Power in the Past*. Oxford: Oxbow Books.
- Koons, Michele L. and Caroline J. Arbuckle Macleod. 2021. *The Egyptian Mummies and Coffins of the Denver Museum of Nature & Science*. Louisville: University Press of Colorado.
- Kotháy, Katalin A. 2013. "Categorisation, Classification, and Social Reality: Administrative Control and Interaction with the Population." In *Ancient Egyptian Administration*, ed. Juan Carlos Moreno García: 479-520. Leiden: Brill.
- Lapp, Günther. 1997. *The Papyrus of Nu*. Catalogue of the Books of the Dead in the British Museum 1. London: British Museum.
- Leahy, Anthony. 1985. "The Libyan Period in Egypt: An Essay in Interpretation." *Libyan Studies* 16: 51-65.
- Leclant, Jean. 1965. *Recherches sur les monuments thébains de la XXVe dynastie dite éthiopienne*. Bibliothèque d'étude 36. Cairo: Impr. de l'institut français d'archéologie orientale.

- Lee, Lorna and Stephen Quirke 2000. "Painting Materials." In *Ancient Egyptian Materials and Technology*, ed. Paul T. Nicholson and Ian Shaw: 104-120. Cambridge, U.K.: Cambridge University Press.
- Lemonnier, Pierre. 1993. *Technological Choices: Transformation in Material Culture since the Neolithic*. London: Routledge.
- Lemos, Rennan. 2017. "Material Culture and Social Interactions in New Kingdom non-Elite Cemeteries." In *Current Research in Egyptology 2016: Proceedings of the Seventeenth Annual Symposium, Jagiellonian University, Krakow, Poland, 4-7 May 2016*, ed. Julia M. Chyla, Joanna Dębowska-Ludwin, Karolina Rosińska-Balik and Carl Walsh: 121-135. Oxford: Oxbow Books.
- Lesko, Leonard H. 1994. *Pharaoh's Workers: The Villagers of Deir el-Medina*. Ithaca; London: Cornell University Press.
- Lichtheim, Miriam. 1980. *Ancient Egyptian Literature: A Book of Readings*. Volume III. Berkeley; Los Angeles; London: University of California Press.
- Lloyd, Alan B. 1983. "The Late Period, 664-323 BC." In *Ancient Egypt: A Social History*, ed. Bruce G. Trigger: 279-348. Cambridge, UK: Cambridge University Press.
- López, Jesús. 1984. *Ostraca Ieratici N. 57450-57568. Tabelle Lignee N. 58001-58007 (fasc. 4)*. Milano: Cisalpino-La Goliardica.
- Mandell, Alice. 2015. "Scribalism and Diplomacy at the Crossroads of Cuneiform Culture: The Sociolinguistics of Caano-Akkadian." PhD diss., University of California, Los Angeles.
- Manning, Joseph G. 2018. *The Open Sea: The Economic Life of the Ancient Mediterranean World from the Iron Age to the Rise of Rome*. Princeton, NJ: Princeton University Press.

- Mariette, Auguste. 1872-1889. *Monuments divers recueillis en Égypte et en Nubie*. Paris: Vieweg.
- Mairs, Rachel and Cary J. Martin. 2008-2009. "A Bilingual "Sale" of Liturgies from the Archive of the Theban Choachytes: P. Berlin 5507, P. Berlin 3098 and P. Leiden 413." *Enchoria* 31: 22-67.
- Martin, Cary J. 2007. "The Saite 'Demoticisation' of Southern Egypt." In *Literacy and the State in the Ancient Mediterranean*, ed. Kathryn Lomas, Ruth D. Whitehouse and John B. Wilkins: 25-38. Accordia Specialist Studies on the Mediterranean 7. London: Accordia Research Institute Press.
- _____. 2009. *Demotic Papyri from the Memphite Necropolis (p. dem. Memphis) in the Collections of the National Museum of Antiquities in Leiden, the British Museum and the Hermitage Museum*. Papers on Archaeology of the Leiden Museum of Antiquities 5. Turnhout: Brepols.
- Martinet, Émilie. "Social Differentiation and Degree of Integration in Court Society: towards a Sociology of the Provincial Élites in the Old Kingdom." In *Old Kingdom Art and Archaeology 7: Proceedings of the international conference, Università degli studi di Milano 3-7 July 2017*, ed. Alessio Delli Castelli and Patrizia Piacentini: 260-273. Milano: Pontremoli Editore.
- Maspero, Gaston. 1880. "Sur une tablette appartenant à M. Rogers." *Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes* 2: 13-18.
- Masson-Berghoff, Aurélia and Franck Goddio, eds. 2016. *Sunken Cities: Egypt's Lost World*. London: Thames and Hudson.
- Masson-Berghoff, Aurélia, Ernst Pernicka, Duncan Hook and Andrew Meek. 2018. "(Re)Sources: Origins of Metals in Late Period Egypt." *Journal of Archaeological Science: Reports* 21: 318-339.

- Masson-Berghoff, Aurélia. 2019. "Naukratis: Egyptian Offerings in Context." *British Museum Studies in Ancient Egypt and Sudan* 24: 127-158.
- Mazzucato, Mariana. 2019. *The Value of Everything: Making and Taking in the Global Economy*. London: Penguin Books.
- McDonald, John. 1998. *Production Efficiency in Domesday England*. London: Routledge.
- McDowell, Andrea G. 1987. "Jurisdiction in the Workmen's Community of Deir el-Medîna." PhD diss., University of Pennsylvania.
- _____. 1993. *Hieratic Ostraca in the Hunterian Museum, Glasgow*. Oxford: Griffith Institute.
- _____. 1999. *Village Life in Ancient Egypt*. Oxford: Oxford University Press.
- Menu, Bernadette. 1982. *Égypte pharaonique: nouvelles recherches sur l'histoire juridique, économique et sociale de l'ancienne Égypte*. Versailles: B. Menu.
- _____. 1988. "Les Actes de Vente en Egypte Ancienne, Particulièrement Sous les Rois Kouchites et Saïtes." *The Journal of Egyptian Archaeology* 74: 165-181.
- _____. 1994. "Un document juridique "Kouchite": le P. Vienne D 12002. In *Hommages à Jean Leclant 2*, ed. Catherine Berger, Gisèle Clerc and Nicolas Grimal: 293-304. Cairo: Institut français d'archéologie orientale.
- _____. 2004a. "Le système économique de de l'Égypte pharaonique." In *Égypte pharaonique: nouvelles recherches sur l'histoire juridique, économique et sociale de l'ancienne Égypte*, ed. Bernadette Menu: 189-213. Collection droits et cultures 4. Paris: L'Harmattan.
- _____. 2004b. "Deir el-Médina au crible de l'économie politique." In *Égypte pharaonique: nouvelles recherches sur l'histoire juridique, économique et sociale de l'ancienne Égypte*, ed. Bernadette Menu: 215-222. Collection droits et cultures 4. Paris: L'Harmattan.

- _____. 2011. "Les Ouchebtis de Neskhons, entre droit et croyances." *Égypte nilotique et méditerranéenne* 4: 39-49.
- Metcalf, Peter. 1981. "Meaning and materialism: The ritual economy of death." *Man* n.s. 16: 564-578.
- Moreno García, Juan Carlos. 2014. "The 'Other' Administration: Patronage, Factions, and Informal Networks of Power in Ancient Egypt." In *Ancient Egyptian Administration*, ed. Juan Carlos Moreno García: 1029-1065. Leiden: Brill.
- _____, ed. 2016. *Dynamics of Production in the Ancient Near East: 1300-500 BC*. Oxford: Oxbow Books.
- Morkot, Robert. 2000. *The Black Pharaohs: Egypt's Nubian Rulers*. London: Rubicon.
- _____. 2007. "Tradition, Innovation, and Researching the Past in Libyan, Kushite, and Saïte Egypt." In *Regime Change in the Ancient Near East and Egypt: from Sargon of Agade to Saddam Hussein*, ed. Harriet E. W. Crawford. Oxford: Oxford University Press for the British Academy.
- _____. 2013. "From Conquered to Conqueror: The Organization of Nubia in the New Kingdom and the Kushite Administration of Egypt." In *Ancient Egyptian Administration*, ed. Juan Carlos Moreno García: 911-963. Leiden: Brill.
- Morris, Ian. 2005. "Archaeology, Standards of Living, and Greek Economic History." In *The Ancient Economy: Evidence and Models*, ed. Joseph G. Manning and Ian Morris: 207-222. Stanford, CA: Stanford University Press.
- Muhs, Brian P. 2016. *The Ancient Egyptian Economy: 3000-30 BCE*. Cambridge: Cambridge University Press.
- Mumford, Gregory D. 1998. "International Relations between Egypt, Sinai, and Syria-Palestine during the Late Bronze Age to Early Persian Period (Dynasties 18-26: c. 1550-525 B.C.): A Spatial and Temporal Analysis of the Distribution and Proportions

- of Egyptian(izing) Artefacts and Pottery in Sinai and Selected Sites in Syria-Palestine."
PhD diss., University of Toronto.
- _____. 2007. "Egypto-Levantine Relations during the Iron Age to Early Persian Period
(Dynasties Late 20 to 26)." In *Egyptian Stories: A British Egyptological Tribute to Alan
B. Lloyd on the Occasion of His Retirement*, ed. Thomas Schneider and Kasia
Szpakowska: 141-204. Münster: Ugarit-Verlag.
- Myśliwiec, Karol. 2000. *The Twilight of Ancient Egypt: First Millennium B.C.E.* Trans.
David Lorton. Ithaca, N.Y.; London: Cornell University Press.
- Neal, Larry. 2007. "Introduction." In *The Cambridge Economic History of the Greco-Roman
World*, ed. Walter Scheidel, Ian Morris and Richard P. Saller: 1-23. Cambridge:
Cambridge University Press.
- Neugebauer, Otto and Richard A. Parker. 1960. *Egyptian Astronomical Texts*. Providence:
Brown University Press.
- Nicholson, Paul T., ed. 2007. *Brilliant Things for Akhenaten: The Production of Glass,
Vitreous Materials and Pottery at Amarna Site O45.1*. London: Egypt Exploration
Society.
- Niwinski, Andrzej. 1988. *21st Dynasty Coffins from Thebes: Chronological and Typological
Studies*. Mainz am Rhein: Von Zabern.
- Nordquist, Gullög C. 1995. "Who Made the Pots? Production in the Middle Helladic
Society." In *Politeia: Society and State in the Aegean Bronze Age*, ed. Robert
Laffineur and Wolf-Dietrich Niemeier: 201-207. Liège: Université de Liège, Histoire
de l'art et archéologie de la Grèce antique.
- North, Douglass C. 1977. "Markets and Other Allocation Systems in History: The Challenge
of Karl Polanyi." *Journal of European Economic History* 6: 703-716.
- _____. 1981. *Structure and Change in Economic History*. London: W.W. Norton.

- _____. 1991. "Institutions." *The Journal of Economic Perspectives* 5: 97-112.
- _____, William Summerhill and Barry R. Weingast. 2002. "Order, Disorder and Economic Change: Latin America vs. North America." In *Governing for Prosperity*, ed. Bruce Bueno de Mesquita and Hilton R. Root: 17-58. New Haven: Yale University Press.
- O'Connor, David. 1983. "New Kingdom and Third Intermediate Period, 1552-664 BC." In *Ancient Egypt: A Social History*, ed. Bruce G. Trigger: 183-278. Cambridge, UK: Cambridge University Press.
- Olson, Mancur. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard University Press.
- _____. 1982. *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. New Haven: Yale University Press.
- Otto, Eberhard. 1951. "Die Endsituation der Ägyptischen Kultur." *Die Welt als Geschichte* 11: 203-213.
- Papadopoulos, John K. 1997. "Innovations, Imitations and Ceramic Style: Modes of Production and Modes of Dissemination." In *TEXNH: Craftsmen, Craftswomen and Craftsmanship in the Aegean Bronze Age*, ed. Robert Laffineur and Philip P. Bentancourt: 449-462. *Aegaeum* 16. Liège: Université de Liège, Histoire de l'art et archéologie de la Grèce antique.
- _____ and Gary Urton. 2012. "Introduction: The Construction of Value in the Ancient World." In *The Construction of Value in the Ancient World*, ed. John K. Papadopoulos and Gary Urton: 1-75. Los Angeles: Cotsen Institute of Archaeology Press.
- Parker Pearson, Michael. 1999. *The Archaeology of Death and Burial*. Stroud: Sutton.
- Parkinson, Richard B. 1997. *The Tale of Sinuhe and Other Ancient Egyptian Poems, 1940-1640 BC*. Oxford: Oxford University Press.

- Payraudeau, Frédéric. 2020. *L'Egypte et la vallée du Nil Tome 3, Les époques tardives, 1069-332 av. J.C.* Paris: Presses universitaires de France.
- Peacock, David P.S. 1982. *Pottery in the Roman World: An Ethnoarchaeological Approach.* London: Longman.
- Peet, Thomas E. 1914. *The cemeteries of Abydos II.* London: Egypt Exploration Fund.
- Pestman, Pieter W. 1992. *Il Processo di Hermias e Altri Documenti dell'Archivio dei Choachiti (P. Tor. Choachiti): Papiri Greci e Demotici Conservati a Torino e in Altre Collezioni d'Italia.* Catalogo del Museo Egizio di Torino 1, Volume 6. Torino: Ministero per i Beni Culturali e Ambientali, Soprintendenza al Museo delle Antichità Egizie.
- _____. 1994. *Les papyrus démotiques de Tsenhor (P. Tsenhor): les archives privées d'une femme égyptienne du temps de Darius Ier.* Studia Demotica 4. Leuven: Peeters.
- Petrie, Flinders W. M. 1886. *Naukratis. Part I.* Memoirs of the Egypt Exploration Fund 3. London: Trübner & Co.
- Piacentini, Patrizia. 2002. *Les scribes das la société Égyptienne de l'Ancien Empire.* Etudes et mémoires d'égyptologie 5. Paris: Cybèle.
- Polanyi, Karl, Conrad M. Arensberg and Harry W. Pearson. 1957. *Trade and Market in the Early Empires: Economies in History and Theory.* Glencoe: Free Press & Falcon's Wing Press.
- Poole, Federico. 2005. "All that Has Been Done to the Shabtis." *Journal of Egyptian Archaeology* 91: 165-170.
- Pope, Jeremy. 2014. *The Double Kingdom under Taharqo. Studies in the History of Kush and Egypt, c. 690-664 BC.* Culture and History of the Ancient Near East 69. Leiden; Boston: Brill.

- Priese, Karl-Heinz. 1970. "Der Beginn der Kuschitischen Herrschaft in Ägypten." *Zeitschrift für Ägyptische Sprache und Altertumskunde* 98: 16-32.
- Ragazzoli, Chloé. 2019. *Scribes: les artisans du texte en Égypte ancienne*. Paris: Les Belles Lettres.
- Raven, Maarten J. 1979. "Papyrus Sheaths and Ptah-Sokar-Osiris Statues." *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden* 63: 7-38.
- _____. 2017. "Third Intermediate Period Burials in Saqqara." In *Proceedings First Vatican Coffin Conference 19-22 June 2013*, ed. Alessia Amenta and Hélène Guichard: 419-424. Città del Vaticano: Edizioni Musei Vaticani.
- _____. and Wybren K. Taconis. 2005. *Egyptian Mummies: Radiological Atlas of the Collections in the National Museum of Antiquities at Leiden*. Papers on Archaeology of the Leiden Museum of Antiquities, Egyptology 1. Turnhout: Brepols.
- Rehren, Thilo. 1997. "Ramesside Glass Colouring Crucibles." *Archaeometry* 39:355-368.
- _____. "A Review of Factors Affecting the Composition of Early Egyptian Glasses and Faience: Alkali and Alkali Earth Oxides." *Journal of Archaeological Science* 35: 1345-1354.
- Rindi, Carlo. 2014. "Some Remarks on the Positioning of Ptah-Sokar-Osiris Figures in Third Intermediate and Late Period Burials." In *Cult and Belief in Ancient Egypt: Proceedings of the Fourth International Congress for Young Egyptologists, 25-27 September 2012, Sofia*, ed. Teodor Lekov and Emil Buzov: 30-36. Sofia: East West.
- Ritner, Robert K. 2009a. *The Libyan Anarchy: Inscriptions from Egypt's Third Intermediate Period*. Leiden; Boston: Brill.
- _____. 2009b. "Fragmentation and Re-Integration in the Third Intermediate Period." In *The Libyan Period in Egypt: Historical and Cultural Studies into the 21st-24th Dynasties*:

- Proceedings of a Conference at Leiden University, 25-27 October 2007*, ed. Gerard P. F. Broekman, Robert J. Demarée and Olaf E. Kaper: 327-340. Leuven: Peeters.
- Robinson, Damian and Franck Goddio, eds. 2015. *Thonis-Heracleion in Context*. Oxford Centre for Maritime Archaeology Monographs 8. Oxford: Oxford Centre for Maritime Archaeology.
- Rondano, Vera. 2015. "Netting the Dead: Mummy Nets from the Tombs of Khaemwaset and Setherkhepeshef in the Valley of the Queens." MPhil thesis. University of Oxford.
- _____. Forthcoming. "Standardization and Modularity in Late Period Burial Assemblages." *Proceedings of the Second Vatican Coffin Conference, 6-9 June 2017*. Città del Vaticano: Edizioni Musei Vaticani (submitted 10th January, 2018).
- Russmann, Edna R. 1973. "The Statue of Amenemope-em-hat." *Metropolitan Museum Journal* 8: 33-46.
- Saleh, Abdel Aziz. 1968. "Plural Sense and Cultural Aspects of Ancient Egyptian *mdw-ntr*." *Bulletin de l'Institut Français d'Archéologie Orientale* 68: 15-38.
- Sassaman, Kenneth E. and Rudolphi, Wictoria. 2001. "Communities of Practice in the Early Pottery Traditions of the American Southeast." *Journal of Anthropological Research* 57(4): 407-25.
- Sauneron, Serge. 1959. *Catalogue des ostraca hiératiques non littéraires de Deir el-Médineh. Tome VI*. Cairo: Institut français d'archéologie orientale.
- Scheidel, Walter, Ian Morris and Richard P. Saller, eds. 2007. *The Cambridge Economic History of the Greco-Roman World*. Cambridge: Cambridge University Press.
- Scheidel, Walter. 2018. *The Great Leveler: Violence and the History of Inequality from the Stone Age to the Twenty-First Century*. Princeton, NJ: Princeton University Press.

- Schneider, Thomas. 2010. "Foreigners in Egypt: Archaeological Evidence and Cultural Context." In *Egyptian Archaeology*, ed. Willeke Wendrich: 143-63. Oxford: Wiley-Blackwell.
- Scott, James C. 2018. *Against the Grain: A Deep History of the Earliest States*. New Haven: Yale University Press.
- Shaw, Brent. 2003. "A Peculiar Island: Maghrib and Mediterranean." *Mediterranean Historical Review* 18:93-125.
- Sheikholeslami, Cynthia M. 2014. "Sokar-Osiris and the Goddesses: some Twenty-fifth - Twenty-sixth Dynasty Coffins from Thebes." In *Thebes in the First Millennium BC*, ed. Elena Pischikova, Julia Budka, and Kenneth Griffin: 453-482. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Shirley, J J. 2010. "Viceroys, Viziers & the Amun Precinct: The Power of Heredity and Strategic Marriage in the Early 18th Dynasty." *Journal of Egyptian History* 3(1): 73-113.
- _____. 2013. "Crisis and Restructuring of the State: From the Second Intermediate Period to the Advent of the Ramesses." In *Ancient Egyptian Administration*, ed. Juan Carlos Moreno García: 521-606. Leiden: Brill.
- Shortland, Andrew J. 2000. *Vitreous Materials at Amarna: The Production of Glass and Faience in 18th Dynasty Egypt*. BAR International Series 827. Oxford: Archaeopress.
- Silvano, Flora. 1980. "Le Reticelle Funerarie nell'Antico Egitto: Proposte di Interpretazione." *Egitto e Vicino Oriente* 3: 83-97.
- Simmel, Georg. 1978. *The Philosophy of Money*. London: Routledge.
- Smith, Adam. 2013. *An Inquiry into the Nature and Causes of Wealth of Nations*. Hertfordshire: Wordsworth Editions.

- Smith, Mark. 1987. *The Mortuary Texts of Papyrus BM 10507*. Catalogue of Demotic Papyri in the British Museum 3. London: British Museum.
- _____. 2009. *Traversing Eternity: Texts for the Afterlife from the Ptolemaic and Roman Period*. Oxford: Oxford University Press.
- _____. 2017. *Following Osiris: Perspectives on the Osirian Afterlife from Four millennia*. Oxford; New York: Oxford University Press.
- Smith, Stuart T. 1992. "Intact Tombs of the Seventeenth and Eighteenth Dynasties from Thebes and the New Kingdom Burial System." *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 48: 193-231.
- _____. 1996. "The Transmission of an Egyptian Administrative System in the Second Millennium B.C.: Sealing Practice in Lower Nubia and at Kerma." In *Administration in Ancient Societies*, ed. Piera Ferioli, Enrica Fiandra and Gian Giacomo Fissore: 67-86. Turin: Centro Internazionale di Ricerche Archeologiche, Antropologiche e Storiche.
- _____. 1998. "Nubia and Egypt: Interaction, Acculturation and Secondary State Formation from the Third to First Millennium BC." In *Studies in Culture Contact: Interaction, Culture Change, and Archaeology*, ed. James G. Cusick: 256-287. Center for Archaeological Investigations Occasional Paper 25. Carbondale: Southern Illinois University Press.
- _____. 2013. "Revenge of the Kushites: Assimilation and Resistance in Egypt's New Kingdom Empire and Nubian Ascendancy over Egypt." In *Empires and Diversity: On the Crossroads of Archaeology*, ed. Gregory E. Areshian: 84-107. Los Angeles: The Cotsen Institute of Archaeology Press.
- Spalinger, Anthony J. 2005. *War in Ancient Egypt: The New Kingdom*. Malden, MA; Oxford: Blackwell.

- Spence, Kate. 2019. "New Kingdom Tombs in Lower Nubia and Upper Nubia." In *Handbook of Ancient Nubia*, Dietrich Raue: 541-565. Berlin; Boston: De Gruyter.
- Spiegelberg, Wilhelm. 1893. "Varia." *Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes* 15: 67-69, 141-145.
- _____. 1932. *Die Demotischen Denkmäler III: Demotische Inschriften und Papyri (Fortsetzung) 50023-50165*. Catalogue général des antiquités égyptiennes du Musée du Caire 40. Berlin: Reichsdruckerei.
- Stefanski, Elizabeth and Miriam Lichtheim. 1952. *Coptic Ostraca from Medinet Habu*. Oriental Institute Publications 71. Chicago: University of Chicago Press.
- Stone, David L. 2014. "Africa in the Roman Empire: Connectivity, the Economy, and Artificial Port Structures." *American Journal of Archaeology* 118(4): 565-600.
- Stövesand, Katharina. 2018. "Regional Variability in Late Period Egypt: Coffin Traditions in Middle Egypt." In *Ancient Egyptian Coffins: Craft Traditions and Functionality*, ed. John H. Taylor and Marie Vandenbeusch: 389-402. Leuven: Peeters.
- _____. 2019. "Late Period Coffins from the Fayum Region: A Common Tradition?" In *Ancient Egyptian Coffins: Past-Present-Future*, ed. Helen Strudwick and Julie Dawson: 214. Oxford: Oxbow Books.
- Strecker, Carolina and Peter Heinrich. 2007. 'Eine Innovative Restaurierung - Eine Neuartige Präsentation: Das Altägyptische Perlennetz aus El-Hibe.' In *Ägyptische Mumien: Unsterblichkeit im Land der Pharaonen*, ed. Grosse Landesausstellung Baden-Württemberg: 217-25. Mainz am Rhein: Philipp Von Zabern.
- Strudwick, Helen and Julie Dawson. 2016. *Death on the Nile: Uncovering the Afterlife of Ancient Egypt*. London: GILES.
- Tacoma, Laurens E. 2006. *Fragile Hierarchies: The Urban Elites of Third Century Egypt*. Leiden: Brill.

- Tainter, Joseph A. 1975. "Social Inference and Mortuary Practices: An Experiment in Numerical Classification." *World Archaeology* 7(1): 1-15.
- _____. 1978. "Mortuary Practices and the Study of Prehistoric Social Systems." *Advances in Archaeological Method and Theory* 1: 105-141.
- Taylor, John H. 1989. *Egyptian coffins*. Princes Risborough: Shire.
- _____. 2001a. *Death and the Afterlife in Ancient Egypt*. London: British Museum Press.
- _____. 2001b. "Patterns of Coloring on Ancient Egyptian Coffins from the New Kingdom to the Twenty-sixth Dynasty: An Overview." In *Colour and Painting in Ancient Egypt*, ed. Vivian W. Davies: 164-181. London: British Museum Press.
- _____. 2003a. "The Third Intermediate Period." In *The Oxford History of Ancient Egypt*, ed. Ian Shaw: 324-363. Oxford: Oxford University Press.
- _____. 2003b. "Theban Coffins from the Twenty-second to the Twenty-sixth Dynasty: Dating and Synthesis of Development." In *The Theban Necropolis: Past, Present and Future*, ed. Nigel Strudwick and John H. Taylor: 95–121. London: The British Museum Press.
- _____. 2010a. *Journey through the Afterlife: Ancient Egyptian Book of the Dead*. London: British Museum Press.
- _____. 2010b. "Changes in the Afterlife." In *Egyptian Archaeology*, ed. Willeke Wendrich: 220-240. Oxford: Wiley-Blackwell.
- _____. 2018. "Evidence for Social Patterning in Theban Coffins of Dynasty 25." In *Ancient Egyptian Coffins: Craft Traditions and Functionality*, ed. John H. Taylor and Marie Vandenberg: 349-386. Leuven: Peeters.
- _____ and Daniel Antoine, eds. 2014. *Ancient Lives, New Discoveries: Eight Mummies, Eight Stories*. London: The British Museum.
- Thomas, Rosalind. 2009. "Writing, Reading, Public and Private 'Literacies': Functional Literacy and Democratic Literacy in Ancient Greece." In *Ancient Literacies: The*

- Culture of Reading in Greece and Rome*, ed. William A. Johnson and Holt N. Parker: 13-45. Oxford: Oxford University Press.
- Thomas, Ross I. and Alexandra Villing. 2013. "Naukratis Revisited 2012: Integrating New Fieldwork and Old Research." *British Museum Studies in Ancient Egypt and Sudan* 20: 81-125.
- Török, László. 1995. *The Birth of an Ancient African Kingdom: Kush and her Myth of the State in the First Millennium BC*. Lille: Université Charles-De-Gaulle.
- Valbelle, Dominique. 1985. *Les Ouvriers de la tombe: Deir el-Médineh à l'époque Ramesside*. Bibliothèque d'Études 96. Cairo: Institut français d'archéologie orientale.
- Van De Mierop, Marc. 2011. *A History of Ancient Egypt*. Oxford: Wiley-Blackwell.
- Verhoeven, Ursula. 2001. *Untersuchungen zur späthieratischen Buchschrift*. Orientalia Lovaniensia Analecta 99. Leuven: Peeters.
- Vernus, Pascal. 1979. "Amon *p3-ꜥdr*: de la piété 'populaire' à la spéculation théologique." In *Hommages à la mémoire de Serge Sauneron 1927-1976*: 463-476. Bibliothèque d'étude 81. Cairo: Institut français d'archéologie orientale du Caire.
- Verri, Giovanni and David Saunders. 2014. "Xenon Flash for Reflectance and Luminescence (Multispectral) Imaging in Cultural Heritage Applications". *The British Museum Technical Bulletin* 8: 83-92.
- Villing, Alexandra. 2019. "Naukratis: Religion in a Cross-Cultural Context." *British Museum Studies in Ancient Egypt and Sudan* 24: 204-247.
- _____ and Ross I. Thomas. 2016. "The Mystery of Naukratis: Revealing Egypt's International Gateway." *Current World Archaeology* 77: 22-29.
- Vittmann, Günther. 2015. "Der Stand der Erforschung des Kursivhieratischen (und Neue Texte)." In *Ägyptologische "Binsen"-Weisheiten I-II: Neue Forschungen und Methoden*

- der Hieratistik. Aketn Zweier Tagungen in Mainz im April 2011 und März 2013*, ed. Ursula Verhoeven: 383-433. Stuttgart: Franz Steiner.
- Vleeming, Sven P. 1980. "The Sale of a Slave in the Time of Pharaoh Py." *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden* 61: 1-17.
- _____. 1995. "The Office of a Choachyte in the Theban Area." In *Hundred-gated Thebes: acts of a colloquium on Thebes and the Theban area in the Graeco-Roman period (P.L. Bat. 27)*, ed. Sven P. Vleeming: 241-255. Papyrologica Lugduno-Batava 27. Leiden: Brill.
- Warburton, David A. 2003. *Macroeconomics from the Beginning. The General Theory, Ancient Markets, and the Rate of Interest*. Civilisations du Proche-Orient. Série IV. Neuchâtel: Recherches et Publications.
- _____. 2007. "Work and Compensation in Ancient Egypt." *The Journal of Egyptian Archaeology* 93: 175-194.
- _____. 2011. "Karnak and the Kings." In *5th Symposium on Egyptian Royal Ideology: Palace and Temple: Architecture-Decoration-Ritual. Cambridge, July, 16th-17th, 2007*, ed. Rolf Gundlach and Kate Spence: 155-179. Königtum, Staat und Gesellschaft Früher Hochkulturen 4,2. Wiesbaden: Harrassowitz Verlag.
- _____. 2016. *The Fundamentals of Economics: Lessons from the Bronze Age Near East*. Neuchâtel: Recherches et Publications.
- Weber, Max. 1968. *On Charisma and Institution Building*. Chicago; London: University of Chicago Press.
- _____. 2013. *Economy and Society: An Outline of Interpretive Sociology*. Trans. Guenther Roth and Claus Wittich. Berkeley, California: University of California Press.
- Wendrich, Willeke, ed. 2013. *Archaeology and Apprenticeship: Body Knowledge, Identity and Communities of Practice*. Tucson: University of Arizona Press.

- Wenger, Etienne. 1999. *Communities of Practice. Learning, Meaning and Identity*.
Cambridge, UK: Cambridge University Press.
- Wiedemann, Hans-Georg and Gerhard Bayer. 1982. "The Bust of Nefertiti: The Analytical Approach." *Analytical Chemistry* 54: 619A-628A.
- Wilfong, Terry G. 2002. *Women of Jeme: Lives in a Coptic Town in Late Antique Egypt. New Texts from Ancient Cultures*. Ann Arbor, Mich.: University of Michigan Press.
- Wolf, Eric R. 1956. "Aspects of Group Relations in Complex Societies: Mexico." *American Anthropologist* 58(6): 1065-1078.
- Woolf, Greg. 1994. "Power and the Spread of Writing in the West." In *Literacy and Power in the Ancient World*, ed. Alan K. Bowman and Greg Woolf: 84-98. Cambridge: Cambridge University Press.
- _____. 2009. "Literacy or Literacies in Rome?" In *Ancient Literacies: The Culture of Reading in Greece and Rome*, ed. William A. Johnson and Holt N. Parker: 46-68. Oxford: Oxford University Press.
- Yaeger, Jason. 2000. "The Social Construction of Communities in the Classic Maya Countryside: Strategies of Affiliation in Western Belize." In *The Archaeology of Communities: A New World Perspective*, ed. Marcello A. Canuto and Jason Yaeger: 123-142. London: Routledge.
- Yoyotte, Jean. 1961. "Les Principautés du Delta au temps de l'anarchie libyenne." In *Mélanges Maspero*, volume 1, ed. Institut français d'archéologie orientale du Caire: 121-181. Cairo: Impr. de l'Institut français d'archéologie orientale.
- Zakrzewski, Sonia R., Andrew J. Shortland and Joanne Rowland. 2016. *Science in the Study of Ancient Egypt*. New York, NY: Routledge.