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Los Angeles

Sensing the Fundamentals:

An Examination of Scent as Integral to Ancient Egyptian Society

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

by

Robyn Sophia Price

2022

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2022

ABSTRACT OF THE DISSERTATION

Sensing the Fundamentals:

An Examination of Scent as Integral to Ancient Egyptian Society

by

Robyn Sophia Price

Doctor of Philosophy in Archaeology

University of California, Los Angeles, 2022

Professor Willemina Z. Wendrich, Co-Chair

Professor Kathlyn M. Cooney, Co-Chair

Despite the senses being foundational to how we interact with our environments, archaeologists rarely consider the significance of the senses to past lives. Thus, I examine in this dissertation the extent to which a culture's understanding of the human body experience (i.e., the senses) affects their society. I argue that sensory experience permeates every aspect of our lives (i.e., the ideological, the social, the economic, and the political), and, by focusing on sensory experience in humanistic studies, we might eliminate false dichotomies (e.g., religious/secular) and discrete categories (e.g., economic/political).

Ancient Egypt serves as a case study for how the senses are central to the ways we organize our lives. Specifically, I investigate the values attributed scent and smelling in New Kingdom Egypt (1550 BCE–1050 BCE)—considering how scented products figured in economic negotiations and across socio-political and religious spheres. After examining the

visual, written, and material evidence of scent from New Kingdom Egypt, I argue that the ancient Egyptians employed scent as an organizing feature in their society, from dictating proper etiquette for celebrating holidays and expressing endearment, to praising the gods, healing bodies, and purifying spaces. Pleasant fragrances communicated one's identity and presence, and also functioned as the manifestation of life itself. To smell was more than a physiological reaction to environmental stimuli but was a physical presence that exerted influence over individuals.

This study, furthermore, demonstrates the dangers of ignoring the senses in humanistic studies. Sensory experiences can be manipulated to control and order populations. In the ancient Egyptian context, the high ideological and social values attributed pleasant scents resulted in a foundational need among the populace for access to sweet-smelling air. In valuing the experience of pleasant scents across social contexts, the demand for these products increased beyond their earlier limited uses. High prices and an emphasis on foreign scents, however, restricted general access to the most desirable aromas. Ultimately, social hierarchies were established and maintained based on access to these products and an industry was developed to support these relationships.

The dissertation of Robyn Sophia Price is approved.

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University of California, Los Angeles

2022

To the ones who I could not have done this without,
but who are no longer here to see it finished.

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- 2022 Stop and smell the flowers: a Re-assessment of the ancient Egyptian ‘blue lotus.’ In D. Candelora, N. Ben-Marzouk, and K. Cooney (Eds.), *Ancient Egyptian society: Challenging assumptions, exploring approaches*, pp. 325–335. Routledge.
- 2020 Price, R., Muros, V., & Barnard, H. Considerations in the technical analysis of ancient Egyptian material remains: Destructive and non-destructive methods. In M. Koons & C. A. MacLeod (Eds.), *Science and the stories of the Egyptian mummies and coffins at the Denver Museum of Nature & Science*, pp. 139–169. University Press of Colorado.
- 2020 Inspiring student motivation through multimodal learning. In P. Durgun (Ed.), *An educator's handbook for teaching about the ancient world*. ArchaeoPress, Access Archaeology Series. Open Access. Permanent URL: <https://pinardurgunpd.wixsite.com/teachancient>.
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1 INTRODUCTION

It was towards noon, al-Mallakh recalled recently, a time when the white desert light glares on the Giza plateau and the dense volumes of the pyramids seem to shimmer in the nearly intolerable heat. As they were only inches away from their goal, al-Mallakh took over the chisel himself, until, finally, the last fragment fell away, leaving a small black hole, its darkness a sharp contrast to the glare outside. "I closed my eyes..." al-Mallakh said, "like a cat. And then, with my eyes closed, I smelled incense, a very holy, holy, holy smell. I smelled time. I smelled centuries. I smelled history. And then I was sure the boat was there.

-Kamal al-Mallakh describing the discovery of Khufu's boat cited in *The Smell of Time* (1980)

1.1 A RE-INTRODUCTION TO THE SENSES

As a student of humanity, one becomes accustomed to questioning anything considered “natural” or “typical” in a given context. That which is “natural” is often problematic in that it is representative only of dominant narratives. In anthropological investigations, researchers must strive to first identify and then restrict how much the dominant narratives extant in their own lives bias their interpretations. One way that this error can be mitigated is through critically assessing the cultural mediation of perception, which is the focus of the following investigation.

Perception is a dynamic process. As Boas and, later, Howes have pointed out, we tend to perceive via the means by which we are accustomed even when confronted with new circumstances. That is, we apperceive—preempting how we will interpret stimuli and defining the impact before we perceive it. For example, Boas offers the example of asking someone who speaks a language with no word for green to identify various shades of “green.” Consistently, the respondents offer shades of blue and yellow in answer (Boas 2018; cited and discussed in Howes 2022). We see, smell, and hear in the manner with which we are accustomed. As Howes (2022)

writes, it is our “situatedness,” that is, our positioning socially, sensorially, geographically, and culturally, which defines our manner of perception.

Engaging with the *agencement* of the senses, or sensory framework (Howes, 2022; Price, 2018), is a crucial aspect of humanistic research. A sensory-focused approach, however, has only recently begun to emerge as a legitimate rather than fringe approach within archaeology (Skeates and Day, 2020; Betts, 2017; Pellini *et al.*, 2015; Hamilakis, 2013; Day, 2013; Fahlander and Kjellström, 2010). Our lives are conditioned by “the sensori-social life of things” which demand the “fleshing out of the relations between the senses, and between people, and the products of their labour” (Howes, 2022, p. 329). To perceive is both a physiological and cultural act. This “material immateriality” (*ibid.*) of sensory experience, where experiences and their object stimuli exist both within and beyond their materialities into the world of value-making and narratives of power, is the subject of this investigation. To ignore this aspect of what it is to be human, to be complacent about how our senses influence our thoughts and behaviors, invites trouble. I set out now to demonstrate how.

The Aristotelian notion of the five senses (sight, sounds, smell, taste, touch) is not a universal paradigm. Nor can sensory experience be relegated to the dictations of science. According to modern science, the following senses can be added to the ‘canonical five’: *thermoception* (feeling heat and cold), *nociception* (feeling pain), *equilibrioception* (perceiving the body’s position and acceleration), *proprioception* (perceiving the physical body), and *interoception* (the awareness of the body's inner physiology) (Fahlander and Kjellström, 2010, p. 3). These additional senses largely are focused inward—within one’s own body—rather than being wholly dependent on external stimuli like the Aristotelian senses. It is interesting to speculate that modern science’s inclusion of these particular senses may be related to

modernity's emphasis on the power of the mind as opposed to the body. As Howes (2005) writes, "This is not to say there is no 'truth' to science, but rather that it is a culturally bounded truth" (p. 5). Few cultures have been restricted by these culturally bounded truths in the grand landscape of history and therefore require a contextualized study.

While archaeology might allow us to observe variations in sensory frameworks, there is disagreement among scholars as to the benefit of enumerating particular senses. Because the senses rarely function individually, identifying the senses as distinct from one another can result in an etic classification system that may not have existed within the society under study (Hamilakis, 2013). To deny the possibility that a certain people could value senses individually, however, could deny the validity of their experience.

Within ancient Egypt, for example, the 'natural' link between smelling, living, and being was foundational to the organization of their social system. As will become apparent throughout this analysis, an emphasis on the necessity of experiencing pleasurable scents as a manifestation of life itself resulted in a dependency on access to agreeable fragrances, regardless of social status (Chapter 3). Because specific aromas were not required beyond them being pleasant, a larger proportion of the population could participate in this social negotiation (Chapter 4). Royal and elite restrictions on access to the highest quality aromata, however, resulted in the maintenance of a strict social hierarchy based on access (Chapter 5). It was in this way that the scent industry, built from the socio-ideological values of scent, contributed to the organization of ancient Egyptian social life.

1.2 TERMINOLOGY

Before beginning to discuss this study in earnest, it is necessary to define some of the terms I will be using. This exercise serves to limit apperception by allowing space to reflect on

the cultural assumptions often built into our use of sensory vocabulary. In this study, the nouns *smell* and *scent* are used interchangeably to reference the fragrance of an identified medium such as a floral bouquet or divine being. *To Smell*, a verb, indicates the experience of perception when scents are encountered. The biological mechanisms of smell will be explored in the following section.

When I reference *the senses* or *a sense* such as “the sense of smell,” I am not referencing a universal experience involving the intake of odor molecules and the body’s reaction to this stimulus. Rather, a *sense* is a culturally defined valuation system applied to a particular bodily reaction to external stimuli. Thus, “the sense of smell” I experience is distinct from “the sense of smell” experienced by the Jahai peoples of the Malay peninsula whose linguistic system reveals a greater function of scent within their cultural milieu than within my own (Majid and Burenhult, 2014). It follows that *the senses* are likewise culturally determined. While a convenient way to reference all the perception methods recognized within a specific culture (e.g., the five senses in many Western cultures), it is not always true that a culture categorizes sensory experiences with such a title. For example, the ancient Egyptians do not seem to have had a word for “the senses” though there is evidence that perceptual experiences were grouped by function, i.e., they all originated in the body and communicated information to the heart. This will be explored more in Chapter 3.6.1.

Sensory Experience is used similarly in this study to reference a range of experiences whose value, form, and function are culturally determined. The physical mechanisms of sensory experiences, while largely shared by human bodies, is not the focus of this investigation and will be largely set aside. Rather, it is the cultural situatedness that is the focus here, as defined above.

Another term often referenced in sensory studies is *sensescape*, and its many off-shoots like *smellscape* or *soundscape*. David Howes (2005, p. 143) explains sensescapes thus:

It is the idea that the experience of the environment, and of the other persons and things which inhabit that environment, is produced by the particular mode of distinguishing, valuing and combining the senses in the culture under study.

Thus, *sensescape* is how one might discuss the situatedness of a particular experience as a whole including not just the experience itself and its associated value, but the context and beings involved in the production and reception of that experience. For example, in this study I am investigating the *smellscape* of New Kingdom Egypt and its many varied forms.

I will also be using the term “cultural meme” throughout this analysis. The Oxford Language dictionary defines meme as, “an element of culture or system of behavior that may be considered to be passed from one individual to another by nongenetic means, especially imitation.” Originally adapted by Darwin as the cultural equivalent of a “gene,” it is here used to reference the smallest element of culture that carries meaning, similar to a “morpheme” in language. I use meme to reference a piece of culture that is shared through repetition and which becomes foundational to a society’s organizational patterning. When referencing cultural memes, I will identify them in all capital letters, e.g., SMELL=LIFE or SMELL=PRESENCE.

A final term central to this analysis is the ancient Egyptian “scent industry.” While this designation certainly implies the economic processes associated with the procurement, production, storage, and distribute of aromata, I would suggest it also implies the driving forces behind these processes, i.e., their value (see Chapter 1.5). Industry, here, not only references the production of aromatic materials but also the cultivation of the desire for the experience of scent. Thus, the scent industry was not only product-oriented, but idea-oriented; the name identifies not

only material production but idea creation. The scent industry embodies the ancient Egyptian need for pleasant fragrances socially, ideologically, economically, and politically.

1.3 THE SCIENCE AND SOCIAL LIFE OF SMELL

Scent is not a quality of molecules but is the physiological reaction our bodies undergo when confronted with certain molecular structures. These odor molecules are typically inorganic and have a very low molecular weight. Our olfactory system has three jobs; it detects odors, classifies them, and then signals the body to react (Firestein, 2001). The detection system is highly flexible as it is able to detect odors that are unfamiliar to it. Additionally, it is highly specific and sensitive, being able to distinguish enantiomers of chiral compounds and recognizing molecules at parts per million. The signals sent to the brain by the olfactory system provide data on reproductive potential, as well as behavioral cues based on territoriality, aggression, and suckling (Firestein, 2001).

The olfactory system is made up of 6–10 million olfactory sensory neurons (OSNs) which are located within the nasal cavity. These neurons end in knobs that are covered with 20–30 cilia. Odor molecules bind to the cilia and then information is transferred through the OSNs into the brain's limbic system. This activation of the amygdala evokes emotions and also allows for the encoding of memories. The information is then processed by mitral cells, which signal to higher brain functions and trigger the reaction we know as smell (Firestein, 2001; Thavaneswaran, 2008; Murphy, 2013). Scientists are still working to understand how a single receptor cell is able to recognize variations in odor molecules, while a single odor molecule is also able to activate multiple receptor cells.

Not only is scent a physiological reaction to molecules, however, it is cultural as our situatedness regularly impacts how we value these experiences. The COVID-19 pandemic

brought the importance of smell to the fore when anosmia, the inability to smell, was recognized as a symptom of infection. I, myself, experienced this loss. It is difficult to describe the sense of confusion, yearning, and fear inherent in the act of sniffing a candle or a fresh meal and being met with no recognition of its aroma. Food became unappetizing, its texture taking on new (often unpleasant) significance; moving through space was disorienting and everything seemed dull, lacking vibrancy and life. The constant, sometimes unconscious, intake of odors in our daily lives is often more meaningful than we give it credit (Jarvis, 2021; Sanders, 2022).

How, though, are scents ascribed particular values? Let us take Chanel no. 5, one of the most iconic perfumes today, as an example. Its Instagram page is filled with images of women wearing designer clothes and displaying faces of fierce calm. In 2021, the world celebrated Chanel no.5's 100th birthday. The ad campaign associated with this event highlighted the perfume's sensuality, elegance, and celebrity status. For example, @chanelofficial posted images with captions such as, "N°5, the myth, the symbol, the invisible clothing Marilyn wore to bed. Discover the history of a legend" (March 20, 2021)¹ and "N°5, a timeless legend that never stops reinventing itself. An allegory of modernity, French elegance, and the feminine eternal" (March 21, 2021).² What does bergamot, iris, and neroli have to do with sex? How can a scent be elegant? Sensual? Feminine? Who decides these qualities and applies these values?

This marketing of scents to individuals of particular classes, genders, and races is not new to modernity. Nor is the application of social values to the experience of pleasant aromas (i.e., if you wear this perfume you can be pretty and desirable, too!). The 2011 perfume exhibit "Perfume Bottles: From Design to Dressing Tables" at the Corning Museum of Glass focused on

¹ @chanelofficial, accessed Nov. 21, 2022. <https://www.instagram.com/p/CMpe7B7oAd6/>

² @chanelofficial, accessed Nov. 21, 2022. <https://www.instagram.com/p/CMrM34foXVG/>

the development of perfume bottle manufacturing in the early 19th century. The scent of the perfumes can no longer be experienced in their original form because of the time elapsed between the creation of the product and today. Furthermore, it is rare for containers of perfumes to portray elements that evoke the original scent, such as a particular flower or garden scene. Rather these perfume containers express primarily luxury and beauty—existing as artistic marvels themselves. The quality of the containers expresses visibly the intangible qualities of these now-lost perfumes, rather than their specific ingredients. This phenomenon is similar to @chanelofficial’s reference to the “invisible clothing” Marilyn Monroe wore to bed. In both cases, it is the container or wearer’s beauty and sensuality that is being sold. It is not the scent that sells but what the scent is selling.

More specifically, the ability for olfactory stimulation to evoke emotion and memory imbues scent marketing with significant power. Scents are processed through our olfactory system, which is connected directly with the limbic system that manages emotions, behavior, and memory. Thus, the body’s immediate physiological reaction to scent can have a large impact on how we feel, behave, or remember past events (Murphy, 2013). To control the material stimuli of scent and/or influence the value associated with certain smells is to control bodies outside of your own. For example, Li *et al.* found that undetectable odors could influence the likability of strangers (Li *et al.*, 2007). Thus, it is important to consider both the physiological and cultural aspects of sensory experience if we are to understand how our realities are constructed.

The physiological mechanisms of scent, however, can likewise be manipulated to achieve certain goals, which brings us back to the “culturally bounded” truths offered by science. For example, scent is often used to define and ostracize what is “other.” Thomas Jefferson, one of the founding fathers of the United States of America, wrote about his slaves saying, “They secrete

less by the kidneys, and more by the glands of the skin, which gives them a very strong and disagreeable odour. This greater degree of transpiration renders them more tolerant of heat, and less so of cold, than the whites (Thomas Jefferson, Query XIV, “Laws,” Notes on the State of Virginia). In this one example, scent is falsely mapped onto physiology to justify the use of black bodies to work outside and be subjected to inhumane treatment. By using a pseudo-science claim, the “disagreeable odour” of slaves is described as part of their biology and this false objectivity is used to justify a culturally-established racial hierarchy.

In another example, from the Christian Bible, scent can identify who is saved and who is not, “But thanks be to God, who always leads us triumphantly as captives in Christ and through us spreads everywhere the fragrance of the knowledge of Him. For we are to God the sweet aroma of Christ among those who are being saved and those who are perishing. To the one, we are an odor of death and demise; to the other, a fragrance that brings life” (2 Corinthians 2:14–16). Here, non-believers smell “death and demise” because they are effectively excluded from those being saved after receiving God’s life-giving powers.

These two examples show that the way a culture or individual values scent has significant social ramifications. Through circular reasoning, judgements based on scent function both as evidence for and consequences of opinions (i.e., if you smell bad, you are a non-believer; if you are a non-believer, you must smell bad). This faulty line of reasoning becomes difficult to argue with and, once it gains a following, can impact the organization of a society remarkably.

1.4 THE ARGUMENT IN CONTEXT

I study how scent can impact the organization of society by specifically investigating New Kingdom, Egypt (1550–1050 BCE) as a case study for how sensory experience can be manipulated to serve an agenda and control populations. Additionally, through this examination,

I expose the importance of scrutinizing the cultural mitigation of the senses within any humanistic study. In archaeology, “constraints along gender, racialized, and class lines... become embedded in the sensate through ‘material activities’” (Howes, 2022; Coupaye, 2018). In other words, cultural norms can be created and upheld through our bodies' sensory interactions with materials and their associated processes. Without reflecting on how the senses are valued within a society before beginning an analysis, researchers inevitably will apperceive when reviewing their evidence—applying their own sensory value-system in their research.

Before laying out my research questions and discussing the layout of the following analysis, however, I will briefly discuss the earliest and latest histories of the perfume trade to provide some context for this investigation. In the New Kingdom/Late Bronze Age, trade and conflict were flourishing in the eastern Mediterranean among and between the major powers, such as the ancient Egyptians, the Hittites, and the Mitanni. Evidence suggests a shift in the function of scented materials in ancient Egypt at this time. Whereas earlier references to positively scented products were largely restricted to royal and religious contexts, the New Kingdom saw expansions in access to desirable scents. Pleasant fragrances became central to more secular spheres of engagement as if the quality of scent itself had become commodified.

This shift is particularly interesting if we consider how, by the Ptolemaic period (332–30 BCE), Egypt was recognized as a prolific exporter of luxury perfumes (de Rodrigo, 2000). Thus, this analysis examines the scent industry of the New Kingdom as a precursor to this known outcome. While the majority of this examination focuses on the New Kingdom period, it is important here to establish briefly a timeline of perfume production and access. Another purpose of this exercise is that much of the evidence discussed in Egyptological publications about scent production in pharaonic Egypt is drawn from later, Classical works wherein we can see how the

quality of scent had become commodified. Therefore, it is important to understand the context from which this information is drawn.

By the fourth century BCE, Egypt was a known exporter of luxury scents. Classical writers from the Greek and Roman World, from Herodotus, Hippocrates, and Theophrastus through Pliny the Elder, Dioscorides, Plutarch, Galen, and Athenaeus of Nautakris, wrote of the wonders of Egyptian scented products. Well before the time of Athenaeus, who was writing in the second century CE, luxury perfumes were a staple element of the international market.

Athenaeus records a speech about perfume made at a symposium in his publication *The Learned Banqueters* (VIII.XV: 688e–689a). One excerpt from this speech reads:

The finest perfumes are associated with specific places, according to Herophilus' student Apollonius in his *On Perfumes*, where he writes as follows: ... (the finest) nard-perfume comes from Tarsus; the (finest) dropwort-perfume comes from Cyprus and Adramyttium; and (the finest) marjoram- and quince-perfumes come from Cos. Egyptian henna-perfume is considered the best, while the Cyprian and Phoenician (especially the Sidonian) varieties come in second. What is known as Panathenaic perfume (is best) in Athens, and *metôpion* and Mendesian perfumes are best when produced in Egypt... But what makes the best perfume, he claims, is the people who supply the raw materials, the materials themselves, and the workers, not the locales. In the past, in fact, he says, Ephesus produced excellent perfumes, in particular Megalleian, but it no longer does so today. The varieties made in Alexandria were also outstanding, because of the city's wealth and because Arsinoe and Berenice took an interest in them (LCL 519: 126–129).

The perfumes mentioned here come from all over the Mediterranean—including Cyprus, the island of Cos, Egypt, Phoenicia, Greece, and Anatolia. Athenaeus notes, however, that while perfumes come from all of these places, they are produced best in their place of origin. For example, the Egyptian perfumes the Mendesian and the *Metôpion* are best when produced in Egypt. Even more important, however, are the artisans themselves and their raw material sourcing, which suggests artisans were living and working outside their birth countries. The verifiable industry centered around scented oils as described by Athenaeus is complex and

specific. Of note, the conversation written here takes place at a banquet. Thus, the perfume trade might even have been a common topic of conversation for social gatherings.

The publications by these Greek- and Roman-era writers are ripe with references to specific materials used in perfume recipes and to various production methods and uses of scented products. The ruminations are helpful for investigating earlier production methods, though they cannot be assumed to be true outside their own social context. One particular example, however, is interesting for the current examination. In Volume IV Book XIII.IV of Pliny the Elder's *Natural History*, he discusses his distaste for the superfluous nature of perfume:

Perfumes serve the purpose of the most superfluous of all forms of luxury; for pearls and jewels do nevertheless pass to the wearer's heir, and clothes last for some time, but unguents lose their scent at once, and die in the very hour when they are used. Their highest recommendation is that when a woman passes by her scent may attract the attention even of persons occupied in something else—and their cost is more than 400 denarii per pound! All that money is paid for a pleasure enjoyed by somebody else, for a person carrying scent about him does not smell it himself. Still, if even these matters deserve to be graded after a fashion, we find in the works left by Marcus Cicero that unguents that have an earthy scent are more agreeable than those smelling of saffron, inasmuch as even in a class of things where corruption is most rife, nevertheless some degree of strictness in vice itself gives more enjoyment. But there are people who get most pleasure from unguent of a dense consistency, which they call 'thick essence,' and who enjoy smearing themselves with perfume and not merely pouring it over them...Moreover, we have heard that somebody of private station gave orders for the walls of his bathroom to be sprinkled with scent, and that the Emperor Caligula had the bathtubs scented, and so also later did one of the slaves of Nero—so that this must not be considered a privilege of princes! Yet what is most surprising is that this indulgence has found its way even into the camp: at all events the eagles and the standards, dusty as they are and bristling with sharp points, are anointed on holidays—and I only wish we were able to say who first introduced this custom! No doubt the fact is that our eagles were bribed by this reward to conquer the world! We look to their patronage forsooth to sanction our vices, so as to have this legitimation for using hair-oil under a helmet! (LCL 370: 110–113).

Pliny the Elder discusses here how scent products are a luxury given their high cost and ephemeral nature. They are bought not for the user, he says, but for passersby. Scent is also a representation of corruption—it being used as a vice to excess by the wealthy. What he disdains

the most, however, is the irony of using scent to conquer distant peoples and lands. He explains that scented oils are offered as gifts to soldiers to bribe them so that they will go into battle. Because these scents are valued as an elite luxury, soldiers, who would not have had access to them otherwise, fight in order to be gifted unguents, thus sanctioning the use of these products by elite peoples and their exorbitant prices. According to this passage, without the high social value of scented oils and unguents the world would never have been subdued by Roman imperialism! Pliny the Elder is here expressing exasperation with this circular reasoning wherein the power of scent serves as both the justification for and consequences of this valuation system. Interestingly, this line of reasoning mirrors the argumentation which is pursued in the following study. Through valuing scent in this way, a strict social hierarchy is both created and maintained. Furthermore, similar to the quotations from Thomas Jefferson and the Bible above, Pliny the Elder here uses scent to identify persons corrupted by their wealth—a negative value is ascribed the smell of saffron, which is contrasted with agreeable, earthy scents. Likewise, as will become apparent in the final chapters of this investigation, Pliny the Elder reveals the key to wielding scent-based power: making the experience desired by all, not just the “privilege of princes,” but restricting access to protect one’s position.

Returning to ancient Egypt, we can now look to the evidence for scent marketing in the earliest centuries of this civilization. Evidence suggests that smelling pleasant fragrances was an inherent part of being royal and/or wealthy even since the earliest kings, particularly in death. Aromatic resins imported from abroad have been found in multiple Predynastic tombs, though their purpose is ambiguous (Sowada, 2009, pp. 198–200; Serpico and White, 2000b, p. 430; Raven, 1990, pp. 10–13). An ebony jar label fragment recovered from the tomb of Djer (OIM E6058), a First Dynasty king, records an event that happened during his reign. Listed there are

what seem to be common quality designations for scented oils: *ḥꜣt* “high quality [oil],” *ph(w)*, and *[t]ḥnw* “Libyan oil” (Teeter, 2011, p. 234; Petrie, 1901, p. 23, pl. 51.13). Another jar label, this one dating to King Scorpion (II?) references *mrḥt*-oil of Upper Egypt (Junker, 1912, p. 5 (abb. 4)).

All these oils and oil-qualifiers are attested in ancient Egypt since the Predynastic period, however, these references are particularly common in the Pyramid Texts from the late Old Kingdom. For example, the “seven sacred oils” are attested across these contexts. PT 72–78 recount how seven oils are used in the Opening of the Mouth ritual meant to reinvigorate the



FIGURE 1-1. OFFERING TABLET OF ANKHWADJES (MMA 11.150.1A). AVAILABLE FOR UNRESTRICTED USE UNDER CREATIVE COMMONS ZERO (CC0).

deceased’s body after death (Allen, W 46–52, 22; Koura, 1999). These seven oils, which are named individually but typically referenced together, were present in funerary rituals and continued in use, though they varied in number throughout ancient Egyptian history. Consider, for example, the offering tablet dedicated to Ankhwadjes, an Old Kingdom official (MMA 11.150.1a; Figure 1-1). Seven small depressions are labeled with the names of each of the seven sacred oils: *sty-ḥb*, “festival scent”; *ḥknw* “oil of praise”; *sft*-oil; *nḥnm* “rejoicing(?) oil”; *twꜣwt* “support(?) oil”; *ḥꜣtt* “ḥ” “finest cedar oil”; and *ḥꜣtt tḥnw* “fine Libyan oil.”

Scented materials were also a popular import since early in ancient Egyptian history. The Palermo Stone, a semi-mythical king list that records the annals of rulers from before Aha, the first king of the First Dynasty, through Neferirkare, the third ruler of the Fifth Dynasty, records 80,000 units of *ntyw* “myrrh resin” imported from Punt in the reign of Sahure (*Urk.* I, p. 246.4). In another example, the autobiography of Harkhuf, recorded on the entrance walls of his tomb, recounts the bringing back of “300 hundred donkeys laden with incense, ebony, *hknw*-oil, *s3t*-resin” etc. to the residence from his soldiering around Yam (*Urk.* I, pp. 126.7–127.1-.3). Incense and resin were likewise imported from the northern Levant (Sowada 2009, p. 198). For example, Shahat identified 24 *Pistacia lentiscus* L. fruits from an intrusive burial in the predynastic Tomb 7626 at Naga ed-Deir. The carbon dates of these fruits dated the intrusive burial to the Fifth Dynasty (ca. 2494–2460 BCE) (Shahat 2021; 2023). Such products were used for a variety of purposes including mummification and other rituals, cosmetics, varnish, incense, medicine, moisturizers, and possibly adhesives (Serpico and White, 2000b, p. 430).

An interesting material manifestation of the value of scent at this time is attested to by the “celebrant” or “bird women” of el-Ma’ mariya. These female figurines have heavy breasts and their legs are unified into a thick, pointed extremity (Patch, 2011, p. 112). Their arms rise up on either side of the head and curve inward at the hands. Patch writes:

It is from the beaklike silhouette of the head that these statues acquired their modern nickname, but for the ancient Egyptians the shape did not depict a bird, and in fact the beaklike curve is an abbreviated convention that focuses attention on the nose and chin, features that are almost always present on figurines. These figurines in particular reinforce the idea that for the Predynastic Egyptians the nose—a source of breath and thus a source of life—required emphasis.

This conclusion indicates that the value of scent, as it relates to breath and life, was a focus in early Egyptian ideologies. Though, given the context in which such finds are found, access to

such life-giving forces was highly restricted. The conflation of scent with breath and life is central to the analysis made throughout this thesis and is explored in greater detail in Chapter 3.

My research questions are as follows:

1. What culturally determined socio-ideological values were attributed scent by the ancient Egyptians in the New Kingdom and how were these values reified across cultural contexts? Namely, what informed how the ancient Egyptians experienced scent?
2. What factors contributed to the ancient Egyptians' access to scented, material goods and what role did the central political and cultic institutions play in determining access for the public? How did these roles affect the organization of ancient Egyptian society at the time?
3. To what extent did ancient Egypt's role as a major economic and political player in the eastern Mediterranean in the New Kingdom influence/was influenced by the socio-ideological values attributed scent?

In addressing these questions, I argue that the way scent was valued within ancient Egyptian society both influenced and was defined by its ideological, economic, social, and political situatedness. As described in this section, the value of scent and its manifestation in the material culture of the ancient Egyptians had a long and complex history wherein its use context developed through time. In this investigation, I examine the ideology, production, and accessibility of a class of material goods, which included incense, resin, unguents, flowers, and oils. By investigating these materials and the processes involved in their procurement, production, trade, and use, I argue that the high value attributed to the scent of these materials contributed to the creation and maintenance of a strict social hierarchy.

My analysis shows that the ancient Egyptians emphasized the general qualities of smell (good/pleasant vs. bad/unpleasant), rather than specific smells or products. The significance of this observation is that it allows for the necessary variation in the means by which the ancient Egyptians could satisfy their ideological needs. This variation was “necessary” because of the geographic and societal factors that restricted access to scented materials. It is like convincing a population that they must own a smartphone rather than obligating them to purchase,

specifically, an iPhone. While certainly some phones have more bells and whistles than others, some being more expensive or available in a variety of colors, the minimum to participate in this social negotiation is to have a smartphone. This is only one example of where we see this pattern of creating buy-in, while restricting access, mirrored in the politics of today.

Coltrane McDowell's thesis research in Nairobi reaches a similar conclusion: that scent can be manipulated to create and maintain social hierarchies (McDowell, Unpublished). The smell "Illicit Brew" was associated with the lower income settlements in Nairobi. This description was for the brewing of an illicit, potent alcohol *Chang'aa*. Its local production operated outside of legal standards and it became associated with poverty, sex work, and crime. These cultural associations of the scent of *Chang'aa* with poverty and crime contributed to this scent being valued negatively, as well as the producers of this alcohol. McDowell instituted an intervention wherein he worked with one of these "illicit" distilleries to begin distilling essential oils rather than the alcohol, changing the scent of the producers and, by extension, their social status.

In ancient Egypt, by emphasizing access to the experience of scent rather than the specific product, a larger proportion of the population was able to engage in this social competition—investing themselves and their resources into these networks of social power, all the while contributing to the establishment, reification, and maintenance of a social hierarchy (Mann, 2012, pp. 22–23). Those in power were thus able to secure their position in much the same way that Pliny the Elder suggested Rome manipulated its soldiers.

1.5 DEFINING VALUE

The foundational assumptions of my approach are as follows:

1. Sensory studies of the past must be grounded in material evidence and not reliant on the researcher's understanding of the sensory world. While this approach will not remove all bias from interpretation, it does allow one to record and trace the line of argumentation for later reflection and revision.
2. An archaeology of the senses must begin with the body, and not in a scientific or universalizing manner. This is because the senses are the primary means by which humans internalize knowledge of the world as they are its only means of interacting with it.
3. The materiality of the world directly engages with our senses, but it is through its cultural situatedness that these experiences are given meaning, purpose, and/or significance.
4. The goal of any sensory archaeology must be the emic understanding of the sensory *agencement* or framework. While the concept of "the senses" is not universal, the human body remains our sole interface with the world. Thus, identifying how the cultural body engages with the world's materiality (i.e., senses it) and how that experience is ascribed value, power, meaning, and purpose within a specific context is at the heart of all sensory analyses.

These assumptions inform my analysis, but do not constitute that which is under investigation. I do take the material forms of scent as the focus of my analysis, particularly in Chapter 4, after investigating the senses in context in Chapter 3. While I am not studying the ancient Egyptian conception of the body directly, I study scent as a bodily experience or way of living rather than a conceptualization of the mind. As for the final point, this thesis is meant to explore the ancient Egyptian sense of scent and the value and power ascribed to it therein. It is necessary, however, to explore what I mean by "value," which I will do below.

In their most basic form, the senses are the primary method by which humans and animals engage and are able to interpret the world around them. Thus, the study of senses should not be divorced from the traditional concerns of archaeologists (i.e., the economic, political, social, or ideological), but are integral to their very organization. Deconstructing and/or reconstructing traditional dichotomies (e.g., mind/body; religious/secular) limit imaginative thinking. Because the senses are a common denominator for societal, organizational patterns, studying them is a strategy to effectively eliminate false dichotomies allowing the researcher to

conduct holistic studies of societies. An example of applying this methodology can be reviewed in Price 2023 where I argue that the social value attributed to the blue water lily and its smell developed overtime and was eventually adopted as a cultural sign that could be referenced across (cross-) cultural contexts.

How people define the nature of their senses is dependent on the way those experiences are valued. The judgements or “values” we apply to these physiological conditions depend on one’s perception of what is right/wrong, safe/dangerous, pleasurable/disagreeable, etc. These pairings, however, are not dichotomies but scales. Though our feelings have foundations in biology, our determination of these experiences are culturally contingent. Classen (1993) demonstrates this by reviewing a diversity of perception systems documented across time and space.

The term I use to qualify how the act of smell is perceived by the ancient Egyptians is its *value*. Numerous scholars have worked to define the concept of value and its usefulness as a conceptual metaphor in studying other societies, such as Smith (1994 [1776]), Mauss (1925), Marx (1977 [1867]), Kopytoff (1988), Graeber (2001), and Papadopoulos (2012). Each publication on value has emphasized how difficult it is to define the concept, defining it as either the amount of labor put in (Marx, 1977; Smith, 1994), the object’s desirability and accessibility (van Wijngaarden, 1999, citing Simmel, 1907), the material form of one’s capacity to act (Munn, 1992), or the material’s ability to attract attention or be visible (Porter, 2012, p. 336; Graeber, 2001, p. 40, citing Strathern, 1979). Regardless of the definition ultimately employed in each publication, however, they all serve to demonstrate how value is a judgment. In the same way that sensory experiences are applied meaning through context, so too is value established. Thus, I would suggest that to study value, whether economic, sociocultural, moral, or aesthetic, is to

investigate the motivations behind behavior. Per Graeber, “The point of social science is not comparing different forms of social systems but understanding what motivates human beings to act the way they do” (p. 22). Therefore, by studying the value of the act of smelling or the industry of scent, I am seeking to understand how the quality of scent motivated ancient Egyptian conceptions of acceptable or idealized behavior.

According to Graeber (2001), there are three ways to discuss value: the sociocultural, the economic, and the linguistic. Sociocultural value is defined by cultural judgements, i.e., “what is ultimately good” (p. 1); the economic value is driven by an object’s desirability; and its linguistic value is established through comparisons of ‘meaningful difference’ (2001, p. 2, p. 15). For him, a theory of value starts from evaluating actions rather than things (p. 49). He views society as having arisen from creative actions, but those which cannot be separated from their concrete, material medium (2001, p. 54). Therefore, similar to how scholars such as Butler (1988), Meskell (1996), and Joyce (2005) have discussed the body as a material display of performance, value has become the material embodiment of actions or processes.

Value is an ongoing resolution between accessibility and desirability, which is subject to alteration based on context and perspective. Therefore, the value of an experience, which is uniquely established both by our bodies’ biology and by our culturally constructed understanding of our sensing capabilities, has the ability to affect the relationships we build between ourselves and everything else. Many of these relationships are built around the procurement, production, dissemination, and consumption of goods. Thus, assessing the value of a sensory experience requires looking at a particular class of material goods that stimulate these experiences, as well as how that quality influences the organization of a culture (e.g., the scent industry). This approach permits the researcher to understand the motivation behind the creative acts which

brought the artifact into being. Therefore, if a material good embodies action—action that contributes or has contributed to any aspect of the object’s biography including the creation of social relationships—the value of that artifact is the drive within the action. Thus, I approach my dissertation and its organization with this conceptualization of embodied action, material studies, and value theory.

In framing my discussion this way, I seek to conceptualize materials as processes, through which archaeologists can access meaning or at least behavior as it is defined, maintained, altered, or reproduced through experience. This research, thus, serves as a commentary on the interrelationships of materials, agency, social constructionism, and phenomenology as they contribute to conceptions of value, all of which will be explored more in Chapter 2. What is particular about this project is that I seek to examine the value attributed to an experience as perceived by the living body and, by extension, how that (sensory) experience determines, maintains, alters, or reproduces behavior.

1.6 DOING SENSORY ARCHAEOLOGY

Scent is rarely preserved across the centuries, so it is necessary to use a mix of methods in order to conduct a study on ancient smell. Some examples of historic fragrances, however, have survived. For example, Sir William Flinders Petrie, an early twentieth century archaeologist, recorded encountering a pleasant fragrance in his excavation report of the First Dynasty pharaoh Semerkhet’s tomb at Abydos. While clearing the ramp down to the tomb, Petrie reported the sediment must have been saturated with an aromatic oil up to a meter in depth as it still gave off a faint aroma (Petrie, 1901). Another rare account of the preservation of scent through the centuries comes from Tutankhamun’s tomb. Howard Carter recorded several unguent jars whose necks had been broken off in antiquity, perhaps as part of a partial robbery.

The jars, Carter indicated, had a faint lemon scent emanating from within (Reeves and Reeves, 1995).

These records of preserved scents are extraordinarily rare and likely do not preserve the true odor of the ancient remains, but rather their state of degradation. Because of this, assumptions are made about certain materials that were likely aromatic. For example, particular vessel shapes, such as the aryballoi, stirrup-jars, alabastra, and unguentaria are traditionally thought to have been used to transport perfumed substances. Other materials like flowers and garlands, aromatic woods like cedar, and tree resins which have comparative examples in modernity can be likewise assumed to have been fragrant.

Identifying ancient aromas with some certainty requires chemical analyses of organic samples (Price, Barnard, and Muros, 2020). These tests can identify scents without visual stimuli. For example, a wig from the British Museum was analyzed chemically and it was concluded beeswax and resin was used to set the hair (Fletcher, 1998).

Gas chromatography combined with mass spectrometry (GC/MS) is a destructive analytical method that can identify the organic molecules in a sample with extreme accuracy. Other than being a destructive practice, its greatest limitation is the thermostability of the analytes, which requires samples to undergo derivatization (Price, Muros and Barnard, 2020). The GC column is coated internally with a viscous polymer and set into an oven. At one end of the column is a mass ionizer. After the sample is injected into the column, the mobile phase (a carrier gas) and the stationary phase (the polymer) both compete to contain the molecules of the sample. As the temperature in the oven is increased, the molecules detach from the polymer coating at different times depending on the molecule's weight and the temperature of the oven. Once the molecules become detached, they move into the mass ionizer and fragment. It is this

fragmentation that is reproducible. Thus, it can be compared with known patterns from a large digital library to identify the molecules that are present.

The age and degradation of the sample can affect the pattern of fragmentation, and thus make specific identifications difficult (e.g., Stern *et al.*, 2000; Stern *et al.*, 2003). This type of chemical analysis, however, can help to rewrite historical narratives based on assumptions if enough samples can be collected. For example, Regert *et al.* (2008) used GC/MS, as well as other chemical tests, in order to analyze chunks of resin found at an 11th c. site in Yemen, known through textual sources to be a major trading settlement that specialized in frankincense. Surprisingly, they tested 50 samples and only 2 were confirmed as frankincense, with the majority being East African copal. Serpico (2004) reminds us, however, that while chemical analyses such as this can identify the presence of aromatic compounds, they cannot communicate to us function. For example, the presence of resin coated pot sherds at Amarna can confirm use of these products by people from across the site (seemingly regardless of status), but not how it was used.

GC/MS can also be combined with Headspace, a technology designed to capture volatile molecules to identify organics by their scent. The volatiles are collected from a sample that is placed underneath a glass dome from which air is being continuously purged. As the volatiles are captured, they become attached to a polymer mesh, which can then be eluted with an organic solvent and subjected to analysis via GC/MS. Dudareva and Pichersky (2000), for example, employ this technology to identify the location in a flower from where odor emanates. Ancient studies incorporating Headspace are particularly promising for advancing the field as it might be a non-destructive process, though more experiments are needed (Hamm, Bleton, and Tchaplá, 2003; Hamm, Lesellier, Bleton, and Tchaplá, 2003; Burrows, 2010; La Nasa *et al.*, 2022).

Other sources of data for this research come from Pharaonic and later Classical writings, ancient Egyptian scent terminology, visual representations of scented materials and their production on tomb walls, scent containers and their two-dimensional representations, remains of raw materials and products, and ethnographic or comparative studies. Ancient Egyptian art is rife with images of scent motifs including flowers, incense, anointing oils, and unguents. Other scents are implied through images of dead people, food, vomit, and animals. Likewise, the abundance of rituals involving scent depicted two- and three-dimensionally in ancient Egyptian art such as the offering of bouquets to the dead and divine, the wearing of unguent cones, and the censuring of statues and mummies, all indicate the important role positive scents played in ritual settings.

Likewise, scent figures prominently in texts; love poetry, medical, ritual, economic, and administrative texts all record the use of scented products. A lover's scent could offer life, while a festering wound's odor might signal death. While these texts are well known to the Egyptologist, they have rarely been investigated in concert with the material, chemical, and artistic record. By studying scent in a holistic way, I will not only discuss the actual fragrances used by the ancient Egyptians but identify their use, function, and meaning.

Ethnographic work can supplement this discussion, as well. Ethnoarchaeology involves conducting research in the present in order to better understand how to ask an archaeological question. This approach helps reveal inherent biases in our research and can suggest alternatives to our interpretations of ancient materials (Wendrich, 2013). As part of this project, I conducted an ethnoarchaeological survey in Beni Suef, Egypt where I visited a production site for scented oils. This experience is discussed in Chapter 4.4.2. As a short example of how modern experiences can inform ancient research, I would like to share a brief example.

In the fall of 2018, I attended a perfume class at the Institute for Art and Olfaction in Los Angeles. The Institute has been open for ten years and its small office in Chinatown is thick with fragrance. When entering the space, you are blasted with a concentrated aroma of perfume, stronger than walking into a Bath and Bodyworks shop. It occurred to me, in that first moment of walking into this space, that if this space has only been used in perfume production for ten years, how might an Egyptian temple have smelled after centuries in operation? Would the porous stones covered in plaster hold the scents of thousands of rituals and censings? If you are familiar with working in the restaurant industry, you might know that once you leave your workplace and return home, you do not leave the scent of the kitchen at work. I imagine, similar to this type of experience, temple workers would have carried with them these divine scents which would have marked them as distinct from the masses.

Ruminations and creative wonderings like this help suggest new questions to ask of the archaeological record. These questions then can be tested archaeologically and/or through experimental archaeology. In my subsequent work with the Institute for Art and Olfaction, I have learned about the modern perfume industry and the ongoing struggle between corporate monopolies and the creative practice of individual artists. Therefore, this investigation is not only archaeological, but anthropological.

The work undertaken by me in this research is inherently biased. It demands the application of my personal knowledge and experience of smell to my observations of the ancient Egyptian sensescape. While bias may be mitigated by examining a large sample size and through the comparison of data from a variety of contexts, ultimately sensory experience is personal. Thus, the identification of products recognized by their smell in ancient Egyptian source material is determined not only by an art historical analysis of ancient imagery, an assessment of material

remains, and references to scented materials and the act of smelling in ancient writings, but also by my own cultural understanding of smell. What is important here to note is that we as researchers reflect critically on how our own circumstances influence our interpretations, and sensory archaeologies are particularly upfront about requiring this level of honesty (Tringham and Danis, 2019, p. 52). One way I seek to mitigate this bias is by comparing my observations of scented materials and the act of smelling across cultural spheres: visual representations, material remains, and written attestations. I would note here, too, however, that the less powerful leave few, if any, shreds of evidence of their access to these products and experiences so the majority of the evidence discussed in this research centers around the wealthy and powerful.

1.7 CHAPTER DESCRIPTIONS

The organization of this research follows the order of my research questions. Immediately following this chapter, I outline the theoretical framework used in this research. Many of the themes introduced in this first chapter are further elaborated in Chapter 2. I begin by exploring the extent to which our understanding of sensory experience is biologically determined as opposed to culturally constructed. Following this, I investigate why studying the senses is foundational to humanistic studies and the methods for undertaking this kind of research. After sharing a comparative linguistic study between English (American) and ancient Egyptian to demonstrate the effects a sensory system can have on cultural patterning, I indicate how a visual bias in our translations has obscured the emphasis on the physicality of experience in ancient Egyptian ideologies. I round out this discussion with a deep dive into ontological, phenomenological, and materiality studies. I review the literature of these theoretical approaches and explain their usefulness when studying the senses. The chapter concludes with an explanation of what these approaches offer Egyptology.

In Chapter 3, I identify what ideological values were attributed to scent in the New Kingdom and discuss how these values were created and maintained. In ancient Egyptian religion, divine beings were identified by their scent. Thus, kings and deceased individuals could take on a divine scent and so be accepted among the gods. Scent is conflated with breath through the nostrils, and it is in this way that scent not only reveals divine presence, but also is a moniker of life itself. While you cannot see the air someone breathes, it can be made visible through representations of scent. This is evident in the use of active and implied scents in ancient Egyptian two- and three-dimensional art.

This ability of scent to reveal one's nature is similarly present outside of strictly religious or funerary contexts wherein one's scent could communicate one's social status and/or physical location or country of origin. Examples of the application of these cultural memes SCENT=IDENTITY and SCENT=LIFE are shared throughout this chapter. Chapter 3 concludes with a discussion of how it is not only scent which marks life, but the invigoration of all the senses.

Chapter 4 addresses the material aspects of scent. In this chapter, I discuss scented material goods, how they were procured, manufactured, stored, and locally accessed by the peoples of New Kingdom Egypt. Much of the raw material used to produce perfumes had to be imported from abroad, but the difficulty in identifying ancient terminology with modern designations makes it difficult to identify exactly what materials were in use. Additionally, the emphasis on generalities when discussing aromatic products suggests the ancient Egyptians were often less concerned with specific recipes and more with the general experience of pleasant scents.

Gardens are an effective way of demonstrating this argument as the produce grown in them was not limited to edible food products. Instead, gardeners were responsible for the cultivation of produce for nourishment, pleasure, and ritual purposes. Unfortunately, the evidence for the production of scented products like unguent, incense, and scented oil is rather limited. Ethnoarchaeological surveys are thus useful for investigating the processes of production and so, included in this chapter is an overview of my work at Beni Suef, in Egypt.

Chapter 4 concludes with a case study investigating the non-literary ostraca and papyri from Deir el Medina, the village of the builders of New Kingdom royal tombs outside of Thebes. In translating examples of texts from this site related to scent and aromata, I show that this population participated in a social negotiation centered around access to pleasantly scented materials. Thus, the ideological values attributed to scent explored in Chapter 3 are reified through institutionalized access to products that exude pleasant scents. The final section of this chapter then explores how these products might have been exchanged locally within Egypt, namely in dockside markets.

In Chapter 5, I discuss the scent trade that existed between Egypt and the other major political entities of the Late Bronze Age. Here, I examine the role of foreign exchange in the valuation and accessibility of scented materials in Egypt. Ancient Egyptian propaganda obscures evidence of a merchant class which effectively limits accessibility of foreign goods. This narrative, which is unlikely to represent reality, influences the value of foreign goods by suggesting that they are only available through redistribution by the state. In this chapter, I review the evidence of an ancient Egyptian merchant class and explore the impact these individuals had on the local population's access to foreign, scented products. Ultimately, I conclude that scent could function as a social separator because, though everyone had some level

of access to desirable products, the quality and quantity defining that access determined one's status and level of influence.

In the final chapter, Chapter 6, I return to my research questions to summarize the findings from my research. Sensory studies are crucial to any humanistic investigation. The values attributed to certain experiences and the manner in which the senses are conceptualized influences society at all levels. The senses cannot be enumerated without examining them directly, though it is important to view them as part of a continuous network of interactions and scales. In ancient Egypt, scent was equated with one's nature and with life itself. To smell something pleasant was the visible and tangible manifestation of life. This cultural meme can be tracked across cultural contexts. By tracking its economic value and role in political negotiations, the extent to which scent influenced how ancient Egyptian society was organized is revealed. I conclude

1.8 A NOTE ON TRANSLATIONS

All translations and transliterations used in this text are my own unless otherwise noted. All hieroglyphs were created by me using the JSesh Hieroglyphic Editor 6.5.5. I use the classification system designed by Gardiner (1957) when referring to specific signs (e.g., D19 for a human nose). For transliterations, I use the transliteration font Trlit_CG Times, which is available for download here: <https://dmd.wepwawet.nl/fonts.htm>. Many names for products (e.g., *sntr*) are transliterated, though may sometimes be written using standard Egyptological publication spellings (e.g., *senetcher*).

I have based most of my translations on hieroglyphic transcriptions of original texts, such as from Kitchen's *Ramesside Inscriptions* (hereafter, KRI) (1969–1990) and Gardiner's *Late Egyptian Miscellanies* (hereafter, LEM) (1937). References in this text to these publications

include the original line numbers and page numbers of the transcription. Liberal use of the databases Deir el Medina Online (https://dem-online.gwi.uni-muenchen.de/index_e.php), which includes the complete corpora of the Qurna and Berlin ostraca, and the Deir el Medina Database (<https://dmd.wepwawet.nl/>) were used to study scent references in the papyri and ostraca of Deir el-Medina. Where images and/or transcriptions were unavailable on these databases, other compendia were consulted and are cited appropriately.

I follow standard diacritics when transliterating and translating ancient Egyptian texts. Square brackets “[]” indicate text that has been supplied though is missing in the original text. Square brackets with ellipses “[...]” represent areas in the text that are too broken to read. Parentheses in translations indicate words added to render the text legible in English but are not present in the original text. Suffix pronouns are marked as *sdm=f*.

Some definitions of terms are based on database entries in the robust database *Thesaurus Linguae Aegyptiae* (TLA; Hafemann *et al.*, 2012). This database incorporates the *Wörterbuch der Aegyptischen Sprache* (*Wb*; Erman and Grapow, 1926–1961), *Die "7-Heiligen Öle" und andere Öl- und Fettamen* (Koura, Öle; Koura, 1999), and the *Late Egyptian Dictionary* (Lesko; Lesko and Lesko, 1982) among other standard resources.

Primary texts are identified by their museum accession number where possible. The identifiers “recto” and “verso” designate where the reference was located in the original text. For material from Deir el-Medina the designation “O.” indicates an ostrakon and “P.” indicates a papyrus (e.g., O. BM 5637; P. DeM V). When citing papyri and ostraca, I use the inventory number rather than the publication name where possible.

2 THEORIZING AN ARCHAEOLOGY WITH THE SENSES

The senses, as understood today, occupy a unique space between the biological and the cultural. Before being able to identify their exact nature, it is important to establish the manner in which the following study approaches them. In this chapter, I first explore the extent to which our understanding of sensory experience is biologically determined as opposed to culturally constructed. In the next section, I discuss the methodologies for studying the means by which our bodies experience the world and the cultural values attributed to them. I begin with a look at the importance of metaphor, particularly in language, as a way of introducing the reader to 1) how ancient sensory experiences can be studied; and 2) the extent to which sensory experience can influence the organization of society.

After presenting a short case study to illustrate these two points, I move on to establishing my understanding of ontology, phenomenology, and materiality, how these theoretical approaches to archaeology have been employed in the literature, and how I find them useful for the study of the senses. Following this, I discuss more explicitly how sensory experience, and in particular the experience of scent, has been studied within Egyptology, itself.

The senses are culturally constructed and, thus, exist in a cyclical relationship with a society's values, wherein they both influence and are influenced by established cultural patterns or norms. Because the body's sensing capabilities originate in biological processes, however, they are often invoked through metaphor as a way of connecting that which seems "natural" (e.g., the smell of a rose) with that which is more abstract (e.g., love). To study the senses in ancient contexts requires the researcher to be aware of such cultural patterns and norms, both within their own culture(s) and the one under study. I would note here that in the following study

I use the descriptor “cultural” as synonymous with something learned in a specific, shared environment.

Many scholars have applied methodologies that focus on ontology as opposed to epistemology, such as phenomenology and materiality, but even this dichotomy that often posits the mind (epistemology) against the body (ontology) is false. In this case, epistemology references how knowledge is created and what it is possible to know whereas ontology addresses ways of being in the world. Instead of focusing on the differences, I instead explore how the spectrum of experience encompasses both ontologies and epistemologies. Within Egyptology, scholarship on the ontologies of the ancient Egyptians is rare. In seeking a deeper understanding of the experience of scent, I define the value(s) of this sense by examining its cultural expressions through a phenomenological lens.

2.1 CULTURALLY CONSTRUCTED SENSORY SYSTEMS

Archaeological materials that at first glance may seem recognizable often tempt the researcher to employ anachronistic interpretations in their analyses (Insoll, 2007, p. 9). This approach can be problematic because meaning is subjective, and it can vary significantly from one person or culture to the next. We struggle with such severe variation particularly when trying to assess ancient sensory experiences (MacGregor, 1999; Tilley, 1998, 2004; Ingold, 2007; Hamilakis, 2013; Skeates and Day, 2019). While the five-sense system, popular today, may seem to be common generally to the human condition, the values attributed to sensory experiences rarely translate well between contexts (Meskell and Joyce, 2003). This mistranslation is likely the result of how the material world can never be divorced from our perception of it, nor the language we use to express it. Rather we exist as “a mind *with* a body,” (Merleau-Ponty, 2004, p. 56)—thus being dependent on our bodies to perceive the world. The objects of the world are not

neutral objects but have ascribed values assigned by the various peoples who create and interact with them. Furthermore, these values are essentially judgements that provoke “in us reactions which are either favourable or unfavourable” (Merleau-Ponty, 2004, p. 63).

According to Kemp (1993), it is our cultural milieu which determines how we establish value judgments. He writes, “all avenues of perception are present in each one of us, but the use we make of them, and the value that we give to them, vary according to our culture“ (Kemp, 1993, p. 2). The human body, according to its biology, is a universal, albeit one susceptible to mutation or alteration. Its ability to react to and perceive the world in which it is embedded is here assumed. Per Western tradition, our distrust of the body’s sensing capabilities was cemented in the Enlightenment period of the Seventeenth century. A debate between two of the prolific writers of this era, René Descartes and Immanuel Kant, centered on whether or not the senses rather than logic and reason were reliable when seeking to understand reality. Kant, born after Descartes’ death, coined the phrase “transcendental idealism,” which argued that perception is more trustworthy than our own reasoning for the simple fact that it is the only way in which we can *be* in the world. Previously, Descartes stated that the senses were unreliable. In *Meditations I* he offers the example of dreams as a way of invoking how untrustworthy our senses are. If you can feel and see in your dreams similarly to how you feel and see in waking, how do we know when we are awake? (*Meditations*, I.5). He presents a second example invoking a philosophical problem similar to that portrayed in the *Matrix* film franchise, in which he explains how a higher power may purposefully be deceiving our senses to the extent that our bodies may not even exist (*Meditations*, I.8–10).

According to Descartes, even though the senses are useful in informing the mind of what is beneficial or harmful, as well as for aspects of the scientific process, like observation, we can

trust only to our reasoning and logic to perceive and make judgements about the essence of the world (*Meditations*, 6.15). This binary way of thinking underlies the dichotomies found in essentialist research, such as mind/body, meaning/experience or reason/emotion, which limit and bias our understanding of other peoples and their cultures (Pink, 2015; Meskell, 2000; Harris and Cipolla, 2017).

In actuality, the world is greyer than the picture painted by this dispute between Descartes and Kant, as aspects of both of their arguments have merit. The *Interface Theory of Perception* suggests that our senses in fact do perceive the material world in a biased form, though they evolved to be misleading in this way intentionally. The goal of perception is not to view the world as it really is, but in such a way that helps us to survive. Hoffman *et al.* (2015) offer a computer screen as a metaphor, likening our senses to icons on a desktop. These icons help us to navigate the digital world, despite not being true representations of the behind-the-screen processes that the computer is running. Rather, this type of display is the most efficient method for achieving our goals in the present context.

So, then, we must ask ourselves to what extent is the world of perception distinct from reality, being biologically defined as opposed to culturally constructed? If the way we perceive is something to which we rarely pay direct attention and thus is a process that simply runs in the background like a software update or breathing and sneezing, then perhaps perception is a universal, biological given, albeit a biased one.

John Locke and William Molyneux explored this idea with a thought experiment in which they questioned whether an individual who was blind since birth and had their sight restored would be able to identify a sphere from a cube without touching the shapes. Such a query questioned the extent to which the judgments based on our bodies' sensory experiences are

innate or learned. Both Molyneux and Locke concluded that mapping sight unto previous experiences of touch is likely a learned behavior and so the answer to this thought experiment must be no (Locke, II.9). In 2011, an experiment was undertaken in which five participants whose sight was restored confirmed Locke's and Molyneux's original hypothesis (Held *et al.*, 2011). This experiment had an extremely small participant count; however, a more thorough study understandably would have been quite difficult to carry out. Regardless, what is apparent from this discussion is that sensory experiences cannot be assigned as either fully a biological or cultural phenomena. Rather, these experiences inhabit the in-between, both simultaneously establishing and being established by the cultural bodies from which they originate.

According to Riggs (2010), the body is a physical object through which a "self" engages with the world in which it is embedded. This perspective, however, differentiates between the "mind" (or self) and the "body," reifying a false dichotomy (Finnestad, 1986; Kus, 1992, p. 175; Hamilakis, 2013, p. 10, p. 113). Rather the body, with its sensing capabilities, is the critical junction between ideological concepts (nature/nurture; mind/body; reason/emotion) that are in truth inseparable though in practice are often distinguished. A discursive, rather than dialectical, relationship exists along the fluid plane of experience. The cultural body, thus, is the "political, social, and cultural object par excellence, not the raw, passive body that is overlaid and inscribed with culture" (Meskell, 2000a, p. 177). By studying the sensory capabilities and experiences undertaken through and with the body, the researcher might examine the cross-roads between the agency of the individual and the structural aspects of societal life. The sensing body actively constructs but also is restrained by social relations and is all the while mediated by material culture (Meskell, 2000a, p. 180; Joyce, 2005; Hamilakis, 2013). Therefore, we might examine

this continuum to reveal the 1s and 0s that establish and are established by our own particular cultural worlds, and how these processes change with context.

2.2 ACCESSING SENSORY PERCEPTION THROUGH LANGUAGE

The question then becomes how we study the sensing body. The following chapters are meant as an exploration of this very question. The methods employed in the following research do not represent a “paradigm shift” in archaeological methodologies (Howes, 2006, pp. 114–115; cf. Harris and Cipolla, 2017). Rather, the traditional methods employed in archaeological and anthropological analyses are used here, namely textual, art historical, phenomenological, experimental, and comparative studies. The purpose of this choice is to demonstrate how an archaeology of the senses should not be considered a distinct field, but rather completely integrated into the field itself. The sensing body is the foundation of human culture. Thus, if we define one of the many purposes of archaeology as, “reconstructing ancient lifeways,” (Binford, 1972, p. 79) then it is impossible not to consider the roles sensory experiences play in human societal life.

Kus (1992) was an early proponent of this perspective. Kus discusses how symbols, their material manifestations, and associated “routines of the state” can reveal to us the “constitution and control of sensuous human activity in different sociohistorical contexts” (Kus, 1992, p. 176). As discussed in the introductory chapter for this thesis, I explore the scent industry across various contexts as a way of defining the extent to which the manipulation of sensory experience by powerful entities affects the organization of a society. One way I seek to do this is through the symbolic integration of the experience of scent into contexts such as art, language, and material culture. By calling on the remains left behind by the “indigenous intellectual specialists” (i.e., those who were embedded within the culture under study), it might be possible to track the

“deliberate mapping” of the tangible experiences of the ancient Egyptians onto their ideological norms (Kus, 1991, p. 176).

In illustration of how such an approach will be employed in this thesis and in consideration of the discussion above about the effects a sensory system can have on cultural patterns, I now will take a short look at sensory bias present in the English language. This short case study on English perception metaphors will highlight how cultural values attributed to various sensory experiences through metaphor both establish and are established by our embeddedness in our societies. A metaphor is a “mechanism that allows us to think and talk about one thing in terms of another, ratcheting up the cognitive and expressive capacity of humankind” (O’Meara *et al.*, p. 1). Often, metaphors function by taking something abstract and communicating it in terms of something concrete. For example, Shakespeare’s rendition in *As You Like It* of the famous metaphor “All the world’s a stage, and all the men and women merely players” (Shakespeare, Act II, scene 7) takes the vast, indefinite nature of the world and equates it to a stage, which is a concept familiar to the audience currently viewing the play being performed on a stage. Men and women are manipulated by the script writer and/or director as mere actors rather than as free agents. We see here the metaphor acting as a metaphysical pun, layering several depths of meaning onto a single phrase. We will see momentarily that the ancient Egyptian language functions similarly.

Let me introduce here, too, the concept of embodied cognition, which claims that both thought and language are based on how the body interacts with its environment. O’Meara *et al.* (2019) provides a clear overview by citing several important publications on the topic. They discuss how meaning is attached to our thoughts through “sensory and motor representations” (p. 2). I introduce this idea here because perception metaphors, i.e., metaphors involving sensory

words, are one way this meaning gets established. O’Meara *et al.* (2019, p. 2) writes, however, that such “embodiment perspectives” cannot account for the diversity of meaning produced by language across cultures—a perspective that seems to emphasize the biology of our sensing capabilities rather than their culturally-dependent values. I would suggest that this conclusion purports a limited understanding of what “sensory representations” truly embody. Were the senses not limited to our Western notion of the categorical five, then it would be less surprising to find languages with “honed vocabularies for texture distinctions” or those that “treat the supposedly ineffable world of odour as something that is, in fact, highly codable (Majid and Burenhult, 2014)” (O’Meara *et al.*, 2019, p. 2). Just because two cultures share a recognition of the ability to *smell*, the value attributed that experience varies from one person, place, moment, or culture to the next.

Perception metaphors are useful then for understanding the diversity of ways humans use language to conceptualize experience (O’Meara *et al.*, 2019, p. 9; Classen, 2019). Let us consider the following phrases common to the vernacular English spoken in the United states: “a loud outfit;” “I see what you mean;” “this project stinks;” “a good taste in clothes;” “a rough day,” “smells fishy“ “a sharp smell,” “a warm thought,” “a heated debate,” “a silky voice,” “a sour note,” “the sweet smell of success,” “the stench of failure,” “a salty comment.” These metaphors demonstrate how deeply our understanding of character traits is affected by our conceptualization of sensory perception (Classen, 2019, p. 23).

While some of these examples make the more abstract (e.g., something suspicious), more concrete (smells “fishy”), others do the opposite, often invoking synesthesia to do so (e.g., a “loud” outfit, equating a visual cue with an auditory one). Of particular interest here is how sensory-related words are used to convey elements of cognition or internalized states (stench of

failure, warm thought). Often, the English language relies heavily on visual terms or words with visual etymologies for this purpose, such as the words “point of view,” “overview,” “focus,” “speculate,” and “idea” (Classen, 2019, p. 24). Thought is here being conceptualized in terms of sensory experience and is not distinct from it. As Classen wrote, “The exploration of how we grope to express sensory experience through language, and to convey non-sensory experiences through sensory metaphors is revealing not only of how we process and organize sensory data, but also of the sensory underpinnings of our culture” (2019, p. 26). Such nuances of language are often ignored when it comes to the study of ancient cultures, and yet it is clear from these few examples that how the values of sensory experiences are established have not only linguistic, but cognitive (and, by extension, structural) implications.

Let us consider the example put forth by O’Meara *et al.* regarding pitch. In English, pitch is described as being high or low, but this is not universal. According to O’Meara *et al.* (2019), Farsi speakers use thin and thick to describe pitch, the Kpelle use light and heavy, and the Suyá use young and old (p. 9). If we really consider these other ways of describing pitch while being able to hear in our minds already what is invoked by a “high” or “low” pitch, then it should be possible to translate our spatial understanding of pitch into a more physical form (e.g., thin/thick) or a personified one (e.g., young/old). Words are useful in describing experiences, but there is more at stake here than only language. If I can describe a pitch as thin and thick, rather than high and low, and you still can recognize that thin is to high as thick is to low, even though it would be strange in the US to describe a bass line as thick, what does that mean for how musical audition is experienced and/or conceptualized? It is through investigating these variations in metaphors that we can reach this depths of meaning.

Returning to scent, let us note how in the list of English sensory metaphors above, the examples involving scent are mapped on to phenomena that are either negative or positive. Of particular note, Smith (2009) and Corbin (1986) have discussed the ramifications of associating either positive or negative feeling toward scent in the attribution of status to particular groups of people through metaphor. For example, Smith in his book *How Race is Made* (2009) discusses how we often conceptualize race as a visual category. In examining the history of slavery in the United States, however, he demonstrates how this is far from the whole picture. Rather the attribution of negative experiences (e.g., loud noises, unpleasant smells) to particular groups of people (in this case, slaves), serves to legitimize their isolation or inhumane treatment. In this way, the sensory experiences of select groups can be created and then employed to maintain social hierarchy structures. Classen (2019), too, recognizes the potential power scent could have were it to be manipulated:

There are relatively few olfactory terms in English and many more refer to bad smells...than good smells. In fact, there is a tendency for smell words to acquire negative connotations in English. To *stink*, for example, once meant to emit any odour, bad or good, and now means only to emit a bad odour...Why should the connotation of smelly be negative, while that of tasty be positive? The answer may be in part that we are confronted with foul smells more often than we are confronted by foul tastes. We can choose our food, but we cannot as readily close our noses to bad smells” (p. 20).

Classen discusses here how to smell is often associated with negative experiences in the English language. Of course, there are exceptions, but even these sometimes require additional adjectives (e.g., sweet smell of success). She suggests this may have to do with how difficult it can be to avoid bad smells. Therefore, scent might function as a tool of the powerful in the ordering of societies, which we will explore in the following chapters. How poignant, then, it is to consider the power structures inherent in describing a race of people as carrying a particular smell, as seen in Smith’s example mentioned above.

Additionally, we can compare this investigation of the English language with the use of scent in the language of the Jahai peoples of the Malay Peninsula (Majid and Burenhult, 2014). Rather than scents being used to describe a binary world of goods and bads, the Jahai people organize their society around a heightened awareness of scent, particularly in connection with their environments. Majid and Burenhult carried out a study which sought to understand if several Jahai speakers could identify odors similarly to the English speaking participants' ease of identifying colors. The study concluded that "Jahai speakers could name odors with the same conciseness and level of agreement as colors" (p. 269). Thus, one's personal way of understanding the experience of scent is not universally applicable, the Jahai system being only one example (Levinson and Majid, 2014; Wnuk and Majid, 2013).

Let us now look to the ancient Egyptian language where we will consider briefly how their sensory metaphors often emphasize the physicality of experience, the relative importance of distance, and the connection of physical and spatial positioning to emotion. These metaphors elicit a connection between the body's movement and cognition, in which the actions of the physical body communicate internalized states of being. Our modern translations of these phrases into English often obfuscate the concrete nature of the lexicography, offering only the emotional or experiential states in translation rather than the equation of the physical with the cognitive. Consider these few examples:

TABLE 2-1. LITERAL VERSUS NON-LITERAL TRANSLATIONS OF ANCIENT EGYPTIAN PHRASES

| Transliteration | Literal Translations | Typical Translation | Example |
|-----------------|-----------------------|---------------------------------|----------------------------|
| <i>phr h3tj</i> | Go around the heart | Sympathize | <i>Wb I</i> , p. 544.14 |
| <i>phr h3</i> | The head goes around | To care about; to pay attention | <i>Wb I</i> , p. 545.11 |
| <i>sn t3</i> | Smell/Kiss the Earth! | Bow! | <i>Wb IV</i> , p. 154.8-24 |

| | | | |
|---------------------------|---|---|----------------------------|
| <i>m b3h</i> | [To be] in the foreskin. | Bow! | <i>Wb</i> I, pp. 420-421 |
| <i>jmj jb=k</i> | Give your heart | Be considerate | <i>Wb</i> I, p. 60 |
| <i>d/tp</i> | Taste | Taste, but also pierce/bite into | See Steinbach-Eicke (2019) |
| <i>bn h3ty=k m ht=k</i> | Your heart is not in your body | Your sense is no longer with you | KRI VI, p. 216.7 |
| <i>z mh n jwty h3ty=j</i> | ...a man who knows not of my heart being non-existent | One ignorant, without sense | KRI III, pp. 772–3 |
| <i>ε3wt jb</i> | Wideness of heart | happiness | Medinet Habu 9, p. 218 |
| <i>hry jb</i> | In/upon the heart | In the midst | <i>Wb</i> III, pp. 137-138 |
| <i>dnd</i> | Angry like a bull | Angry | PT 260, p. 319b |
| <i>jmj-rd</i> | Sin the leg | impediment | PT 260, p. 322a |

While some of these literal translations make little sense to the modern researcher, prioritizing the cognitive or emotional meaning in translation obscures the physicality inherent in these perception metaphors. Consider the word *h3tp*, which is often translated either as “offering” or “satisfaction” depending on context (*Wb* III, pp. 183–196; Davies, 2018). As *h3tp* is written similarly regardless of its meaning, perhaps rather than identifying “offering” and “satisfaction” as semantic variants, they would be better identified as different nuances of the same word. Put another way, rather than “offerings” and “satisfaction” being categorically separate, one being a physical object(s) while the other a state of being, *h3tp* may always mean both “satisfaction” and “offerings,” though the emphasis might shift based on context. To me, translations are inherently rampant with apperceptions. Thus, it is important to reflect on how our own categorical and sensory systems influence the way we translate texts. As I will discuss throughout this

investigation, the ancient Egyptian sensory framework emphasizes the physicality of experience as if our sensory experiences are a physical presence in the world with which we interact through our bodies. Awareness of this phenomenon begins with our translations. Furthermore, the multivalence inherent in this lexicographic system partially results from the use of recognizable signs in the writing of words, which makes such neat, categorical divisions impossible (Goldwasser, 2005, 96). Thus, we might conclude that metaphor and its ability to create metalinguistic meaning is a true underpinning of society.

We see how metaphor is basic to the ancient Egyptian language itself through Goldwasser (2002, 2005)'s discussion of determinatives. Determinatives are visual, silent icons included at the ends of written words in the ancient Egyptian script that provide categorical context. Thus, a stylized hieroglyph showing the tail and hide of an animal (Gardiner sign F27) typically will be found after the word for an animal, such as in the word for "dog" *ḏs*. Goldwasser (2005) writes that determinatives are an "intensely motivated, highly constrained categorization system referring to conceptual nonlinguistic configurations" (p. 95). So, for example, she states how there is no word for "animal" until the introduction of the Coptic language, but there is a cognitive category for what we would identify as an animal today given that this particular sign is used as a silent addition to animal-words (Goldwasser, 2005, pp. 102–104).

Determinatives can act both as metaphors and as iconic representations of semantic values. For example, putting the hieroglyph for a one room house at the end of a word for a building as a determinative is not strictly a metaphor. Rather, metaphors add depth of meaning to the written word, moving beyond the physical and/or linguistic, into the metaphysical and cognitive. For example, the ancient Egyptians had several words for "angry," one which uses a monkey determinative, and another a bull. Goldwasser writes that the scribe must select one in

order to “refine the description of the type of anger involved” (Goldwasser, 2005, p. 104).

Goldwasser suggests a person angry like a monkey may be loud and showy, but not so dangerous, whereas one angry like a bull might be less boisterous but more menacing.

Such analysis moves our understanding of the ancient Egyptian language beyond the linguistic and into the conceptual. The depth of meaning would be lost were we to only translate such phrasing as “angry.” Additionally, in not acknowledging the physical basis of many of these perception metaphors, valuable information is lost. For example, such information might be useful in understanding the difference, should it exist, between the two words for “heart” in ancient Egyptian by seeking to understand their role in metaphor (Riggs, 2010; cf. Faulkner, 1973, p. 12: CT 20, Note 3).

While the classification of words by determinatives is far from static or even consistent, determinatives demonstrate the combining of the physical with the cognitive through metaphor (Goldwasser, 2005, p. 102: “alternative classification”; Relats-Montserrat, 2014, 2016; Incordino, 2017). In Montserrat’s studies of Gardiner sign D19 (2014; 2016), he concludes that words which take this determinative are related to the nose, respiration, opposition, and feelings. We will see in the following chapters how the links between the sensory act of smelling (and by extension, breathing) is not so divorced from the emotions evoked in the words that use this sign (joy, etc.). Rather the connection between LIFE-BREATH-SMELL-HAPPINESS (as well as the opposite DEATH-LACK OF BREATH-STENCH-UNHAPPINESS) is shockingly consistent across contexts for the ancient Egyptians, as if this metaphor were an organizing factor in their society. In the same way I will argue the image of a flower indicates the presence of its smell, so too these determinatives and perception metaphors reflect a presence beyond the obvious visualization (lexeme/icon) or audition (metaphor vs. verbal speech), rather invoking additional

layers of significance that require fluency with cultural memes and/or cognitive structures in use at that time.

Goldwasser (2005, p. 106) offers *sr* “giraffe; foresee” as an example of ancient Egyptian words carrying extended layers of meaning. *sr*, which is typically written out phonetically with a giraffe hieroglyph as the determinative. Giraffes, needless to say, are very tall with long necks and large eyes situated in such a way that they have superb peripheral vision. Such animals are able to ‘foresee’ dangers, or at least, see across a great distance. This biological fact is used in the ancient Egyptian language as a semantic metaphor, wherein the same word for giraffe is likewise used as “foresee; foretell.” Thus, it would read something like “to foretell (foresee) is to see like a giraffe” (Goldwasser, 2005, p. 106).

Similarly, I would like to emphasize a specific conceptual metaphor that appears in some of the examples from Table 2-1, which relate physical distance to states of being. Let us take the act of bowing as an example. Instead of or in addition to phrases of praise and worship, a supplicant is often described as kissing/smelling the earth. Rather than using the word meaning ‘to bow’ (*ksw*), the ancient Egyptian language places the focus on an external reference point, either the foreskin of the one being worshiped (*m bꜣḥ*) or the earth before their feet (*sn tꜣ*). The emphasis therefore is on the distance of the supplicant to that which is being praised, rather than their own body’s positioning. This metaphor of using sensory experience to establish distance as a way of communicating emotion will be taken up again in the following chapter.

As discussed at the start of this chapter, how sensory experience affects us is influenced intentionally and unintentionally by the cultures in which our bodies are embedded. This analysis of how language reifies how sensory experience is valued within a society is particularly relevant to the current study. This is because of the tendency in English translations to maintain our

vision-centric organizational patterns, which biases our translations of ancient Egyptian texts. This cannot be made clearer than by referencing the same examples given above (Table 2-1) wherein the affinity for using sensory experience in metaphors related to physical distance is completely lost, as in the translation “being considerate” as opposed to the more literal translation, “giving your heart (away).”

The implications of this bias in our sources have led to translation choices that give precedence to a cognitive model that values reason over emotion—ultimately obscuring the ancient Egyptian cultural model, which did not ascribe to a mind/body division. Rather, the ancient Egyptians seem to have emphasized their bodies’ roles in the perception of lived experiences.

Additionally, such non-literal translations obscure the concrete reality of sensory experience emphasized in the language of the ancient Egyptians, and so, by extension, their beliefs and the organization of their society. In illustration of this assertion, take for example this story set in the workmen’s village of Deir el-Medina. In it, the high priest Khonsu-em-heb is met with an unhappy *ꜥḥ*-spirit of a Middle Kingdom official whose tomb has decayed. When Khonsu-em-heb realizes how awful death really is, the story reads:

[wn.jn ḥm-nṯr tp n Jmn-Rꜥ nswt-nṯrw] ḥn-sw-m-ḥb ḥms rmy r-gs[=f m ḥr nꜥ] [...] [pꜥ ꜥḥ r-dd] [...] nn wnm nn swr nn [kḫkḫ] nn rnn nn mꜥꜥ stꜥ n jtn nn ḥnm [mḥyt] wn kk n ḥr[=k] rꜥ nb nn dwꜥ=sn r šmt

[Then the first high priest to Amun-Ra king of the gods] Khonsu-em-heb sat and wept beside [him (i.e., the spirit), with a face] [...] [he addressed the spirit saying], “[how miserable are these spirits] without eating, without drinking, without [growing old], without youth, without seeing the light/warmth of the sun, without smelling the North Wind. Darkness is in [your] face every day and they shall not rise early to go forth (Translated by author; Beckerath, 1992, II,3-III,2; McDowell, 1999, p. 150).

Such description indicates that life is in fact the opposite of death wherein all physical experience is lost. In the story, Khonsu-em-heb bemoans the lack of care taken on behalf of this deceased person, whose tomb has decayed and who no longer receives offerings. Because no connection to the physical world is left to the spirit, the description recorded in this excerpt is all that is left to the deceased. The body is built up here with touch, smell, vision, movement, taste, and vigor. To understand this value placed on the body is to begin to understand the ancient Egyptian way of being. In this way, life, and, by extension, death, is marked by the experiences that the body undergoes. The ancient Egyptians sought to preserve the body and revivify it as a sensing being to offer life to the deceased.

2.3 ARCHAEOLOGY WITH THE SENSES: A THEORETICAL APPROACH

Hamilakis (2013) suggests that the incorporation of the senses into archaeological study requires a paradigm shift and a move from a focus on epistemology to ontology (p. 203). The sensory qualities of materials, he argues, divorces material objects from their period of creation and use, giving them a timeless aspect and an ever-changing role. His approach requires the researcher to be open about their own biases, encouraging scholars to incorporate personal experiences in academic writings. He does this to great effect by including italicized snippets of personal experiences and ruminations that inform, inspire, or illustrate his analyses. The senses, he argues, bridges the divide between the internal world of the individual and the external world by incorporating a “trans-corporeal flow.” Furthermore, the senses cannot be enumerated as they rely on one another to define an experience. Rather, it is with this “intersensoriality” that people engage with their world, like McHugh (2011)’s discussion of the visible element of burning colored pastes in India.

Hamilakis and I agree that the senses help bridge the essentialist dichotomies, such as mind-body, subject-object, internal-external, agency-structure, that commonly appear in theoretical, archaeology publications. I would go further, however, to suggest that even the line dividing epistemology from ontology becomes blurred when considering sensory experience. The trans-corporeal flow disallows the separation between the experience itself and how we think about that experience before, during, and after its occurrence.

The senses are the method by which living beings engage with the world, but the judgments we place on those experiences are directed through comparison with the memory of our other experiences, namely our cultural contexts. It is for this reason that sensory systems can vary so drastically from one culture to the next. These judgments we place on our experiences, or rather the values we attribute to particular experiences, create, but also maintain and reproduce, our cultural contexts. This model leaves space for changes to take place within a cultural context due to the consequences of remembering and forgetting, which can be manipulated through changes in material culture (Wobst, 2000; Mills, 2008). Thus, these shifts alter our value judgments.

Unlike Hamilakis (2013), I believe sensory experiences can be enumerated should the emic context be explicit enough to allow for understanding individual senses. For example, Joanne Murphy (2013) discusses the role of perfume at the palace in Mycenaean Pylos, which was renowned for its perfume production. Material, written, and iconographic evidence accord perfume a high status through restricted access. Murphy concludes that the scent of perfume, which would have pervaded the palace, maintained a strict social hierarchy that divided those who could access and wear these scents from those who could not. Furthermore, the intangible nature of scent is what made these social divisions so difficult to break. Scent and its ability to

identify status is based on belief rather than biology. We might support this suggestion by invoking Michael Mann's (2012) theory of social power that suggests ideological power is the strongest form of power because it is difficult to disprove due to its inherent ambiguity. He writes, "You can't argue with a song" (Mann, 2012, p. 23, citing Bloch, 1974), or in this case, a scent. Thus, in this context, the scent of perfume can be demonstrated to have held importance within the Mycenaean sensory framework and so can be enumerated separately. I am not suggesting, however, that a single sensory experience might operate in isolation, only that important conclusions can be made by examining a single sense. I recognize that, for example, other experiences combined with that of scent might emphasize or detract from its perception, such as movement, temperature, or visual effects (Galczynski and Price, 2023).

There are several edited volumes that have been published on archaeology and the senses (Fahlander and Kjellström, 2010, Betts, 2017, Pellini *et al.*, 2015, Skeates and Day, 2019). Day (2013a), in particular, incorporates a series of very well-written articles that employ a variety of theories and methods for studying archaeology and the senses. From sound produced by rock art (Allen *et al.*, 2013) to Minoan ceramics shaped like flowers enhancing their content's aroma (Day, 2013b), to architecture influencing the experience of scent (Mongelluzzo, 2013), and to the ethnographic experience of bull sacrifices in Spain informing one's understanding of Roman ritual sacrifice (Weddle, 2013), there is no shortage of creative ways for approaching the sensory past. In reading these chapters, it becomes clear that sensory archaeology need not have a single theoretical paradigm to follow as it is not an approach that should be treated in isolation. Rather examinations of ceramic assemblages, architecture, iconography, or ethnoarchaeological studies are all ripe for sensory analysis.

Furthermore, the study of the senses is not a side-show to archaeology and should not be considered a short-lived theoretical fad. Being the only way our bodies can engage with the world around us, it is surprising that the incorporation of sensory data has taken this long to gain the theoretical spotlight. Furthermore, for anyone who has ever licked a pot sherd to see if it is actually a rock or listened to the sound it makes when hit with another pot sherd to identify it (“metallic ware”), sensory considerations have been a part of archaeological excavation since the beginning. What the articles in Day’s book show and what Hamilakis also acknowledges, is that an “archaeology of the senses” is more realistically an “archaeologies of the senses.” Yet, where I draw the line is divorcing this approach from traditional approaches to the past, as these will benefit greatly from considering the senses.

Since the publication of the books by Day and Hamilakis in 2013, it is now possible with some distance to understand the larger developments that this approach to archaeology has undergone. In particular, sensory archaeology has developed similarly to feminist archaeology in the 1990s and early 2000s (Tringham and Danis, 2019, pp. 50-51). Margaret Conkey and Ruth Tringham (1995) criticized early feminist archaeology for only adding women into the dominant, androcentric paradigm ubiquitous in archaeological theory at the time. They also pushed back against simply identifying particular activities or materials as “feminine.” Rather they charged archaeologists to reconceptualize their field: researchers should always be engaging with gender, both in fieldwork and in scholarship, while investigating how and why cultures change (Conkey and Tringham, 1995, p. 205).

This “engendered archaeology” (Conkey and Tringham, 1995, pp. 205–206) thus serves as a cautionary comparison for sensory studies in archaeology. Sensory archaeology is at risk for being criticized for the same two reasons Conkey and Tringham (1995) suggested this “goddess

movement” in feminist archaeology was criticized for in the early 1990s. Firstly, feminist archaeology was criticized for the “add women and stir” approach that squeezed gender issues into existing, often androcentric paradigms. Secondly, it was criticized for contributing to the “gender attribution” model that tacked on gender as an additional descriptor without considering any of the extensive theoretical resources on gender already accessible at the time. If we examine the recent history of sensory archaeology, it is apparent that we are at risk for falling into a similar pattern. We must not simply tack on sensory research onto existing models, but reconceptualize and contextualize sensory experience through and by means of our research. Similarly, a “sensory attribution” model in which sensory experiences are enumerated but not investigated for their implication in the greater social context brings very little new information to the metaphorical table.

As Conkey and Tringham write:

Are we not, in fact, facing at least two separate but interwoven tasks: first to demonstrate that gender is archaeologically “visible,” that is, to construct an archaeology of gender, and/or second to challenge disciplinary paradigms, structures of knowledge and bias, that is, to develop an engendered archaeology, a theorized, self-reflexive archaeology that takes gender and difference as crucial? (Conkey and Tringham, 2005, p. 204).

This passage easily could be rewritten to be applicable to sensory archaeology. First, the senses must be identified in the archaeological record and then this work must be reworked into a critical and self-reflexive approach to the past that considers sensory experience and its many variations crucial to any study of the past.

In my work, I seek to understand the ancient Egyptian sensory framework. By sensory framework I mean a system of understanding and manner of engagement with the world that our bodies submit to in order to internalize knowledge of our environment and which in turn is attributed value through our environmental and cultural context. If it is always through our

bodies that we experience the world, must not that affect our understanding of it? Thus, I argue in order to better access the ancient experience, we must first uncover the manner in which they understood how they engaged with the world as this system will affect every aspect of their past.

I am not suggesting a paradigm shift away from traditional archaeological concerns like politics, economics, or material studies. Rather, I am simply asking the researcher to take a look at old questions in new ways to answer fundamental inquiries as to the nature of what it means “to human” (Ingold, 2015). A culture group’s understanding of their sensory system necessarily biases all the information they produce and the materials they create and with which they interact. Yet, in archaeology, a field that professes to investigate past peoples, scholars rarely have sought to understand these ancient sensory frameworks despite their importance in dictating life-ways and organizing systems of value (Price, 2018).

Phenomenology has had a larger presence in archaeological methodologies—an approach which likewise seeks to understand ancient ways of being. Phenomenology’s complicated history makes it impossible to define singularly (Harris and Cipolla, 2017), however, Tilley and his 1994 publication on the *Phenomenology of Landscape* often serves as the standard citation for the incorporation of phenomenology into archaeology. In this publication, Tilley explores how meaning is constructed through his experience of place. He defines phenomenology as the study of the relationship of being to being-in-the-world. It is with perception through the body that these concepts can be bridged, whether through sensory experience, movement, judgment, or memory (Tilley, 1994, p. 12).

Tilley’s 1994 publication has received serious criticism over the years (cf. Bradley, 2000, pp. 42–43; Flemming, 2005, 2006; Brück, 1998, 2005; Hamilakis, 2013), resulting in a response by the author himself (Tilley, 2012). A major issue with his original approach was that it was

unduly biased by his own cultural context. It is impossible to know today exactly how aspects of a cultural landscape were valued in the past because our modern experiences will be inevitably biased by our modern contexts. With an acknowledgement of the limited usefulness of such an approach, however, valuable information might be gleaned or at least inspired by the researcher's own experiences. Regardless of Tilley's specific approach, phenomenology has found purchase in a variety of new and innovative ways within archaeology beyond landscape and spatial studies (cf. Gillam, 2020; Rahmstorf and Stratford, 2019), including literary analysis (Nyord, 2009a; 2009b; 2010; 2013), experiential reconstructions (Tringham, 1991; Weddle, 2013; Pellini, 2015), and materiality studies (Coole and Frost, 2010; McGregor, 2019).

While these studies are all uniquely valuable, where I find phenomenology particularly intriguing is in its philosophical beginnings. An early purpose of phenomenological studies was to understand the nature of existence as based in our relationships with the worlds in which we dwell. In Heidegger's publication *Being and Time* ([1927]1962), he argues that we encounter entities as *equipment*, which are meant as being for certain tasks such as hammering. We connect to these materials not by looking at them directly but from a removed perspective. The less we stare at an entity but the more we use it results in this mode of being he calls *readiness-to-hand*. The equipment becomes less an aspect of a subject-object relationship and more part of the experience of an ongoing task. Only when these things are removed from their ongoing context will they manifest as 'Things.' It is then, when they are considered directly through contemplation, that the subject-object relationship re-emerges. He identifies this alternative mode of being as *presence-at-hand* (Wheeler, 2020 qtd. Heidegger, [1927]1962, 16:103).

By being-in-the-world, people are "dwelling" in places. To "dwell" is not so much spatially oriented, but rather encompasses a sense of belonging (Wheeler, 2020). We, as beings,

are never only *present-at-hand*. Additionally, there is never anything such as *an* equipment (Heidegger, [1927]1962, 15:97), because equipment always is part of a larger series of networks.

Wheeler takes Heidegger's example of the hammer to illustrate this,

Links will be traced not only from hammers to hammering to making fast to protection against the weather, but also from hammers to pulling out nails to dismantling wardrobes to moving house. This behaviour will refer back to many other behaviours (packing, van-driving) and thus to many other items of equipment (large boxes, removal vans), and so on. The result is a large-scale holistic network of interconnected relational significance (Wheeler 2020).

We see this meshwork of interwoven ways of being manifest in Timothy Ingold's *Life of Lines* (2015), wherein he seeks to understand what is it "to human" without commenting on what it is "to *be* human" (p. 108). He sees social life as a built up network of lines laid down by people. Lines are created in a "world without objects," which creates the "atmosphere" from which a person finds significance and meaning (Ingold, 2015). Material culture, which we might rename "equipment," is thus the interpenetration of structure, line, and atmosphere, i.e., the social or discursive context. Thus, phenomenology encompasses the trans-corporeal nature of sensory experience by offering the researcher ways of tackling the cognitive dissonance that is existing simultaneously as both *ready-to-hand* and *present-at-hand*.

Being-in-the-world, and the relationships established therein, are dictated by our ready-to-hand experiences which are defined by our bodies' sensing capabilities and our contextual understanding of them. If we conceptualize scent, and the capacity to smell, as a form of equipment, it becomes an essential aspect of *dwelling* in the world (cf. Ingold, 2015, p. 18). This conceptualization of sensory experience, as something which is an aspect of this ready-to-hand/present-at-hand spectrum, including the un-readiness-to-hand element wherein equipment malfunctions, is particularly salient in this quote by Merleau-Ponty: the world of perception "allows us to rediscover the world in which we live, yet which we are always prone to forget"

(2004, p. 39). In this quote, Merleau-Ponty draws out how our bodies' sensing capabilities operate without our consciousness of them, thus as *ready-to-hand* processes. Yet, to truly understand their operations and effects, we must actively seek to perceive them, thus translating these experiences into discrete objects. We only become aware of our sensing capabilities when considered directly, though they are always functioning. This understanding of phenomenology will be explored in this dissertation through the examination of scent as *equipment*. As Merleau-Ponty indicates, it is essential to be aware of scent directly in order for it to be examined concretely, even though it typically exists as ready-to-hand.

Heidegger presents phenomenology similarly: as a study that takes as its beginning an ordinary experience, and then, through a close examination therein, seeks to reveal the “transcendental conditions that shape and structure it” (Heidegger, [1927]1962, 5:38; cf. Harris and Cipolla, 2017). Thus, this dissertation is organized with beginning at the trans-corporal experiences of scent contextualized within various experiences (e.g., ritual, trade, literary tropes), rather than with scent-as-material. With this research, I am not seeking to identify a variety of discrete categories of value, but rather the shared meanings observable across contexts of scent as experience.

Phenomenological approaches that seek to understand ancient ontologies have also been criticized for being overly text-based. Heather Hunter-Crawley writes, “To ‘read’ material culture as discourse is a semiotic process whereby intellectual activity in fact denies material culture its own materiality. Yet, in the absence of materiality, there can be no embodiment and no sensing” (2013, p. 161). Thus, in response, phenomenology often gets interwoven with materialist approaches. In addition to, rather than regardless of, the usefulness of textual sources, New Materialism may provide a way to incorporate materiality and textual studies while

overcoming the criticism that phenomenology is overly anthropocentric (Hodder, 2012, p. 28). This approach seeks to provide material goods with their own agency (Coole and Frost, 2010, pp. 19–20), a squarely human endeavor. New Materialists ask that we not assume humans, as opposed to everything else, like animals or plants, are worthy of a “special, ontological status” (Harris and Cipolla, 2017). Rather, we should approach our studies without making this assumption. From the perspective of sensory archaeology, which to an extent must be unapologetically anthropocentric, we might understand sensory experience, newly conceptualized as being *ready-to-hand*, to be similarly presented as carrying its own agency.

What New Materialists bring to phenomenology is an emphasis on the sensory and social impacts of material in forming “the fabric of past lives” (Godsen, 2001, p. 167). Godsen writes, “We may not be able to isolate individual intentions or specific attempts to exercise agency, but we may well be able to see what types and combinations of sensory responses were socially important and whether the visual appearance of objects was always more important than their feel to the hand, for instance” (p. 165). Thus, appreciating ancient sensory frameworks as manifested in materiality has the ability to reveal social relations (cf. Heather Hunter-Crawley, 2013).

While I find textual sources and the multivalency inherent in the ancient Egyptian script particularly useful for investigating the ancient Egyptian perceptualization of sensory data, I contextualize this data by comparing it with material referents. By examining materials as sensory stimulants, I maintain their status in the readiness-to-hand mode. Namely, I investigate their ability to release aroma and the effects therein on human agency; thus, I contextualize these fragranced materials within a sensing, cultural world.

2.4 ARCHAEOLOGY WITH THE SENSES IN EGYPTOLOGY: A REVIEW

Sensory archaeology, albeit a relatively new theoretical approach to archaeology, has been growing in popularity over the last decade. Whether in a book that outlines how such a study can be done (Hamilakis, 2013; Skeates and Day, 2019) or as an exploration of the modern researcher's experience of ancient places (Tilley, 1994; Pellini *et al.*, 2015; Zinn, 2018), there has been no shortage of creative ways to tackle this complex approach. Many publications on sensory archaeology have taken the form of collaborative edited volumes that cover a range of cultures and contexts (Fahlander and Kjellström, 2010; Day, 2013; Pellini *et al.*, 2015; Betts, 2017). These publications often cite anthropologists such as David Howes, Constance Classen, Alain Corbin, and Robin Skeates for their theory, which all seem to agree that the rise in sensory studies came about initially as a response to the "culture as text" paradigm first popularized in the late 1970s.

Within Egyptology, few studies have explicitly examined the senses, though there has been some work done with sound (Emerit and Elwart, 2019), touch (Zinn, 2018), creative narrative (Pellini, 2015), and smell (Manniche, 1999, p. 2002; Serpico and White, 2000ab, 2001; Serpico and Bourriau, 2003; el Shimy, 2003; Serpico, 2004; Tatomir, 2008; Wise, 2009; Goldsmith, 2019). My study will be the first to apply the concept of value to a sensory experience as expressed in the material record. The goal of this project is to use this approach to investigate the relationship of agency to structure, the large scale with the small scale, and the political and economic with the ideological and social. Many publications on theory have attempted to examine the in-between of these major conceptual metaphors by employing theoretical frameworks such as Bourdieu's *habitus* (Dietler and Herbich, 1998), *decorum* (Baines, 1990; 2023), agency (Robb, 1999; Wobst, 2000, contra Hodder, 2000), or materiality

(Beaudry *et al.*, 1991; Ingold, 2007; Knapp and Van Dommelen, 2010). But, as can be seen by the continued discourse on the topic, no consensus has been reached. Thus, I would like to put forth a sensory study as a suggested approach to this difficult task. Neither a cognitive archaeology nor study in materiality, examining the ontological (power) networks which underlie social realities and focusing on the sensorial reveals the complexities of ancient social life and creates space for the “messiness” of multivalency (Wendrich 2015).

More specifically, the study of scent in Egyptology largely has centered around three areas: iconographic studies on perfume; lexicography of scent products and recipe reproduction; and chemical identification and residue analysis. Middeke-Conlin (2014), who conducted a study on the scent industry at Old Babylonian Larsa using material and written evidence, suggests that the study of scent in Mesopotamia has followed a similar trajectory to that which I have noticed in Egyptology: scholars work to identify scented materials lexicographically, then rush to identify said materials chemically and in written attestations, which is followed by an examination of the social and economic roles or significances of said products.

A short case study on unguent cones from Egyptian tomb iconography might help to demonstrate the shortfalls of such disembodied analyses. This topic will also be addressed in greater detail in Chapter 3. Unguent cones have long been assumed in Egyptological publications to be just that—cones of fat mixed with scented materials to form a type of perfume. These cones appear on the heads of individuals depicted in tomb art from the New Kingdom onward and art historians have been able to date tomb scenes based on the length and width of these cones. Bruyère (1926) was the first to suggest these cones were not representative of material objects but were instead symbolic of the rebirth of the deceased. Cherpion (1994) agreed they were likely symbolic metaphors, but not necessarily for the concept of rebirth but for

perfume. Manniche (2002), building on Cherpion's interpretation, added that this artistic representation had the ability to visibly represent something invisible. Padgham (2012) countered, stating that actually there is little evidence to suggest these cones are scented at all and rather represent the deceased's *ba*, a part of the Egyptian "soul."

Interestingly, at least two unguent cones have been excavated from a female burial at Amarna from the workmen's village. Chemical tests have suggested this cone was made from wax (Kemp, 2010; Kemp and Stevens, 2010; Stevens *et al.*, 2019), with no evidence of scented material being incorporated. As I will discuss later in this study, despite the lack of preserved evidence of scent, it is unlikely that this is indicative of the object's function. Additionally, in an example of an obvious modern bias influencing the interpretation of these cones, we can look to Wachsmann (1998, p. 313) wherein the author suggests because these cones are often seen in banquet scenes being worn by women, they likely mark these women as "prostitutes" due to the "inherent" connection between prostitutes and perfumes.

What this discussion is meant to demonstrate is that even when (purportedly) scented materials are being discussed, it is rarely the odor of these products that is being emphasized, and, sometimes, when it is mentioned, it is couched in modern bias. Rather, the materials get flattened to the page. Consider this: how practical would it be to wear a scented cone on top of a wig in the heat of an Egyptian summer? Would that melting fat sliding down your arms and legs and staining your clothes have been the way the Egyptians put on perfume? How long till the fat turned rancid? How does discussing symbolic significance or counting depictions provide insight into the lives of an ancient people?

Most of the work on the procurement, production, and trade of scented products in or by Egypt likewise has relied on iconographic evidence, like tomb scenes and, so, often emphasize

the role such products play in funerary or ritual contexts. Unlike Cyprus (Christodoulou, 2008), Crete (Koh, 2008), or the Levant (Stager, 1985) in which perfume production areas and olive presses have been excavated, Egypt has no such evidence (Serpico and White, 2000ab; Alba Gómez, 2016). And, iconographically, there are only about three tomb scenes which *may* represent a complete production process for unguents and scented oils (el Shimy, 2003; cf. Alba Gómez, 2016). More commonly it is the use of these products that is displayed, such as anointing in reward ceremonies and banquet scenes (Thompson, 1994) or in the mummification of the deceased and offering of floral garlands. Through a comparison with funerary texts, such imagery may establish a link between sweet scents and divinity with representations serving to evoke the invisible presence of the divine visibly (Price, 2018).

An important focus in the study of ancient senses has been necessarily lexicographical. Several scholars have sought to determine the modern scientific designation of ancient material terms for the purposes of recipe recreation, identification of trade routes, and/or the symbolic value of the specific materials. For example, Relats-Montserrat (2014, 2016) investigated Gardiner sign D19 for its form and function in the Egyptian language. This sign, which is in the shape of a nose, evolved from a canine snout to a human nose, to a bovine nose over time. While fascinating articles, the author was unable to make any certain conclusions regarding the function of this sign, which typically acts as a determinative and so likely nuances the meaning of the word to which it is attached. Rather, the author found that this sign was not applied systematically. He concluded that the words employing this sign as a determinative are generally related either to the semantic fields of emotion, smelling, or breathing. This conclusion, when put into a conversation with the social significance of smell, as I explore in the following chapters, promises to be enlightening.

In another article, de Vartavan (2010) discusses the word *sntr*, typically translated as “incense.” In it, he emphasizes that this word is often written *sn-ntr*, rather than *s.ntr* and so should be translated as “divine scent” rather than “to cause to be divine” as is sometimes suggested. He uses the *Thesaurus Linguae Aegypticae* (TLA) to collect 2200 uses of this word to make his conclusion. Again, while I agree with his interpretation and would go even further to suggest that *sntr* was used to mean all three of these translations due to the common use of multivalence in the Egyptian language to create puns and dual meanings, the discussion stops there. What needs to happen next is a multidisciplinary approach to smell that involves not only the linguistic aspects, but an examination of how such conclusions based in linguistics might function on the ground.

Another popular discussion on scent related materials is relating ancient terminology to modern, scientific terms. Much of this literature relies heavily on Ancient Greek and later sources such as Herodotus, Theophrastus, Diocorides, and Pliny the Elder to make the necessary connections. Manniche (1999, 2002, 2006) is a proponent of this approach. In both *An Ancient Egyptian Herbal* (1989) and in *Sacred Luxuries: Fragrance, Aromatherapy, and Cosmetics in Ancient Egypt* (1999), she lists ingredients found on recipe lists from Ptolemaic period temples in combination with references by the Greek writers to identify the modern equivalents of the ancient terms. While very useful, it is nearly impossible to identify the modern equivalents of all the materials. Nor is it possible to assert that all of these recipes were in use in earlier periods, as the influence of a wider market and foreign values likely influenced the materials being used. I would suggest this study, while very valuable, lacks an interdisciplinary approach necessary for understanding the role of scent beyond the material or written evidence.

Serpico has been a major player in the discussion of the trade of scented raw materials in the eastern Mediterranean. Her work on the Canaanite Amphora Project has been particularly interesting demonstrating the relationship of ceramic fabric and form to origin and by extension to the procurement of raw materials. For example, one fabric type of these amphora excavated at Amarna demonstrates a close link with a specific area in the Northern Levant and with Pistacia resin. This work suggests a regional specialization in pottery production and material procurement. In her 2004 publication, she uses titles related to scent production to demonstrate a relationship between these products and social organization. Together, Serpico's publications do a fantastic job of incorporating different sources and methods to make her arguments.

What is absent from these studies is the experiential aspect of scent and odor. While iconographic and written evidence can give us insight into how the Egyptians might have employed scent two-dimensionally (see the “meta-sensory” approach, Houston and Taube, 2000), the interplay of this funerary significance with the linguistic, material, economic, and political aspects of the whole scent industry is lacking. By incorporating such notions as the relationship of scent to memory (Li *et al.*, 2007), to the manipulation of power (Murphy, 2013), or to its physical material quality (Ingold, 2007) and the nature of its exchange, studying the *experience* of scent becomes an embodied examination of the construction of social life.

This chapter offers the foundation upon which I built the following investigation. In some ways, it is a recording of my personal ruminations and biases as an ode to Hamilakis (2013) that led me to this research. I approach the study of scent in ancient Egypt wholistically—examining the interplay of the values of scent evident in the linguistic, social, ideological, economic, and political traditions of New Kingdom Egypt. In order to study scent in the “readiness-to-hand” mode, that is, where it fits in the cultural narrative(s) of the ancient Egyptians, it is necessary to

first examine it as “present-at-hand.” We have to examine scent directly, through textual and two- and three- dimensional examples, to understand its larger role in the society. Thus, it is from this foundation that I crafted my research questions, so let me return to them here.

1. What culturally determined socio-ideological values were attributed scent by the ancient Egyptians in the New Kingdom and how were these values reified across cultural contexts? Namely, what informed how the ancient Egyptians experienced scent?

This first question, which is addressed in Chapter 3, is crafted to examine what values were attributed to scent by the ancient Egyptians across cultural contexts. By examining written and artistic evidence from funerary, religious, political, and social contexts that discuss scent and smelling, it is revealed that: 1) scent and smelling can be treated as an emic category of experience within ancient Egyptian ways of being; 2) the quality of scent was important across a variety of contexts to the ancient Egyptians and in particular ways; and 3) scent was both an aspect of the ongoing process of living and a quality of life that could be dealt with and manipulated directly (i.e., it operated in both a readiness-to-hand and presence-at-hand mode).

2. What factors contributed to the ancient Egyptians’ access to scented, material goods and what role did the central political and cultic institutions play in determining access for the public? How did these roles affect the organization of ancient Egyptian society at the time?

This second question, which is addressed in Chapter 4, examines scent as material. While the focus of this chapter is on the procurement, production, storage, and local distribution of (scented) material, the purpose is to highlight how the quality of scent was what instigated the development of a scent industry. It is in this way that I attempt an embodied approach. I am not only studying the material themselves, but their quality of scent, which Chapter 3 demonstrates was ideologically significant. Furthermore, the creation of this complex industry was developed and supported by centralized institutions and influenced the power dynamics within ancient

Egyptian society. Thus, this chapter demonstrates the extent to which sensory experience can be manipulated to influence the organization of society and, by extension, what is gained by studying culture from this perspective.

3. To what extent did ancient Egypt's role as a major economic and political player in the eastern Mediterranean in the New Kingdom influence/was influenced by the socio-ideological values attributed scent?

The final research question spans both Chapters 4 and 5. This question builds upon the theoretical frameworks presented in Chapter 2 by taking the discoveries made in the previous chapters from the small to the large scale. Chapter 5 incorporates additional, theoretical economic models that are introduced there, which are not specific to sensory archaeology. It is the third stage of feminist archaeology that I am building upon in Chapter 5 wherein I seek to reconceptualize archaeology to take sensory experience as crucial to understanding societal dynamics and organizational patterns.

3 SCENT AS IDEA: THE INVISIBLE, SEEN

This chapter discusses the three central values attributed to scent by the ancient Egyptians in the New Kingdom: SCENT=IDENTITY; SCENT=LIFE; SCENT=PRESENCE. These cultural memes were foundational to the organization of ancient Egyptian life. These values were not distinct from one another, however, but were intimately linked. Because writing is inevitably linear, in order to demonstrate the circularity of the relationships between identity, life, and presence, some examples in the following chapter will be referenced more than once.

Scent could serve as a marker of one's nature. The flavor of one's odor could identify you as divine or mortal, moral or evil, high or low status, native or foreign. This quality of scent is applied in ancient Egyptian tomb scenes wherein depictions of scent icons, such as incense or unguent cones, revealed the presence of divine beings. That the scent icons marked not only divinity but their invisible presence ties in two nuances of scent, both its tie to identity and to presence.

Scent likewise gets conflated with breath through the nostrils, often as the breath of life and/or the North Wind. Thus, scent functioned as a life-giving force, one that ensured the breath of the recipient. This quality of scent made it useful for the transitioning of the deceased into the afterlife—an act that intertwines all three values of scent. Taking on the scent of the gods provided one with a new divine identity that allowed for the acceptance of that person among the gods (SCENT=IDENTITY). Additionally, scent assisted with establishing a liminal space which facilitated the interaction of the visible, living world and the invisible one of the gods (SCENT=PRESENCE). Finally, scent provided new life to the deceased to enable their rebirth in the afterlife (SCENT=LIFE).

In this chapter, I overview some of the scented material used in funerary and burial practices to demonstrate how central these values of scent were to the ideology of death. I also share examples from contexts outside those related to death to demonstrate the ubiquitous application of these scent memes. I then conclude this section with an examination of how sensory pleasures more generally were indicative of life as opposed to a lack which defined death. This is necessary to demonstrate that the role of scent specifically in ancient Egyptian ideologies did not operate in isolation, but was part of a sensory continuum.

3.1 THE INVISIBLE PRESENCE

According to the *Ritual of Amun*, the gods were considered to all carry a particular scent—namely, that of the perspiration of Amun himself. This ritual was recorded in the Nineteenth Dynasty upon the walls of the Temple of Seti I at Abydos and in the Berlin Papyrus no. 3055 (Mariette, 1869; Erman, 1901). It has over thirty chapters, all of which detail the daily ministrations undertaken on behalf of the god Amun-Re (Moret, 1902; Price, 2018). One particular passage, titled “Speech of Becoming Divine” *r3 n sntr* records how Amun gave his sweat to all the gods so that those on the land (i.e., humans) would know them (i.e., the gods) when confronted with their divine scent. Note how the title of this passage uses the word *sntr*, often translated “incense,” as a causative verb *s.sntr* “to cause to be divine,” thus invoking its dual meaning:

r3 n sntr

*dd mdw jj ntr db3=w m hcrw=f k3pw n=f sw m jrt=f nt dt=f sntr n ntr pr jm=f hr sty r dwt
pr m jwf=f fdt ntr h3.tw r t3 rdjt.n=f sw n ntrw nbw...m33=sn tw hnm=sn sty=k jw=k hcr.tw
hr t3.k*

A Speech of Becoming Divine

Words spoken, the god comes, whose body is adorned. He fumigates himself with his eye of his body, the incense of god, which comes out from within himself on account of the

smell with regard to the efflux which comes out of his flesh. The god's sweat, which he gave to all gods, descends to the land... They see you when they smell your odor for you will appear upon your land (Author's translation; Moret 1902, pp. 115-116: Ch. XII, 8).

This passage identifies the scent of Amun's efflux as that of divine incense. Whatever that particular odor, it exudes from his flesh and Amun provides all the gods with its scent. The relationship between scent and divinity here is cyclical. Amun fumigates himself with his eye, the "incense of god." This incense likewise exudes from his body as sweat, thus scenting him. Amun gives his scent to all of the gods and so the humans upon the earth are able to "see" the gods by "smelling" them. Thus, it is the scent of the gods that marks their presence.

It is not only Amun who was known for his scent. In an early Ptolemaic papyrus purchased by antiquarian Henry Salt we can read about the divine origins of various resins. In the passage, we read how Horus' tears fell to the earth and germinated the trees that produce *ḥntyw*-resin, Geb's nosebleed created *ḥš*-trees, Tefnut's tears germinated and made *sntr*-incense, and the sweat of Isis and Nephthys germinated and made *tj-šps*-resin (P. Salt II, 1-5: Derchain, 1965, pls. 1-2). While this excerpt is from a much later text than the materials that are the focus of this research, this passage offers an interesting commentary on an unsolved mystery from the Old Kingdom, namely how one fumigates with an eye.

When harvesting, resins like myrrh, Pistacia, and frankincense ooze out from the tree and will dry in the air often in the shape of tear drops. Whereas myrrh dries with a pale yellow color, pine resins and frankincense take on a reddish hue. Thus, we see here in this passage from P. Salt how nature's forms are applied in myth-making: blood being the origin of the reddish-hued resins (*ḥš*-trees) and water or tears being the source for the lighter colored ones (*ḥntyw*, *sntr*, *tj-šps*).

It may be significant that in this text it is from the eyes and nose that these resins are formed. Notably, as we will discuss below, it is through the nose that scent and breath provide life. As for the eyes, there is a theme that crops up throughout ancient Egyptian sacred texts wherein eyes are used to fumigate various individuals and things. For example, refer back to the excerpt from the *Ritual of Amun* wherein Amun fumigated himself “with his eye.”

In particular, it is the eye of Horus that is referred to by its scent, though this quality is rarely commented on in the Egyptological literature. Many scholars have instead focused on the Eye’s cosmic, solar and lunar, mathematical, mythological, or kingly connections (cf. Jéquier, 1946; Rudnitzky, 1956; Westendorf, 1980; Priskin, 2002; Oestigaard, 2011). There are eleven references to the smell of the Eye of Horus in the Pyramid texts: PT 25, PT 26, PT 27, PT 29, PT 200, PT 524, PT 621, PT 637, PT 686, PT 687 (Edwards, 1996). These passages record how the Eye could be used to purify spaces, as an offering to the gods, and as a marker of one’s divine status. Consider PT 29:

[*dd mdw*] *h3 ppy pn jj=[k]w[j] n jn.n(=j) n=k jrt-hrw*
htm=k hr=k jm=s sw^cb=s tw st=s jr=k
st jrt-hrw r ppy pn j.dr=s rdw=k
hw=s tw m-^c zgb n ^c n stš

[Recitation] O this Pepy, I have come, having brought for you Horus’ eye.
 May you provide your face with it, that it may cleanse you, its scent being on you.
 Let the scent of the Eye of Horus be on this Pepy and remove your efflux,
 and protect you from the flood of the hand of Seth.
 (author’s translation; see also Allen, 2005b, N 121; Sethe, 1960, Pyr. 29:20a-d).

Here the Eye’s scent both purifies and protects the deceased King from his enemy, namely Seth’s hand. Efflux, while often equated with “sweat,” more fully references the flowing out of a substance. In this case, because Pepy is deceased, his efflux perhaps references the liquids leeched out of the body during the mummification process—particularly, since in this passage, the efflux is being “removed.” It is, then, the Eye’s scent which must replace Pepy’s odor. As

noted above, Amun’s efflux is pleasantly and divinely scented. Presumably this passage is suggesting that the pleasant (and divine) scent of Horus’ eye is potent enough to combat Pepy’s odor of decay. Additionally, the Eye’s scent is able to protect Pepy from “the flood of Seth’s hand.” Pepy has adopted a fully divine identity through the adoption of the divine scent and, so, is protected just as Horus was protected from Seth’s advances in *The Contendings of Horus and Seth*.

The Eye’s connection to scent and divinity continues into the New Kingdom. In one example from the Tomb of Amenmose (TT42), the Eye of Horus confers divinity up the deceased through fumigation. The passage reads:

r3 n sn̄tr w3b m sn̄tr w3b ḥrw sn̄tr r.f sw m jrt=f n dt=f...mdw zp 3 ḥmtw sn̄tr n=k jm=s m r rn=[s] pwy n sn̄tr dp(.w) ḥr=k jm=s

Spell of deification and of purifying with incense. Horus is pure, he is made divine with his eye of his body...Speech three times: Make yourself divine with it in this [its] name of incense. Let your face be touched with it (author’s translation; see Davies and Davies, 1933, 23, pl. 29 (second register)).

The Eye of Horus links incense with purification and divinity in this passage. It is by taking on the Eye of Horus that you make yourself divine. By touching your face with it, you are purified and divinity is conferred upon you. Interestingly, in this passage the word for “touch” is *dp* which also means “to taste.” Thus, we see here a synaesthetic overlay of vision, scent, touch, and taste wherein divinity is made visible through the application of scent and the scent is absorbed onto the face by the skin tasting it. As I will discuss below, the celebration of life is evoked through sensory stimuli. And, as is apparent here, the invocation of the senses offers new life to the recently deceased.

Furthermore, I would like to draw a connection between the Eye of Horus and the tear-shaped resin drops discussed above in the excerpt from Papyrus Salt 825. Because it is Horus’

tears that germinated the *ntyw*-bearing trees, it is possible that the Eye of Horus, when referenced for its scent and divine-conferring abilities, is a reference to “this its name of incense.” It is the shared form between resin droplets and tears that permits this connection. The part (the tear) is referenced by the whole (the Eye of Horus) as a synecdoche.

Let us take another example. In the Eighteenth Dynasty tomb of Djehutymes (TT295) at el Khokha to the left of the false door in the bottom register there is depicted an offering bearer who presents two ointment vases to the deceased and his wife. The accompanying text reads:

Spell for ointment (*mdt*). I have come, having filled you with the ointment which comes forth from the Eye of Horus. Fill yourself with it, so that it may bind your bones [...] and loose the evil thing against you. Receive it from you, so that its smell (*sty*) for you may be sweet (*ndm*) like that of Re when he comes forth from the horizon; may your smell (*hnm-k*) be with the hearts (*jbw*) of the gods of the horizons and like Re when he comes forth from the horizon (Translation in Hegazy el Sayed and Mario, 1983, p. 16).

In this excerpt, we read that the ointment comes out from the Eye of Horus. The deceased is instructed to fill themselves with it to bind their bones and protect them from evil—a process which is quite similar to embalming when the body cavities are stuffed with resins, many of which carry their own antibacterial qualities (de Rapper *et al.*, 2012). The following sentences repeat the idea that taking on a sweet smell will permit the deceased to be “with the hearts of the gods” and, so, welcomed by them. If the Eye of Horus is a name for incense, this passage would suggest ointments could be made from that resin.

Another god associated with and recognized by his scent is Nefertem, the son of Sekhmet according to the Memphite tradition, or Bastet at Bubastis. Nefertem is typically depicted as a child sitting on a blue water lily, but he also appears as a man or lion-headed man with a blue water lily on his head. Nefertem likewise is considered a minor solar deity due to his connection to Re (Peterková Hlouchová, 2017). In this myth, Nefertem places the sun disc in a blue water

lily. When it rises from the water and blossoms, it reveals the sun god Re as a child wearing the sun disc on his head. This myth is referenced in the Tomb of Menkheperasonb (TT112) when a priest declares, “The chief father of the god of Amun, Menkheperasonb, appears as Nefertem, as a blue water lily to the nostril of Re. The gods are pure because of seeing (*mꜣꜣ*) him daily” (Translation by author; Davies and Davies, 1933, p. 22, pl. 27). While the reference to holding the blue water lily to Re’s nostril is not in the original myth, it is Nefertem who places the sun disc inside the flower, facilitating Re’s rebirth within it. This scene, once again, intertwines the act of sight with the experience of scent. The gods are pure from “seeing” Menkheperasonb daily, in the form of a fragrant flower held to the nostrils of Re. The visible form of Nefertem, who is Menkheperasonb, who is a blue water lily, is made manifest through scent.

The divine birth scene of Hatshepsut, an Eighteenth Dynasty king, located on the north half of the middle colonnade of her mortuary complex at Deir el-Bahri, also references this ability for scent to reveal divinity (Brunner, 1964, pl. 4). Hatshepsut’s mother-to-be Ahmosi is awakened by the perfume of the god Amun who is disguised as her husband. His divine identity, however, is quickly revealed after Ahmosi smells him (*snn sw*) (*Urk.* IV, pp. 220.14). After their sexual union, his scent floods the room, and Hatshepsut is thus conceived. The passage reads:

They (the king and the god Amun) found her resting in the chamber of her palace. She woke up because of the god’s scent (*st*). She smiled in the face of his Majesty, and then he went to her immediately and he spread out to her, and gave his heart to her, and let her see him in his form of a god, after he previously came to her. This one (the queen) rejoiced seeing his penis. His love went into her body. The palace was flooded with the god’s scent (*st ntr*), all of his smells (*hnmw=f*) are from Punt” (Translation in Matic, 2018; *Urk.* IV, pp. 219.13–220.6).

Regardless of disguise, the god’s nature is revealed to Ahmosi by his scent. In the same way that she is offered the symbol of life, the *ꜥnh*, by Amun in the accompanying image, Ahmosi receives life in the form of the child Hatshepsut whom she conceives at that moment. The male and

literary climax of this sexual encounter is marked by the flooding of the room with Amun's scent, suggesting scent does more than mark divine presence but is also connected with life itself.

3.2 DEFINING IDENTITY AND SPACE THROUGH SCENT

According to the traditions of the ancient Egyptians, the dead merge with the gods in the afterlife. Depending on the text and era, the deceased becomes an "Osiris" but also merges with the Ba of the sun god Re in his sixth hour of journeying in his solar barque through the Amduat (Hornung, 1999, p. 34; Hornung, 1963, pp. 109–114).

One way scent is associated with facilitating the merging of the deceased with the gods is through its ability to be taken on and worn by another. Deceased individuals could adopt a divine scent, which would mask their own, like in PT 29 discussed above, and so be able to enter into the afterlife as one smelling like the gods. In Spell 125 of the Book of the Dead, Anubis states when speaking of the deceased, "I am satisfied with him. I smell his odor as belonging to one among you" (Faulkner 1994, pl. 30). Anubis is speaking to the gods and so the "you" in this example is referencing them. Here, the deceased has taken on the odor of the divine and so will be accepted as one belonging among the gods as the deceased's identity has taken on a divine character by adopting the divine scent.

Taking on another's scent as a way of redefining your own character was not a new idea in the New Kingdom. Rather, examples of the deceased taking on the smell of the gods to assist with their transition unto death is rampant throughout the Pyramid Texts of the Old Kingdom. PT 412 reads "your scent is as their scent" which is mirrored in PT 508, 524, and 576 (Allen, 2005b). In these older examples, however, it is only the deceased king who is able to take on the

divine scent. By the New Kingdom, this privilege has been extended to elite members of society able to afford their own copies of the Book of the Dead.

Gods and mortals alike could be identified by their scent as it is not only the pleasant scent of the gods that recalled one’s nature. In the Pyramid Texts of the Old Kingdom, a bad smell could prevent the deceased king from transitioning into the afterlife and was also a descriptor for the deceased’s enemies (e.g., PT 369; PT 412). Furthermore, smells such as the odor of a furnace, manure, or rotting fish likewise had implications regarding one’s status. Consider for example a few stanzas from the *Instructions of Dua-Khety*. This text was copied rather extensively in the New Kingdom on many ostraca, but the longest continuous recording is from P. Sallier II (BM 10182) (Translations in Hoch, 1991). In it, a father seeks to convince his son to pursue a scribal career by offering discouraging descriptions of various other careers.

| | | |
|--|--|---|
| <p>The farmer—he cries out for ever.</p> <p>His voice is loud, that ‘aba-bird!</p> <p>His fingers are nothing but sores.</p> <p>With all sorts of excessive stench.</p> <p>(p. 94)</p> | <p>The fire-tender—his fingers are rotten;</p> <p>Their smell is of corpses.</p> <p>His eyes are inflamed from all the smoke,</p> <p>And he cannot drive out its smell.</p> <p>(pp. 95-96)</p> | <p>I have seen the coppersmith at work,</p> <p>At the door of his furnace,</p> <p>With his fingers like a crocodile’s.</p> <p>He stinks more than fish eggs.</p> <p>(p. 90)</p> |
|--|--|---|

The smell of death and rotting fish feature in these excerpts. The bad smells described here were expected to be a strong deterrent against pursuing the listed professions.

Similarly, the scent of feces is referenced in a Nineteenth Dynasty satirical miscellany that is meant to lament the current state of a drunk scribe. Take note here particularly how this text contrasts perfectly with the below examples of “Harper’s Songs” yet to be discussed:

jw=k hms m t3 jwyt jw kd tw n3 hnmw jw=k h^c hr jr šp [...] jw=k hms m-b3h t3 msy jw=k thbtj m mrht jw p3y=k m3h n jštpn r hh=k jw=k hr tbtb hr ht=k trp=k tw=k h3y hr ht=k tw=k wrh m shw

As you are seated in the *jwyt*, those who pleasure surrounding you and you stand while bouncing [...] (12,4) and you are seated before the woman, being soaked in *mrht*-oil and your wreath of *jštpn* is at your neck, and you (12,5) drum upon your belly, you stumble and fall on your belly and are anointed with excrement (Author's translation, P. Anast. IV 12/3-5: *LEM*, pp. 47–48).

Rather than being anointed with lavish scented oils, the unfortunate man is soaked in them and then anointed with fecal matter after falling down in his drunkenness. Both this text and the examples from *The Instructions of Dua-Khety* discussed above not only reference scent as a descriptor for that which is undesirable but several of the other senses, like sound (e.g., drumming on his belly; voice is loud), vision (e.g., I have seen), and touch/movement (e.g., stumble and fall; fingers are rotten). These references to sensory qualities communicate to the text's audience that such characteristics are deserving of rancor and individuals displaying them are to be chastised. In another late Twenty-first Dynasty instruction text (P. Boulaq 4), the author advises the reader, “Do not go when the superiors enter in case your name stinks (*hnš*)” (Author's translation; Suys, 1935, p. 32). This example, as well as the others quoted above, imply that one's moral identity is communicated by the odor of one's name or body.

In a much earlier literary text titled *The Debate Between and Man and His Ba* which dates to the early Twelfth Dynasty, a lengthy section of the text repeats the verse “Oh, my name reeks” at the beginning of each stanza as the author bemoans his lot in life. He likens the stench of his own name to rotting carrion on a hot day, to bird excrement, to lies told about a married woman, and to uncovered plots of sedition (Allen, 2011). This passage is later contrasted with the following:

Death is in my sight today, like the smell of myrrh, like sitting under sails on a windy day.

Death is in my sight today, like the smell of blue water lilies, like sitting on the bank of inebriation (Translation in Allen, 2011, p. 155).

Death is near, it is visible, but it has not yet come for this man. He instead appreciates its portended coming by likening it to positive experiences such as being nearly drunk or feeling your boat sails catch the wind. This interplay of nearness, vision, and scent should be familiar by now. The presence of scent identifies its location, even when it has not yet come. The contrast of positive scents with negative ones are expressed in parallel with one another (Parkinson, 1997, p. 164, nn. 33–34). Due to the hedonic nature of scent, it provides a clear distinction between what is desired and what is not. In the same way as discussed above where scent relates either a good or bad character, there is no middle ground.

A didactic phrase copied across three New Kingdom ostraca reinforces this idea that one's character is part of one's body. It reads, "You should not straighten what is crooked, (but) do what is loved; every man is led according to his character like (it is) a part of his body" (Translation in Hagen, 2005, p. 143). In this example, which is repeated much later in *The Instructions of Ankhsheshonqy* (cited in Hagen, 2005, p. 147), the couplet posits that our character is as foundational to ourselves as our body parts. That our moral qualities can be characterized by our scent is a recognizable extension of this suggestion, given the experience of scent is an aspect of our bodies.

Not all had access to pleasantly scented oils, and so, as expressed in the *Teaching of Dua-Khety*, scent served as a marker of not only moral identity, but status, whether divine or otherwise. In the *Admonitions of Ipuwer*, which dates to a time just before the New Kingdom when the centralized government had lost its control over a unified Egypt, the author laments the topsy-turvy nature of the world. The scribe writes, "[people] are unanointed with oil...Look, he whose hair has fallen out, who had no oil, has become the owner of *hbbt*-jars of sweet myrrh" (P.

Leiden I 344 Recto, 6,3 and 8,4; Enmarch, 2004). This excerpt clearly implies that before the world turned upside down, there were individuals who did not have access to myrrh-scented oil. Now, however, such people do.

Scents were also indicative of one's geographic origin. For example, to be well-scented was seen as a sign of being a good Egyptian. Consider the Middle Kingdom story of Sinuhe. Upon returning to Egypt from his exile, he recounts:

*rdj sw3 rnpt hr h^cw=j...sd=kwj m p3kt gs=kwj m tpt...dj.n=j š^c n nmjw=f mrht n ht n wrh
jm=s*

Years were caused to depart from my limbs...I was clothed in fine linen; I was anointed with fine oil...I gave the sand to those who traverse it, the *mrht*-oil to those who anoint with it (Author's translation; P. Berlin P3022 and P. Amherst m-q (B) fragment, 290–295; Feder, 2022; Lichtheim, 1973, p. 233).

Sinuhe is bathed in scented oils and dressed in fine linen. He contrasts his current state with his former self by stating that he no longer has need of the tree-oil used by the sand-dwellers, which presumably he wore when living among them. As we will investigate in the following chapter, *mrht* is a common word for scented oil. It is clear from this context, however, that this excerpt is referencing a particular type of oil indicative of the region where he passed his exile.

One example suggests that smelling like an ancient Egyptian was the prerogative of all, regardless of status. On the eastern half of the south wall in the longitudinal hall of the tomb of Rehmire (TT100), *mrht*-ointment, linen, and clothes are given to the servants of the temple of Amun. These prisoners and their children were presented to the king as tribute and then provided with yearly supplies. The passage reads, “Give them linen (*sšr*), ointments (*mrht*), and clothes (*hbs*) as their annual supplies” (Author's translation; Davies, 1943, pl. LVII). Visually, the accompanying scene depicts rows of women in non-Egyptian dress receiving armloads of linens, clothes, and bowls filled with fine unguents. Children scurry underfoot, being breastfed, swung

by the arms, or led by the hand. This scene suggests even foreign servants require the right smell and dress if they are to serve in Egypt as Egyptians.

This theme of scent revealing one's nature, whether it is one's morality, status, or geographic origin, is also present in medicine, wherein scent is often used to identify the character of various illnesses. Consider this example from the Edwin Smith Surgical papyrus regarding an open wound on a patient's skull: "odor of the top of his head is like the excrement of sheep" (Author's translation; Breasted, 1991, p. 181: Case 7, III.8–12). It is specifically the scent at the site of injury which is referred to in the diagnosis. Another medical text advises readers to smell milk to determine if it is safe to consume: "To recognize (*m33*) bad (*hjn*) milk: you should find (*m33*) its smell like the stink of fish" (Ghalioungui, 1987, §788). Note that, in this example, the translation "recognize" and "find" both are from the ancient Egyptian term *m33* "to see." Even here, scents are perceived through sight. The alternative is also recorded: "To recognize (*m33*) good milk: its smell is the smell of pounded *w^h*-legumes" (Ghalioungui, 1987, §796). In a much later example from the fourth century BCE, this time found inscribed into a stone stela named the *Cippus of Horus*, Isis recognizes her son is ill after she "put her nose in his mouth" (Translation in Allen, 2005a, pp. 49–63)

In one way or another, in many of these examples, scent as it reveals identity is also associated with physical space. In the medical examples, the scent emanates from a very specific location that requires the physician to lean in close for diagnosis. Sinuhe has returned from far away to take up again the pleasant scents of Egypt. In the Boulaq Papyrus, the reader is cautioned to "not leave." Even in the *Ritual of Amun*, the divine scent itself "descends to the land" that it might be "seen."

Two stone door frame fragments were found in the excavations of Karnak Temple that record the act of storing scented material from the God's Land in "the room of incense" so that the temple would smell divine. The earlier of the two fragments was found reused in the foundation of Amenhotep III's pylon and dates to the reign of Hatshepsut. The black granite block states how the King created for her father Amun this

pr-ḥd ḥntyw r jrt t3w r^c-nb mry-wt wnn pr n m st t3-ntr jr=s ḥnh dt

storehouse of incense to make pellets daily with the desire that the estate is in the smell of God's Land. May she create life forever (Author's translation; Lacau, 1952).

An easy supply of incense pellets for the various temple rituals would have been a requirement of the Karnak temple estate. What this inscription tells us, however, is that the incense was specifically meant to bring the smell of the God's Land, presumably Punt in this instance, to the temple on behalf of its divine inhabitant, Amun.

Thutmose III seems to have deconstructed this chapel and replaced it with his own elsewhere in the temple. Surrounding the door to his room, a similar inscription to Hatshepsut's was found:

pr-ḥd n ḥntyw [...] jrt nwd špss n mrt wnn pr n m ḥnm ḥt-ntr jr=f ḥnh dt

The storehouse of incense...of making the noble effluvia so that the estate shall be in the smell of divine things. May he create life forever (Author's translation; Lacau 1952).

Within the room itself, Lacau tells us Thutmose III records the offering of the Seven Sacred Oils, ḥntyw-incense, ḥnd-unguent, and incense trees to Amun.

In both of these examples, the purpose of the rooms is for the storing of ḥntyw-incense pellets. The latter artifact refers to what was discussed above in the *Ritual of Amun* wherein the effluvia of the gods, namely of Amun, is equated with incense. ḥntyw is typically translated as

“myrrh” which was not native to Egypt. Instead, expeditions to Punt were undertaken in order to bring back this material from the south.

Two important values of scent are referenced here. The first is that of distance—that the scent of a foreign land was brought into Egypt specifically so that its scent would make Karnak temple smell of the God’s land, i.e. Punt. Punt was a semi-mythical locale likely located in the area of modern-day Eritrea, southern Sudan, and/or northern Ethiopia. Expeditions were sent there to bring back *ḥntyw*-resin at least since the Old Kingdom. For example, the Palermo stone records an expedition to Punt under Sahure in the Fifth Dynasty (Lacau, 1952). These expeditions continued on throughout ancient Egyptian history, though it is Hatshepsut’s journey that is most well recorded. The walls of her mortuary complex illustrate a massive expedition with multiple ships and dozens of individuals sent by Hatshepsut to Punt to bring back *ḥntyw*-resin for her divine father, Amun. In bringing the scents to Egypt, the foreign space is brought near and can be controlled—namely, that the ruler may “create life forever,” thus invoking a second value accorded scent, that of its life giving properties.

Scent’s association with implying location is also invoked in the Nineteenth Dynasty love poetry ostraca from Deir el Medina. In these texts, Egyptologists typically translate the word *sn* as “to kiss” rather than “to smell.” Colexification such as this is not uncommon in the languages of the world. For example, *sentir* in French means “to smell, to feel, to taste” and *sentire* in Italian means “to smell, to feel, to hear” (Schapper, 2019, p. 95). Either way, *sn* is used to indicate the nearness of another person or, at least, the desire to be near them. References to ointments and scented oils are common in this genre. Take these excerpts as examples, all of which come from the “Cairo Love Songs” collection (O. DeM 1266) which were written on the

side of a large storage jar that was subsequently broken. The text remains fragmentary; at least 31 pieces are known and were translated by Posener (1972).

(B.VI) *hpt=j sw g3bwy=s pš hr=j mj nt[y] m pwnt...sty=s n3 jbr*

I embrace her whose arms are stretched out before me like one who is in Punt...Her smell is the iber-balm.

(B.VII) *snn=j sw spty=s wn hntš=kwj nn hnkt...[n3y]=s ʿwt gm mj nty jwh m ti-šps*

I kiss her, her lips are parted, I am exhilarated without beer...[her] limbs are found to be something drenched in *tj-šps*-oil.

(B. IX) *hnr n=j p3 rhtj [n] sšr n snt=j m 3bd wʿ jw=j rwd=kwj m t3y...j.t3n n hʿwt=s jw jnk j.jrt jʿw n3 b3kw nty m p3y=s jdg sky=j h3wt=j m p3y=s n3frwy f[d]...[jw=j m]ršwt th3wt [jw h]ʿwt=j rnpj*

Would that I were the washerman [of] my sister's linens for a single month! I would be renewed by taking [the clothes] that were near her body, and it would be I who washed out the ointment that was in her kerchief. I would wipe my limbs with her cast-off clothing(?) [...] [I would be] in joy and exultation; my body [would be] young.

(Author's translations; Fox, 1980; Posener, 1972)

As discussed earlier, Punt is the place of divine scents. In the first example here, the lover's target of affection is encompassing him in her scent, describing the space in which they are canoodling. In the second example, the couple kiss. Their closeness to one another is emphasized by the scented oil drenching her skin. The third example continues this theme of describing the closeness between two lovers by their scent. Here, however, the author describes his desire to be immersed in the scented ointment of his lover's cast-off clothing. In addition to using scent as a metaphor for closeness, it is also through the scent that the author's body would be rejuvenated or 'made young.' Thus, these love poems offer life or rejuvenation through being close to and enjoying the desirable scents of their loved ones.

I return to the example shared above that describes Hatshepsut's divine conception. In that excerpt, Amun's scent "flooded the palace" with the aroma of Punt, in a similar way that the "room of incense" stored ʿntyw to fill the temple with the scents of the God's Land. Another

example like this one is a common epithet for those holding the title *God's Wife of Amun*: “The one who fills the room with her floral scent” (Bianchi 1992, p. 40). It is specifically the scent of these women that is referenced—not their specific scent but rather its strength or ability to fill a room.

Scent is spatially oriented. The density and temperature of the air has an effect on our ability to smell, and so does our nearness to the source. Why else must we stop to “smell the roses” were we able to smell them without bending down? The ancient Egyptians played on this fact with their references to scent. To smell something was to know its nature, but also, sometimes, to recognize its closeness. As the author of *The Debate Between and Man and His Ba* wrote, “Death is before me today, like the fragrance of myrrh” or, in other words, death is close enough the author can smell it (Allen, 2011).

3.3 TRANSITIONING BY MEANS OF SCENT

The spatial orientation of scent is present in the transition of the deceased into the afterlife. The adoptability of scent, its ability to identify one’s nature, and its connection to space all work in tandem to facilitate the transference of the deceased across the boundary between the living and invisible worlds. Whether it is on the smoke of incense or as the breath of life, the interplay of these various ideological values accorded scent facilitates this movement, as I will now investigate.

Sacred texts commonly invoke scent when speaking of providing the deceased with breath. An offering scene from the Tomb of Djoserkaere’s sonb (TT38) depicts the deceased’s son presenting a “bouquet of Amun” so that it might “exhale breath to your [the father’s] nostril daily” (Author’s translation; Davies, 1963, p. 5, pl. 3). This example seems to imply that the bouquet provides life-affirming breath through its scent.

The western wall of the Tomb of Paheri at el-Kab discusses how all good and pure things will be offered to Ra-Horakhty, Nekhbet, Hathor, Osiris, and Anubis that *dj=sn ssn t3w ndm n mhtj* “may they give the smell/breath of the sweet breeze of the North” to Paheri (Author’s translation; Taylor and Griffiths, 1894, pl. XIII). Designed as a one-to-one transaction, the offerings to these gods will cause them to provide the deceased with breath in the form of a sweet-smelling wind.

In fact, the North Wind is regularly invoked as a life-giving force, either in connection with scent or breath to the nostrils. Take this example of Chapter 151 of the Book of the Dead as depicted in the center section of the northern wall in the burial chamber of Sennefer:

*dd-mdw n jst r wsjr h3ty-^c n njwt sn-nfr m3^c-hrw jj.n=j m s3-k hw.n=j t3w r fnd=k mhyt
pr m [tm s3].n=j hty(t)=k*

Recitation by Isis to the Osiris, Mayor Sennefer, justified. 'I have come as your protection. I have fanned the air to your nose, the North Wind which comes from Atum. I [have cleared] your throat (Author’s translation; Gundlach, 1988, abb. 33).

Here, Isis speaks to the deceased Sennefer, now Osiris Sennefer. She offers him protection and air or breath in the form of the North Wind, which is provided by Atum, a primordial god responsible for all creation. By merging with the Gods, Sennefer becomes one of them and his deceased form is given life through breath.

In fact, by the Ptolemaic period, an unambiguous function of the North Wind is to provide life. On the north wall of an interior room of the Opet Temple at Karnak decorated under Ptolemy VIII, a four headed ram is depicted. This ram is labeled as “the North Wind” and the accompanying inscription indicates that *kb* “freshness, purity” is its name. The inscription goes on to state that the North Wind provides the breath of life to the nostrils of Osiris-Wennefer(?), thus reviving him (de Witt, 1957).

This conflation of scent with breath likely results from the ancient Egyptians associating breath with the nose, as we saw in the above example wherein Isis provided breath to the deceased's nose. For example, in TT78, in the longitudinal hall, the deceased Horemheb declares upon returning from a voyage to Abydos, "I came back after receiving my bread of sacrifice, after my body was united with the food for sacrifice, after I breathed the fragrance of [ʿ]ntjw and sntr." Meanwhile sailors exclaim, "To starboard, to western Thebes!" (Adapted from Brack and Brack, 1980, p. 45, pl. 54). Horemheb is breathing the scents of myrrh and incense. Having accomplished that, he is now able to travel to the west bank of Thebes, the location of his tomb, the place of his upcoming rebirth.

The offering of scent was equated with the presentation of life. Whether it was through offering the deceased a divine identity or the literal breath of life, scent was a crucial element of the rituals of rebirth. It thus comes as no surprise that the ancient Egyptian word for "bouquet" ʿnh is a homonym for "life." It was not only deceased individuals in need of scented air, but the gods as well. Fumigation with fragrant smoke and anointing with fine, scented oils were necessary parts of the daily rituals performed at New Kingdom temples (Osing, 1999).

3.4 SCENT-AS-LIFE/PLACE/IDENTITY IN PRACTICE

The inclusion of fragrant materials in burial assemblages as ingredients in mummification and embalming practices, as well as artifacts modeling the shape of fragrant materials are all part of this conversation, wherein a fragrant atmosphere of pleasant scents offered life to the deceased and the means by which one might transition between the world of the living and the divine.

TT8, the Eighteenth Dynasty tomb of Kha and Merit, was excavated in 1906 by the Missione Archeologica Italiana directed by Ernesto Schiaparelli, the director of the Museo Egizio di Torino. Schiaparelli discovered the tomb intact after it had been sealed in antiquity by a

landslide (La Nasa *et al.*, 2022). The burial assemblage found within the tomb contained no less than 440 objects, including cosmetic sets, alabaster jars of ointment, and dishes of various organic materials (Sousa, 2019). Because many of the jars that might be presumed to contain aromatic materials remain sealed, material analysis on their contents has been understandably restricted by the Museo Egizio di Torino, where the assemblage is now held.

In 2022, a team of researchers working as part of the “TT8 Project” published a study that used a completely non-destructive method, selected-ion flow-tube mass spectrometry (SIFT-MS), to characterize the organic contents of around 50 objects. Of these, only three were found to contain an aromatic resin: S.8323; S.8444; S.8526 (La Nasa *et al.*, 2022). Of peculiar interest, S.8619 also showed evidence of containing protein materials, perhaps originating from dried fish. It is possible to presume one reason the “aromatic resin” was added to this container was to help limit the smell. An interesting point of comparison comes from several jars examined from the New Kingdom ancient Egyptian garrison site at Jaffa. Jacob Damm (2021) ran GC/MS on the remains of two “meat jars” (type JRVmj) discovering a mixture of fatty acids suggesting an animal origin and terpenoids indicative of coniferous resin. Whether this addition of resin was to mask the smell, impart flavor, or offer some type of preservative or antimicrobial effect, however, is yet unknown.

Returning to TT8, another study concluded that S.8448 contained oxidized resin exuded by plants of the Pinaceae family after some organic material stained the linen used to seal the container’s lid (Festa *et al.*, 2021). S.8619 has also been suggested to contain a mixture of oil and resin, though this observation was based on a visual examination of the jar’s internal contents using non-invasive and non-destructive neutron scattering techniques on the outside of the vessel rather than a chemical analysis of the contents (Andreani *et al.*, 2017).

Though the results from these studies are limited, my own anecdotal experience can speak to Kha and Merit's burial assemblage remaining pleasantly fragrant to this day. In 2018, when I was conducting research at the Museo Egizio di Torino, Sala 07 Vetrina 08 which contained many of the materials later studied by La Nasa *et al.*, (2022) was opened for the first time in the living memory of the staff who were working in the museum that day. A sickeningly sweet aroma blasted out of the glass display case as if it had been building up for years. I imagine these were the fragrances that the La Nasa *et al.* (2022) team sought to capture using Headspace techniques, though it seems unfortunate the technology was not sensitive enough to capture the scent. We are left simply to imagine the full, heady aroma of the tomb itself when it was freshly packed full of such items and subsequently sealed.



FIGURE 3-1. BOX FOR THE SEVEN SACRED OILS, INSCRIBED WITH AN OFFERING FORMULA FOR KHA, S. 8450. IMAGE FROM MUSEO EGIZIO. AVAILABLE UNDER CREATIVE COMMONS LICENSING.

A box with an expanded offering inscription that included *mrht* and *sntr* was uncovered from this tomb (Figure 3-1; S. 8450). Within this jar was found 7 alabaster jars, among other objects, likely a reference to the seven sacred oils (Caramello, 2013; Trapani, 2012; Smith, 1992). While the number of oils referenced changed depending on context, such oils had important ritual connotations which will be discussed later. The jars associated with this container were found sealed (S.8441; S.8442, S.8443, S.8444, S.8445, S.8447, S.8448). They



FIGURE 3-2. EXAMPLES OF BLUE PAINTED WARE VESSELS FROM THE NEW KINGDOM. NATIONAL MUSEUM OF EGYPTIAN CIVILIZATION. AUTHOR'S PHOTO.

were included in the study completed by La Nasa *et al.*, but only one (S.8444) was confirmed to contain an aromatic resin. These containers, likely filled with fragrant oils and unguents, were not the only aromatic materials sealed within this tomb. Several flower wreaths (S.8319; S.8430; S.8320) and fragrant foodstuffs such as garlic (S.8350), juniper berries (S.8414), and cumin seeds (S.8415) were also included, as well as perseas and papyrus branches bound with twigs (S.8329; S.8330).

These many varied scents, not to mention the mummified bodies of Kha and Merit themselves, worked in concert to produce a strongly fragrant smellscape.

Objects included in burial assemblages, however, may take on the form of aromatic materials, rather than carrying scent themselves. For example, the Eighteenth Dynasty is the first



FIGURE 3-3. EXAMPLES OF POLYCHROME PAINTED VESSELS FROM THE NEW KINGDOM. NATIONAL MUSEUM OF EGYPTIAN CIVILIZATION. AUTHOR'S PHOTO.

period since the Nagada II that painted pottery began appearing again in earnest. Blue painted ware features decorative bands of blue water lilies, often located around the necks of amphora or open-mouthed jars, cups, and bowls (Figure 3-2; Budka, 2015; Aston, 2011). Polychrome painted pottery also shows up around this time, following similar decorations as the blue painted ware, but featuring additional colors beyond blue: white, black, green (Figure 3-3; Hope, 1991). Is it

possible that the floral decorations on these vessels communicated the aromas contained within—either as perfumes or, perhaps, scented wine (Day, 2013b)?

Likewise, unguent spoons are often decorated or carved into the form of scented materials. Take for example unguent spoons featuring open-woodwork bouquets such as BM EA5966 at the British museum where the unguent was held inside a blue water lily blossom (Figure 3-4; Kantor, 1945, p. 222, fig. VI.45–48). One example of an unguent spoon now at the Manchester Museum (10988) is in the form of an *ḥnh*. It reads *n ḥnh w3s nb* “for all life and dominion.” There may be multiple meanings overlapping in this single item: *ḥnh* is the word for “life,” but also for “bouquet,” as mentioned above. There are examples, in fact, of bouquets constructed in the form of an *ḥnh* (Kantor 1945, 203f). Thus, the intertwining of the themes of scent, flowers, and life are inherent in this single object.



FIGURE 3-4. OINTMENT SPOON, BM EA 5966, EIGHTEENTH DYNASTY. RELEASED UNDER A CREATIVE COMMONS ATTRIBUTION-NONCOMMERCIAL-SHAREALIKE 4.0 INTERNATIONAL (CC BY-NC-SA 4.0) LICENSE. ©THE TRUSTEES OF THE BRITISH MUSEUM.

Models as stand-ins for the original objects are a well-known inclusion in tombs throughout ancient Egyptian history. I would argue that the depiction of scented materials two-dimensionally and the construction of objects in the form of various aromata are in line with this tradition. In the same way that a tomb scene might depict a bouquet hanging over the top of a vessel to indicate its contents, or offerings might be shown stacked on a table to represent them

being spread along the table, so too do three-dimensional objects painted with or representing scented materials participate in this narrative by contributing to an atmosphere of life-giving, divine-presence-ensuring fragrance. Day (2013b; 2006) presents a similar argument for Minoan ceramics, whose appliqué and/or form can display flowers or floral elements. Day argues that these visual elements invoke the aromas contained within these vessels and, so, both enhance the aromas while the vessel is in use and also provokes “metaphorical and mnemonic olfactory responses” (Day, 2013b, p. 286).

The application of scent-based varnishes might also add to the smellscape of the tomb, though more research is needed. Alexis Den Doncker and Hugues Tavier conducted a study on 90 New Kingdom chapels to reassess the use of varnish by Theban painters in the Eighteenth Dynasty (2018). The team used UV rays to spot the presence of varnish in the tombs and then compared these readings with their own experimental approaches to identify at least two types of varnish used in at least 37 of the chapels. Both Pistacia and a pine resin were attested in the ancient contexts mixed with beeswax to form the varnish. Their brief publication suggests an intentional application of these yellow varnishes to representative markers to scent, such as unguent cones and skin anointed with aromatic oils. If this is so, then it would reflect the findings from the examples above that speak to *m33* “seeing” scents. A more thorough publication, however, is necessary to understand the significance of their findings.

The bodies of the deceased are likewise treated with aromatics. In mummification, cloths and strips of linen drenched in scented oils and heated resins were applied to the corpse. These practices, accompanied by ritual recitations and the burning of copious amounts of incense, were meant to assist the deceased with their transition into the afterlife and subsequent rebirth (Morant, 2020, p. 104).

Though mummification is thought to have reached its initial peak in the Middle Kingdom, new evidence suggests that the recipes popular in Pharaonic period mummification practices may date back as early as the late Neolithic and early Chalcolithic periods (Serpico and White, 2000b). Using a combination of GC/MS and thermal desorption/pyrolysis (TD/Py-GC/MS), researchers have identified pine resin, aromatic plant extracts, plant gum/sugar, a natural petroleum source, and plant oil/animal fat in securely dated 5th and 4th millennia BCE funerary wrappings (Higham *et al.*, 2014). Chemical evidence of ingredient processing (i.e., heating) suggests these materials constitute complex recipes of natural products used in similar proportions to those used in Pharaonic period mummification practices. Nine samples were taken from Badari and 42 from Mostagedda, both of which are located in Upper Egypt. A coniferous resin was identified in all analyzed samples, which, the authors note, are “notably similar to the dominant coniferous biomarkers observed in previous studies on ‘balms’ in Pharaonic and Graeco-Roman mummies” (Higham *et al.*, 2014). In addition to the preservation and antibacterial properties of these ingredients, I would argue the odor of such balms was likewise desirable—at least in the Pharaonic age.

It is said to the deceased in the Osirian Liturgy of the Divine Night (Liturgy A), “an embalming place was set up for you in Busiris, to mummify you and make your scent pleasant...Thoth stood at the entrance of the pure place and recited his rituals so as to breathe life into your Ba daily” (Translation in Assmann, 2005, p. 280). This excerpt from Coffin Text spell 62 explicitly links the act of mummification with a desire to make one’s scent pleasant. One wish for maintaining a pleasant aroma in death stems from a need to prevent the decay of the body.

This fear is explicitly referenced in Chapter 154 of the Book of the Dead wherein the deceased petitions Osiris to save their body from the effects of decomposition wherein: “he will

be swollen, all his bones will rot, the limbs are destroyed and fallen away (?), the bones are softened and the flesh is a stinking mass; he reeks, he decays and turns into a mass of worms, nothing but worms” (Translation in Assmann, 2005, pp. 126–127). To avoid becoming a “stinking mass,” the deceased must undergo the process of embalming and mummification so that their scent may remain pleasant.

As part of the mummification process, after the body is drained of fluid and desiccated with natron, the corpse is reduced to skin and bones. It is through the process of mummification that the body is reformed. Its cavities are stuffed with resin, gum arabic, oil-soaked linen strips, and chaff; it is decorated with artificial eyes and limbs, make-up, and a wig; then, it is wrapped with oil-soaked bandages inscribed with spells and wrapped up with apotropaic amulets. For example, as Cyril Aldred (1979, pp. 92–99) states, when the thieves of the royal tomb of Ramses VI tipped over the sarcophagus, the scented oils used in burial flowed down to the floor leaving streaks that were still visible at the time of excavation.

In the later New Kingdom and Late Period, once the body was placed into its coffin, it was sometimes covered with a thick, black varnish. As Assmann (2005, pp. 32–33) writes, “Just as the magic of writing made it possible to make meaning visible and to preserve it, so in the mummy as a symbolic form or hieroglyph, the person of the deceased was made visible and preserved.” I would suggest, however, that the deceased was not only manifest visually by this process but aromatically—that they might be recognized and welcomed by the gods in death.

Book of the Dead Chapter 169 [Liturgy B spell 20] reads, “O Osiris N. here, may Geb open your blind eyes, may he stretch your bent knees. May your *jb*-heart from your mother be given to you, and your *hꜣtj*-heart, which belongs to your body, and your Ba, which is on earth, and your corpse, which is on the ground. Bread for your body, water for your throat, and sweet

breath for your nostrils” (Translation in Assmann, 2005, pp. 291–292). According to Assmann, this passage demonstrates that in death the “unity of the person has collapsed, and it must be restored to the deceased” (pp. 291–292). This act is accomplished by the naming of these parts of the person and stating their return to the deceased.

This liturgy expresses themes of the restoration of movement and provisioning of the deceased throughout. The purpose of the ritual then is to both encourage and protect the deceased as they ‘go forth by day’ to visit the tomb and receive offerings (Assmann, 2005, p. 295). In order for this to happen, the body must be rejuvenated—the senses must be given back their perception, the body its motion, and this all must be maintained through nourishment in the form of food, water, and breath. That the breath is “sweet” is reminiscent of the quote from Liturgy A wherein mummification makes the scent of the deceased “pleasant.” Both “sweet” and “pleasant” are common English translations for the word *ndm*, which is regularly used to describe scents in ancient Egypt. Again, we see a conflation between smelling and breathing through the nostrils as a marker for life.



FIGURE 3-5. 29TH/30TH OCTOBER 1925. TUTANKHAMUN'S TOMB. EXAMINATION OF THE INNERMOST COFFIN (CARTER NO. 255). BURTON PHOTOGRAPH 0770 © GRIFFITH INSTITUTE, UNIVERSITY OF OXFORD (COLOURISED BY DYNAMICHRONE).

Assmann (2005) defines the “embalming gaze” of the ancient Egyptians, wherein the world was viewed from a perspective of integration rather than dissection, as we often do today. Embalming offered a symbolic connectivity of the body which lost its unity in death. Assmann (2005, p. 31) argues that “Death was the principle of dismembering, dissolving, isolating disintegration, while life was the principle of integrating animation, which conferred unity and

wholeness.” Re-provisioning the deceased body with movement and perception and rejuvenating it through the application of scent/breath served to hold together the parts of the person, both metaphorically and physically. The pouring of black resin over golden artifacts and the mummies of the deceased known, for example, from the burial assemblage of Tutankhamun (Figure 3-5), represents a sensory moment where scent and the desire for unity superseded other forms of display.

As Chapter 52 of the Book of the Dead states, “My mouth truly belongs to me, that I may speak with it, my nose, which was in Busiris, that I may breathe air and take in the North Wind. I live on the divine dew” (Translation in Assmann, 2005, p. 130). The deceased breathes in the air of the North Wind allowing them to live on account of the divine dew—a metaphor for the fragrance of the gods. It is this aroma that allows the deceased to live, in concert with, but perhaps more so than, all the other preparations of the deceased.

3.5 THE VISIBLE MARKER OF THE INVISIBLE IN ART

The implications of the relationship between scent, life, and divine presence is further exemplified in the art of New Kingdom period tombs. While significant differences do exist between the tombs of the early Eighteenth Dynasty tombs, Amarna tombs, and the Ramesside period tombs, some consistency spans these periods with regard to scented imagery. By “scented imagery” I am referencing depictions of incense, unguent, perfumed oils, and flowers.

Examining the visual record of the New Kingdom period will also provide an overview of the raw materials valued for their scent in ancient Egypt at this time—a theme to be taken up in the following chapter.

Within the New Kingdom visual record, most imagery can be divided into two categories with regard to representations of scent: 1) implied; 2) active. Visual imagery from this period

referenced in the following analysis comes from elite and royal tomb wall paintings and carvings, figural ostraca (largely from Deir el-Medina), private stela, material artifacts, and temple wall scenes. The consistency in execution of these images is impressive and is likely demonstrable of a shared artistic canon. As I will examine below, the consistency in two-dimensional artistic framing devices is so striking that the formulations can be mimicked to communicate humor with the expectation that the audience would recognize the joke being made.



FIGURE 3-6. LEFT: STELA OF INTEF. MUSEUM ARCHEOLOGICO NAZIONALE 2504. RIGHT: STELA OF SAMONTUOSER. MUSEO ARCHEOLOGICO NAZIONALE/MUSEO EGIZIO FLORENCE 6365. AUTHOR'S PHOTOS.

Distinguishing between implied and active scents will help to organize the following discussion. For a clear example of the distinction, consider Figure 3-6. In the left image, a Middle Kingdom stela from Abydos, we see Intef, Superintendent of the Prophets, seated and holding a blue water-lily in his left hand up to his nose. This act of breathing in a flower clearly communicates an act of smelling taking place. In contrast to this example, we can observe the Middle Kingdom stela of dignitary Samontuoser. In this representation, the deceased male is seated similarly upon a lion footed throne. Rather than holding a flower to his nose, however, an unguent jar (Gardiner sign W1) is depicted in the open space before his face. I would take this artistic rendering as a visual marker of the invisible presence of scent, similar in function to the

active smelling of the flower from the other stela. These two options for representing scent were available for selection throughout Pharaonic history and thus both implied and active scents will be featured in the following discussion.

3.5.1 ACTIVE SCENTS



FIGURE 3-7. CAT AND MOUSE, CA. 1295-1075 BCE. LIMESTONE, INK, 3 1/2 X 6 13/16 IN. BROOKLYN MUSEUM, CHARLES EDWIN WILBOUR FUND, 37.51E. CREATIVE COMMONS-BY (PHOTO: BROOKLYN MUSEUM (GAVIN ASHWORTH, ER), 37.5E-GAVIN_ASHWORTH_PHOTOGRAPH.JPG)

Let us begin with active scents represented in ancient Egyptian two-dimensional imagery. The image of an individual holding jars of scented oils or unguents or a blue water-lily to their nose is common throughout the New Kingdom period (and beyond). This “generalized set of iconographical images” (Cooney, 2012, p. 159) is the most obvious representation of scent in ancient Egyptian imagery and is even included in the humorous representations painted upon some of the figural ostraca of Deir el-Medina. Consider for example this enthroned mouse (Figure 3-7) wearing a blue water-lily while smelling a cornflower and being waited upon by a cat-servant. As Cooney writes, “The serialization of a differentiated set of images indicates an ongoing communal agreement of subject matter, and thus that sketching activity happened within a communal structure” (Cooney, 2012, p. 166). Thus, this *communal* artistic canon allowed for

the application of such standards of representation to unique circumstances as a way of creating humor (Houlihan, 2001; Morris, 2007, p. 202). Were the image of one smelling a water-lily unfamiliar to the majority of people, its effect in a satirical context would be lost. Other than the blue water-lily, however, it is unclear exactly which smells these individuals are experiencing and so, it is likely the general experience of scent that is being emphasized here.



FIGURE 3-8. PAINTED SCENE FROM INSIDE OF DJED-HOR-JWEF-ANKH'S COFFIN. NIWINSKI 1988, 132 #147. AUTHOR'S PHOTO.

Another example of a clear reference to scent would be the directing of smoke and other implied scents toward the individual receiving the smells. In Figure 3-8 of the painted inside of the coffin of *dd-hr-jw=f-nh* (Niwinski, 1988, p. 132 #147), we see offerings being provided to the mummiform deceased. Above the bowl at the end of the censer, three flames of smoke waft toward the deceased's nose. Upon the offering table, a closed and an open water lily are directed similarly.

Additionally, beneath the table, a water lily sits atop a jar facing the deceased's form indicating even the scented contents of this vessel are intended for the deceased. The yellow varnish, unguent cones, and garlands all add to the general atmosphere of heavy scent.

An interesting metaphor that also includes a direct reference to smelling is the representation of individuals "smelling/kissing the earth" (*sn t3*), sometimes referred to anachronistically as *proskynese*. This translation emphasizes the position of the individual, wherein they are kneeling with their noses to the ground, prostrating themselves before their superiors. Egyptologists often use this phrasing to describe all individuals represented in this posture, regardless if they are labeled with the exact phrase (TT56 Userhat; Figure 3-9).

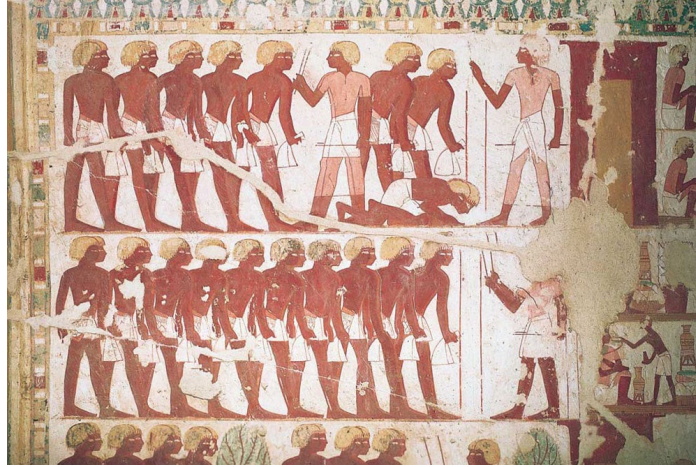


FIGURE 3-9. EXCERPT OF SCENE FROM TT56 USERHAT DEPICTING SOLDIERS SMELLING THE EARTH BEFORE A SUPERIOR. REPRODUCED WITH PERMISSION FROM ©WWW.OSIRISNET.NET.

A detailed description of this posture is included in the Great Dedicatory Inscription of Ramses II at Abydos. Spalinger’s translation of this passage reads, “Then they were ushered into the presence of his majesty, their noses touching the earth, knees on the ground in jubilation, kissing the earth, their arms in praise to his majesty” (2009, p. 29). While this posture does not necessarily emphasize the act of smelling itself, it does draw upon the body’s position for smelling, i.e., being near to the scent of interest. We must ask ourselves then, is it the literal smell of the earth that this phrase and posture emphasize, or rather the positioning required for undertaking this act of smelling? Might it be both? One’s scent reveals much about one’s identity—whether divine, corrupt, or something in between. Thus, showing respect for an official by smelling the ground before their feet might serve as a type of greeting—acknowledging their status by recognizing their scent. Therefore, smelling the earth is a sign of respect because it requires you to place your face near the earth’s surface in prostration.

3.5.2 IMPLIED SCENTS

Ancient Egyptian imagery also is filled with images of products that imply the presence of pleasant scents. It will become clear after this discussion that we will see an emphasis on the

general presence of positive scents and/or the suppression of negative scents rather than a focus on particular perfumes, with a few notable exceptions that I will discuss below. One of the most common images is that of incense (Figure 3-10). Incense pellets, typically formed by the mixing of a variety of powdered aromatics with a binder such as honey, were used regularly in ritual. Typically, these pellets are represented as small spheres burning atop small piles of charcoal in larger bowls or as small spheres being deposited into the bowl-ends of arm-shaped censers (Figure 3-10). Emerging from these bowls of burning incense are thin lines, likely representative of aromatic smoke.



FIGURE 3-10. RAMSES III BURNING INCENSE, KV 11. AUTHOR'S PHOTO.

Incense is rarely classified by its material components. Rather, the visual depictions and their associated captions consistently emphasize the act of censuring as the means by which breath and/or scent might be provided to the deceased rather than any particular mixtures or recipes, as was noted in later periods. Raven (1990) and Helck (LÄ II.792) both suggest that the word for incense *sntr* served as a causative word for god, meaning fumigation with incense created a divine atmosphere. Raven expands on this suggestion arguing that such divine scents could repel

evil and so burning incense became a necessary part of any practice meant to oppose the forces of chaos (1990, p. 16).

Other images of implied scents include unguents, floral decorations, garlands, bouquets, and the act of anointing. Unguents are represented in a variety of ways: as head cones, in mounds set in dishes, and in unguent jars (Gardiner sign W1), though, similar to incense, no specific recipe or mixture is identified. Unguent head-cones first appear just before the beginning of the New Kingdom and they change in size and shape throughout the following periods. They appear on stela, ostraca, papyri, coffins, and in representations of offerings, banqueting, worship, hunting, fishing, music-making, childbirth, and even one scene of selling bread and fish in a market (TT217: Davies, 1927, pl. XXX). By the Nineteenth Dynasty, these cones were much taller and thinner than their Eighteenth Dynasty counterparts, which appeared as small rounded white lumps. By the Ramesside period, the cones were typically two-toned, being capped with a reddish-yellow spot that drips down the side (Padgham, 2012, p. 96). This color change may be



FIGURE 3-11. LEFT: BANQUETERS FROM TT90 NEBAMUN, BM EA 37984. IMAGE RELEASED UNDER A CREATIVE COMMONS ATTRIBUTION-NONCOMMERCIAL-SHAREALIKE 4.0 (CC BY-NC-SA 4.0) LICENSE. © THE TRUSTEES OF THE BRITISH MUSEUM. RIGHT: EXCERPT FROM UNGUENT PRODUCTION SCENE IN TT175. PERMISSION GRANTED FOR IMAGE USE ©OSIRISNET.NET

representative of the scented oils either incorporated into the unguent itself or else added to the cone to carry the scent. An alternative suggestion has been made that the fat is going rancid,

though it seems unlikely the ancient Egyptians would depict this process given the tomb-context of the scenes. The earlier cones are only white in color.

The nature of these head cones has been debated over the last few decades. It is most likely produced through *enfleurage* in which the scented materials like flowers and resins are steeped in beeswax or animal fat. It is their form that likely led early Egyptologists to identify these head cones as made from scented unguent, as we can see in the comparison here (Figure 3-11). The form also embodies a striking similarity to representations of the Primordial Mound upon which Atum created all life (e.g., Lehner 2008, pp. 166–7; Snape 2011, p. 249, Fig 17.1). Note how not only is the shape of the cone similar in these instances, but the colors.

Bruyère (1926) first interpreted these cones as symbolic of rebirth, as they are often found depicted upon the heads of deceased persons. Cherpion (1966) suggested an alternative explanation, that the cones were symbols of perfume, which would otherwise be invisible. Simpson (1972) later argued that these cones were true material objects made from lumps of animal fat or wax, which were infused with scent and worn on the wigs of both male and female Egyptians as a moisturizer and perfume. The cones would slowly melt in the heat, yellowing the linens worn by these individuals (Simpson, 1972, p. 306). For example, consider BM EA 37984 (Figure 3-11 Left), a fragment of a scene from the Tomb of Nebamun TT90 now located in the British Museum. Though linen would not easily have been dyed by oils, Manniche argues that the fat would have melted and made the linens appear shiny or greasy. Thus, the yellow color was a way of expressing that appearance two-dimensionally (Manniche, 2002, p. 84). Another argument has been put forth by Padgham (2012) who completed a quantitative study identifying exactly where and how often these cones were represented in Eighteenth Dynasty tombs. She concluded that these cones mark the Ba of the effective dead.

My own argument has been that these cones are the visible manifestation of the invisible presence of scent, demarcating the presence of divinity within a scene or within an individual (Price, 2018; see also Meskell and Joyce, 2003). This assertion does not deny or contradict any of the other arguments, which largely have focused on whether or not these unguent cones are physical objects or symbolic representations. In fact, it melds quite well with Morant's suggestion that the unguent cone's scent produced an atmosphere representative of the deceased's second life (Morant, 2010, p. 107). My own interpretation, however, focuses on the cone as an artistic marker of scent, the significance of which will be discussed below.

One enlightening scene shows two women selling bread and fish wearing these head cones (TT217: Davies, 1927, pl. XXX). This occurrence would suggest that these cones may be used to represent the suppression of negative scents in a more mundane context. It is interesting to compare this unique occurrence with a stanza from the New Kingdom Text the "Teachings of Dua-Kheti" referenced earlier. While seeking to convince his son to become a scribe, Dua-Kheti criticizes the work of other occupations. When speaking of a coppersmith, he says, "He stinks more than fish eggs" (Hoch, 1991, p. 90). There was a level of disgust associated with the smell of fish, so it is understandable that the artists of this tomb scene would have wanted to ensure its smell did not interfere with the deceased's rebirth.

It was not until 2015 that material examples of these cones were excavated. Two examples were excavated from two separate burials at Amarna. The first was "Individual 150," who was aged 25–30 years old at the time of death. They were buried wearing a hollow cone of a "pale, brittle, waxy substance (object 39920)" (Kemp, 2010, p. 3). The interior of the cone had impressions of "short, randomly clustered lines that criss-cross," which suggests the cone's center may have been made from organic matter. The cone was a "creamy brown with dark

stains, mainly on the outside” (Kemp and Stevens, 2010, p. 10). The other cone was excavated in 2020, but was in much worse condition. This individual was a 20–29 year old female. The cone was reported to have a “silky feel,” thin walls, and perhaps the remains of linen on the inside (Stevens, 2019, pp. 1520–1521). Diffuse reflectance infrared Fourier Transform Spectroscopy identified the cones were made from biological wax (probably beeswax) and that there was no wax on the hair of the deceased individuals (Stevens, 2019, p. 1517). Both burials were from non-elite graves of which there are around 700 burials in total at the site.

The discovery of these burials suggest that these cones may in fact have been material objects, yet this does not disprove the idea that they also held symbolic significance. The lack of evidence for the “melting” of these cones onto the deceased’s hair is not problematic, as the ancient Egyptians themselves were no stranger to models being used within tomb assemblages. In the same way that flowers laying atop jars might indicate the scent of their contained materials, so too would I suggest these cones indicate the presence of (divine) scent. These cones may represent an experiment by which a two-dimensional visual symbol was translated into a physical object as a way of visibly representing the (invisible) presence of divinity by its scent well past the time that a true scent would have been preserved. Were this suggestion to be accepted, we see here that it is not necessarily the specific scents and their material origins that is important, but only the sensing/experience which is being emphasized. Deceased figures, especially by the New Kingdom, the period in which religion became more accessible to the general population, sought to be identified as one belonging among the gods that they might transition into the afterlife and become a member of the “effective dead.” By representing the invisible presence of scent (and therefore divine identity) visibly, this desire was made tangible. Think back to the many examples above where others are able to “see” someone’s “smell.”

In addition to incense and unguent implying the presence of a general category of pleasant scents, there are countless representations of flowers and other plants of smell: blue water-lilies; papyrus; corn flowers; poppy; etc. Flowers appear as borders around scenes, garlands, bouquets, jar decorations, offerings, filets, carved into jewelry and furniture, growing in gardens, etc. In fact, their absence is often more remarkable than their presence, particularly in Eighteenth Dynasty tombs. A word for “flower” in ancient Egyptian is: *stj-š3* which literally translates as “the smell of the garden/marshes” (*Wb* IV, p. 350.12). Thus, flowers evoke scent through their representation and use.



FIGURE 3-12. LEFT: BEADED COLLAR, JE52023. EGYPTIAN MUSEUM, CAIRO. AUTHOR'S PHOTO. RIGHT: FLORAL COLLAR FROM TUTANKHAMUN'S EMBALMING CACHE, MMA 09.184.216. IMAGE RELEASED FOR UNRESTRICTED USE UNDER CREATIVE COMMONS ZERO (CCO). METROPOLITAN MUSEUM OF ART IN NEW YORK CITY.

The material translations of these two-dimensional representations of flowers regularly accompany these scenes as part of the burial assemblage. For example, the *wsh*-collars represented around the necks of the deceased have been made both from actual plant materials as well as beads made to represent plant material (Figure 3-12). Actual bouquets of flowers have been excavated from tombs, as well. For example, Tutankhamun's burial included flowers of cornflowers, mandrake, poppy, mayweed, wild celery, persea, water lilies, olive, willow, papyrus, reed mace, and the red berries of *Withania* nightshade (Hepper, 1990).

Garlands, bouquets, floral collars, and filets feature prominently in tomb and temple scenes, as well as funerary assemblages (Kantor, 1945). Bouquets were presented as offerings to the gods and other floral decor such as garlands were essential to the construction of ritual spaces. These materials would need to be replaced regularly to maintain their freshness. In one tomb scene (TT6), the deceased Neferhotep was given a bouquet from a god’s altar to take home, indicating that the used plants were not always left to decay (Wild, 1979, I, pl. XLI; II pl. III, VI, p. 49).

The lack of consistency in the form scented flowers take suggests that specific identifications are not what is being emphasized here but rather it is their sheer quantity and implied scent. For example, the caption associated with the offering of a bouquet to the deceased reads, “For your ka, the scent of marsh flowers” (*n k3=k sty-š3*) (Author’s translation; Davies, 1973, vol. II pl LXX). Or, in this poorly preserved example from the Tomb of Menna, that identifies “[plants] of smell (*hnmw*)” (Hartwig, 2013, p. 39). Rather than identifying specific flowers in either of these examples, the emphasis is on the general category of aromatic flora. The blue water lily is one exception. Without fail, it is this flower that is represented most consistently across contexts. An Egyptologist would be hard pressed to find a bouquet, garland, or filet that fails to include a blue water lily. By the New Kingdom period, the blue water lily was functioning as a metonym for “pleasant scents” (Price, 2023).

Even in this longer passage from the tomb of Djehuty (TT110) where a few types of flowers are articulated, it is their scent and their geographic origin that is emphasized:

*sm3c m3ct nbt m pr jmn sc r tjwt nbt jmj t3 pn h3tyw šw nw nswt m zšn nhbwt jzw rrmw(t)
 cntyw w3d nw pwnt sty-š3 hrrw nb wcb jmj t3-ntr 3w-jb snb jm=sn m3ct nbt n nswt ntr r
 fnd s3t=f mrt=f [hnmw-]Jmn cnh dt...*

Offering all offerings from the estate of Amun and the presentation of all plants which are in this land, the choicest of the garden pools of the king(?), namely blue water lily

flowers and buds, reeds, mandrakes, fresh myrrh of Punt, scent of the marsh plants, and all pure flowers which are in god's land, joy and health being in them, all the offerings of the divine king to the nose of his beloved daughter [United with] Amun, living forever... (Author's Translation; Davies 1932, pl. 35 and 41).

This inscription accompanies a scene depicting the deceased Djehuty offering two bouquets to the enthroned King Hatshepsut. One bouquet is cylindrical, being made up of several papyrus stalks wrapped in a surplus of blue water lily buds. The other bouquet is shorter, being made of blue water lilies and a persea fruit, and is held by two arms extended from an *ꜥnh*-symbol. As stated, *ꜥnh* is also a word for "bouquet" so the image functions as a pun tying together the meanings of life, scent, and breath neatly. The *ꜥnh*-symbol is held by Djehuty, which functions in parallel with what is stated in the inscription—that he is providing life to Hatshepsut through this offering of scent. Note also how, in the inscription, it is not specific flowers that are being offered other than the blue water lily. It is rather their origin (e.g., *jmj t3 pn, nw pwnt*) that is highlighted, as well as their quantity (*nbt*) and state (*wꜥb, ḥst*). This passage sums up well what we have been discussing so far—that scent provides pleasure ("longness of heart" *ꜥw jb*) and health (*snb*).

Thus, the way these scenes are described indicates that it was the smell of the flowers that was significant as well as their geographic origin, more so than their exact identification. I return to the example from the Tomb of Djoserkaere's sonb (TT38) wherein the deceased's son presents a "bouquet of Amun" so that it might "exhale breath to [the father's] nose day by day" (Davies and Davies, 1963, p. 5, pl III). Now, everything comes together. The scent is the tangible representation of breath, and so, life. While the rising and falling of one's chest shows vitality, the presence of breath in the body as experienced through scent denies death. The bouquet with its aromatic flowers provides this life-giving force to the deceased and so revives them. Thus, in art, the invisibility of the gods was made manifest through the visibility of scent icons.

Returning to our discussion on the representation of scent in art, the final marker of implied scents are scented oils. Often these are only visible through the act of anointing or as contained within jars marked in some way to identify their scent. One set of specific fragrances sometimes represented two-dimensionally is the seven (or ten) sacred oils. These oils are referenced typically in the context of temple and funerary ritual. Seven is the most common representation, but the number can vary. The figural depiction of the seven sacred oils are not always labeled as such but can be deduced from their number. An example of this phenomenon can be seen on the south end of the east wall of the tomb of Paheri, which dates to the reign of Thutmose III of the Eighteenth Dynasty and is located at el-Kab/ancient Nekhen (Tylor and Griffith, 1894, pl. VIII). Seven unguent jars, each topped with a single, open blue water-lily blossom represents the “seven sacred oils.” The blossoms are open toward the deceased and his wife that they might “give [them] the scent of the sweet breath of the wind of the North,” effectively offering them life by engaging their sense of smell.

The purpose of the presentation of aromata was twofold. First, by equipping the deceased with a pleasant smell, they took on a divine identity and so were able to successfully transition into the afterlife by merging with the gods. Second, the aromatic offerings offered life to the deceased by invoking breath and so called them back to the living world to receive offerings.

3.5.3 THE ABSENCE OF SCENT

The absence of scent in scenes from the New Kingdom deserves some comment here, as well as the differences found in Eighteenth Dynasty and Ramesside period tombs. Early Eighteenth Dynasty tombs were characteristically T-shaped and divided into three main sections: a transverse hall, an elongated passage, and an inner room with a niche set into the rear wall. The decoration upon the walls of these tombs transitioned from activities of living peoples

establishing the status of the deceased to funerary and mortuary scenes involving the worshipping of the gods and the deceased's transition into the afterlife. Amarna tombs, on the other hand, tend to focus on the royal couple, Akhenaten and Nefertiti, and their worship of the Aten. In scenes from these late Eighteenth Dynasty tombs, the deceased acts almost as a bystander, only able to observe the royal couple and their prostrations before the Aten (Snape, 2011, pp. 209ff).

Ramesside period tombs tend to show little investment in depicting the activities that made up the "public identity of the tomb owner" but rather focus on the deceased's relationship with the gods (Snape, 2011, p. 225). The tomb scenes are no longer divided into several registers. Instead, they are divided into an upper and lower register. The lower sections focus on the funerary cult of the deceased, and the upper registers describe the deceased's worshipping of the gods.

The icons discussed above appear with greatest intensity in early Eighteenth Dynasty Theban tombs, particularly in banquet-, offering-, fishing-, fowling- and ritual-scenes. Their intense concentration in these scenes is notable particularly when compared to visual depictions where they are lacking. Such representations are made effective through their inclusion of these icons as markers for divine presence, ensuring the effectiveness of the ritual by guaranteeing the presence of a divine being—whether that is the deceased as an *akh* (an "effective dead person") or a godly being (Price, 2018; Price unpublished). For the early Eighteenth Dynasty, the contexts in which these markers fail to appear are typically scenes of craft production and agricultural pursuits.

Thus, given the stark absence of scent markers in some contexts as opposed to others, it is likely their inclusion or exclusion was designed to perform a specific function. Scented imagery in visual representations demarcated a defined space, or "smellscape." As discussed above, scent

assisted with the transition of the deceased into the afterlife by offering them the scent of the gods. This quality could be marked through the wearing of scented materials, such as unguent cones, as well as actively inhaling pleasant scents, such as a single blue water-lily. Similarly, implied atmospheric scents must have communicated the presence of divinity thus ensuring the success of a ritual by guaranteeing the presence of divinity through the visible representation of their scent.

In the Amarna period, tombs tend to focus on the bounty that is provided by the Aten. Because Amarna-era beliefs dictated that only the royal couple was able to directly commune with the Aten, images of the royal couple worshipping the Aten and offering boons to the populace were common. Amarna tombs in particular are scenes of abundance. Stacks of offerings and flowers abound. Though the form these scenes take are different from their early Eighteenth Dynasty counterparts, the function of these scent-markers is the same, namely that of marking divine presence. In this case, it is the Aten's role in the creation and maintenance of life. Take this "Hymn to the Aten" from the private tomb of Aye (n.10) as an example:

Every heart rejoices at the sight of when you have appeared as their Lord. When you [go down] in the western horizon of the sky, they sleep like a dead man. And their heads are covered and their noses clogged until you rise in the morning in the eastern horizon of the sky. Their arms are (then) in praise for your Ka because you have caused their hearts to live with your perfection/completeness. One lives because you gave your light. Every land is in festival...O Aten who lives by his appearance, all you have created dance before...Though you are one, a million lives are in you to cause them to live. The breath of life to their noses is seeing your rays. All flowers exist by living, growing, and thriving on earth because you arise. What lives and sprouts from the soil grows when you shine (Author's translation; Davies, 1906, pl. 27 and 41; Murnane, 1995; Transliteration by Sperveslage, 2022).

As is clear from this passage, the Aten itself creates life. It provides breath to the living and makes animals and plants flourish. Thus, the abundance marked in the Amarna-period tombs is a visible representation of the life-giving properties of the Aten, itself. Through its light, we all

may live. It is lovely that this invocation of the sun's light is situated such that its rays are invoked to brighten this dark tomb.

Ramesseid period tombs represent an important change, however. By this period, high concentrations of scented imagery seen in Eighteenth Dynasty tombs disappeared and instead are replaced by representations of the divine beings themselves. Scented imagery becomes relegated to the status of an offering, either the presentation of incense, unguents, and bouquets to a divine being or as stacked among the offerings on offering tables. Scenes from this period lack decorative borders and tend to focus largely on representations from the various religious books. Instead of desiring to mark divine presence solely through scented imagery, it is the gods and goddesses themselves being depicted. Rather than a complete overhaul of value attributed to such aromata, however, this change might represent instead a new taste in artistic form—that of depicting the gods directly in private tombs rather than referring to them obliquely through aromata. Though the style and content of the imagery changes throughout the New Kingdom, the function of scented imagery seems to remain largely the same, namely marking visibly the invisible presence of the gods, and, by extension, their life-giving properties.

As Platt succinctly states, “Manifestations of the gods offer the potential for a seemingly direct sensory experience of divine *eidea*—a moment in which mortal bodies can apprehend immortal bodies, whether it be through sound, scent, or, most commonly, sight” (2011, p. 56; cited in Laferrière, 2019, n. 38). It is not only scent which identifies the presence of the divine. In this thesis, I am focusing only on a very small element of the ancient Egyptian sensory world. Rarely do such concerns operate in isolation. Sensing was the physical manifestation of life and scent was only a small part of that understanding.

3.6 LIFE DEFINED BY THE STIMULATION OF ALL THE SENSES

Tombs operated as contained spaces filled with divine scents that assisted the deceased with their transition into the afterlife. Such artifacts and practices that we have discussed so far were visible or tangible representations of the invisible sense: scent. SCENT-AS-BREATH, however, was not the only observable manifestation of life. Rather, it was the complete invigoration of the senses that encapsulated what it meant to be alive. Living life to the fullest was the most revered form of existence, regardless if you thought life continued on after death or not. The Harper's Song genre represents this theme well. Here are two examples:

*jr hrw nfr r wr zp sn jmj kmj hpw twt=tw r gs=k mshw sšnw rrm(t)w r šnb=k st hmt pw
jnj jb=k s[...] =tw r gs=k jm=k hdnw jb=k hr hprwt nb jmj hsj r-hft hr=k m jr shz dwt bwt
ntr shz n=k ršwt*

Make holiday greatly, two times! Put ointment and incense you gathered at your side, and garlands of lotus and mandrake to your chest. The one who [sits] at your side is the woman who is in your heart. Do not let your heart be angry on account of anything that has happened. Set song in front of your face, do not recall evil, the abomination of god. Recall to yourself joys (Author's translation; Tomb of In-her-khau: McDowell, 1999, Fig. 20).

...Hence rejoice in your heart! Forgetfulness profits you; follow your heart as long as you live! Put myrrh on your head, dress in fine linen, anoint yourself with oils fit for a god... Make holiday...none is allowed to take his goods with him...none who departs comes back again (P. Harris 500; Harper's Song of King Intef. Translation in Lichtheim, 1976, p. 196–197).

This genre of texts advises the listener to celebrate life while you are living it. These passages are typically found attached to banquet scenes in private Theban tombs of the Eighteenth Dynasty. Whether they argue that you should not fear death because there is an afterlife or else they caution the listener that we all die and will be forgotten, they encourage listeners to revel and celebrate life. Specifically, as these two passages do, the songs encourage people to indulge in sensory pleasures.

Celebrating a “*hrw nfr*” or perfect day involves imbibing in alcohol, being anointed in aromatic oils, smelling flowers, wearing fragrant unguent and fine linens, dancing, listening to

music, and being with the ones you care about most. This ultimate indulgence in sensory pleasures represented life at its fullest. We can contrast these representations of life with the picture of death described by the Priest Khonsu-em-heb first discussed in Chapter 2. Where Khonsu-em-heb saw infirmity, lack of mobility, sight, sound, and breath as the lot of the dead, celebrations of life are filled with abundance and indulgence. Similar to Khonsu-em-heb's depiction of death, the Instructions of Ptahhotep describes old age:

Frailty has come, old age has arrived, weakness has come, childish helplessness returns, strength diminishes, for my heart is weary. The mouth is silenced and speaks no more, the eyes are dim, the ears are deaf, sleep comes with difficulty, day after day; the heart is forgetful, it no longer remembers yesterday, the bone aches due to the length (of years), the nose is clogged, it cannot breathe, for standing and sitting are difficult. Good becomes bad, all sense of taste is gone. What old age does to man: bad in every way (Translation in Assmann, 2005, p. 28).

Weakness has entered the heart and limbs. No speech, sight, sound, sleep, taste/touch, or movement is left to the old. Neither breathing nor smelling is possible for the nose is clogged. Death is summarized here as a *lack*. Such lack contrasts greatly with ancient Egyptian expressions of life. For example, Galczynski and Price (2023) discuss how dance was the ultimate expression of life due to how its function was to stimulate the senses and define communities. Individuals present at a celebration would be united through shared indulgence in sensory pleasures. Scent, in particular, can have this effect. For example, in a Nineteenth Dynasty love poem, the scribe writes, *jn=st n=k hnm=st sty bḥ djt thw=tw n3 nty* “she will bring to you her fragrance, and the scent inundates (the room) causing those present to be intoxicated” (Author's translation; Gardiner, 1931, p. 36f, §10.16–17 recto, pl. XVIa–XVIIa). Scent here has the ability to overwhelm, intoxicate, and define the boundaries of a community. “Those who are present” will be affected by the divine fragrance, marking them in that way.

Through sound, movement, scent, and visual stimulation, a dancer's costume attracted and held the attention of the audience, defining its boundaries and establishing a shared identity

through the celebration of life (Galczynski and Price, 2023). In the *Teachings of Ani*, it is “song, dance, and incense” that nourish the gods (Lichtheim, 1976, p. 136). In a hymn to the Aten, all of that which the sun gives life *dances* in celebration (Lichtheim, 1976, p. 91). Such examples identify how sensory stimulation was related to the living of life and contrast greatly with those above wherein death is marked by its lack.

3.6.1 I FEEL THEREFORE I AM

The categorization of “the senses” does not seem to have been a concern for the ancient Egyptians. As discussed in Chapter 2, the cognitive bias inherent in our translations of sensory metaphors has obfuscated the physicality embodied in ancient Egyptian perception. We can take again the example “to give your heart” (*dj hꜣty*) meaning “to be considerate.” Rather than describing a character trait, the original text speaks to “giving away one’s heart.” This conceptual metaphor, like many others, establishes relationships through commenting on the distance something is from the body.

The foundational text the Memphite Theology is a text rarely translated by Egyptologists due to its difficulty, but which can provide insight into the ancient Egyptian conceptualization of sensory experience (Galczynski and Price, 2023). The stone on which this inscription is found is now located in the British Museum (BM EA 498). The inscription states that the first gifts provided humanity were the use of our hands, legs, and arms. This was then followed by the gift of sensation: vision, audition, and olfaction/breath:

sw jr ꜣꜣt nb ꜥmt nb jrt ꜥwj ꜥmw rdwj nmnꜣ ꜥt nb mꜣꜣ jrtj sꜣm ꜥnhwj ssn fnd ꜣꜣw

and every work and every craft were made: the doing of the arms, the walking of the legs; the moving of all the limbs, the seeing of the eyes; the hearing of the ears, the breathing of air for the nose... (Author’s translation; Breasted, 1901, pl. 2, col 7–9; following Rothöhler, 2004).

This passage is the most explicit statement on the conceptual organization of bodily experience by the ancient Egyptians. In it, experience is perceived by moving, doing, making, seeing, hearing, and smelling/breathing. The passage continues stating that the knowledge acquired through these processes are brought before the heart and made effective through articulation by the tongue:

š(j)ʿr=sn hr ḥꜣtj ntf dd pr ʿrkt nb jn ns wḥm kꜣꜣt ḥꜣtj

They (i.e., the forms of perception and abilities for movement listed above) let rise before the heart. It (the heart) is what causes the coming forth of all wisdom. The tongue repeats the works of the heart (Author's translation; see Breasted, 1901, pl. 2, col. 9; following Rothöhler, 2004 and el Hawary, 2010).

The heart, thus, is the center of the person through which all experiences are translated and given value. Ultimately, these qualities of doing, moving, seeing, hearing, and smelling/breathing are the primary elements of creation. To live, and, by extension, to serve the gods, can be summarized as the ability to act and to feel through our bodies.

The ancient Egyptians defined experience more expansively than only the five senses recognized by many cultures today. At the very least, vestibulation (movement) and proprioception (body awareness) must be added to taste, touch, vision, audition, and olfaction. Nowhere is the equivocation of sensory stimulation with life made more explicit than in the category of texts titled the "Harper's Songs" and their accompanying tomb scenes as discussed earlier in this chapter. Life itself is expressed through the invigoration of the senses. Sensing is the physical manifestation of life itself. As I will show in the following chapters, however, this cultural fact lends itself to being manipulated as a means for exerting social control.

4 SCENT AS MATERIAL

The pleasing odor of resins, aromatic woods, herbs, spices, and flowers made such materials invaluable for scented ointments (Serpico and White, 2000b, p. 430). This chapter is about the procurement, production, and dissemination of scented products in ancient Egypt during the New Kingdom period. I begin by discussing the procurement of raw materials for incense, unguent, and scented oils. Next, I move on to how these products were manufactured. Because of the limited evidence for the production of aromata in ancient Egypt, I include here my experience with the Institute of Art and Olfaction in Los Angeles and at Beni Suef, Egypt and in Cairo, Egypt where I observed how plants are processed to capture their essential oils. After a brief commentary on the storage of these products, I move on from considering local procurement and production to how trade functioned within Egypt's ancient borders, highlighting the accessibility of these goods. Chapter 5 will review how the relationships explored here are mirrored in large-scale political negotiations and foreign trade.

Napoleon Bonaparte's expedition to Egypt in the Eighteenth century CE gathered together savants from various disciplines to 'rediscover' the wonders of Egypt for European audiences. The remarks recorded by the botanists are useful for the perception of the Egyptian landscape at that time. This expedition occurred before the landscape in Egypt was fully altered to suit the demands of a global market, though it had already changed from its ancient state. According to Prosper Alpin who was writing in the sixteenth century, sycamore, acacia, tamarind, balsam, and sambac trees grew locally. Other scented flora that would have grown locally in ancient Egypt include the blue water lilies which grew like weeds in the Nile River, as well as a whole bouquet of aromatic flowers. Terebinth resin trees, which were already rare by this time, were also an important component of this scented atmosphere (Leblanc, 2003, p. 39).

The construction of the Aswan Dam, completed in 1904 and the Aswan High Dam, finished in 1970, greatly altered Egypt's planting cycles and environmental conditions (Serpico and White, 2000a, p. 391). Today, the fertile soils of Egypt produce flora that have some of the highest concentrations of essential oils in the world; but the plants selected for mass farming today in Egypt are determined by international markets. Most of the plants grown commercially in Egypt are not native to the region (personal communication, June 2019, director of the Department of Medicinal and Aromatic Plants in the National Research Institute of Cairo, Dr. Elsayed Hassan). With such a different landscape from that of the ancient Egyptians, what is left for the researcher who seeks understanding of this locale's native species?

Visual, written, and material evidence suggest that frankincense, myrrh, cinnamon/malabathrum, cassia, and cardamom were some of the most popular ingredients in ancient Egyptian perfumes, though all would have been imported (Manniche, 2009, p. 2). Later Ptolemaic and Classical Greek writings also list a variety of ingredients circulating the Mediterranean at that time, including iris, henna, juniper, lily, marjoram, mint, myrtle, sweet flag, Cyperus grass, mastic, and Pistacia resins (Serpico and White, 2000a; Manniche, 2009, p. 2). Ancient Egyptian incense requires a base of dried plant materials such as raisins or sycamore figs, and local oils such as castor, ben, safflower, moringa, and linseed could be used as a base for liquid perfumes (Serpico and White, 2000a, pp. 390–405; Manniche, 2009, p. 2; Alba Gomez, 2016, p. 187). Other oils like sesame, olive, tiger nut, and almond also may have been available, in addition to animal fats and natural waxes for unguents (Serpico and White, 2000a). The likelihood of using one oil over another for scented mixtures would depend both on its inherent odor, as well as its stability. For example, castor and safflower oils both have a distinct

odor, whereas balanos and moringa oils have a neutral scent. Linseed oil, alternatively, turns rancid much more quickly than olive or sesame oil.

It is interesting to note that of all the resinous trees native to the area surrounding the Mediterranean Sea, Serpico and White (2000b, p. 435) identify only the *Pistacia kniniuk* as native to Egypt. This tree produces very little resin and only on its leaves when they are damaged. Therefore, the tons of resin used throughout Pharaonic history would have needed to be imported. The identification of *Pistacia* resin in dozens of amphora sunk with the Uluburun shipwreck, and the additional two dozen imported amphorae at Amarna can only hint at the substantial quantities of this type of resin imported into Egypt in the New Kingdom (Serpico, 2003; Serpico and White, 2000b, p. 458; Mills and White, 1989). *Pistacia* resin has also been identified in four incense burner sherds at Sai in Nubia excavated from New Kingdom period domestic contexts (Fulcher and Budka, 2020, p. 9). This last example indicates the availability of this material for non-royal domestic use, while also hinting at the distance which this material must have traveled, it being native to the area around modern-day Syria.

4.1 A RETURN TO TERMINOLOGY

The discussion of ancient aromata must begin with a comment on the difficulty of associating ancient material terms and remains with their modern equivalents. While there is no lack of written materials from ancient Egypt, it is not always possible to identify the modern equivalents of ancient terms, especially for organic materials. For example, *tj-šps* translates as “this nobleman,” or, alternatively “a noble stick/chisel,” but these literal translations provide little hint as to what specific tree it refers (*Wb* V, p. 243; cf. Incordino, 2017). Alternatively, some terms reference more than one product (Raven, 1990, p. 7). For example, *mrḥt* is used to reference varnish, anointing oil, unguent, lamp fuel, and oils generally, as will be explored

below. Even recognized words for oil such as *sgnn*, *nwd*, and *mrht* can refer both to non-scented oil and scented oil- and fat-based mixtures (Serpico and White, 2000a, p. 406). Other times, several words seem to be interchangeable, such as the use of *sgnn*, *mrht*, and *nḥḥ* in the ostraca of Deir el-Medina, while others are found only in specific contexts, like *tj-šps*. Examples of these complications will be shared below.

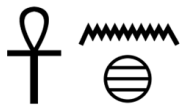



Let us take *nḥḥ* as an example. *nḥḥ* can be translated alternatively as “sesame” and “olive” oil (Serpico, 2004). Serpico and White (2000a, p. 397) indicate that sesame was likely introduced to Egypt in the New Kingdom, though its equivalence with the term *nḥḥ* remains unconfirmed. Evidence from Deir el Medina may suggest that the local variety of *nḥḥ* translates as olive oil. Many jar docketts excavated from this site carry the inscription “*nḥḥ* of the great orchard of *d(t)*” (KRI VII, pp. 76–83). *d(t)* is translated as “olive tree, olives,” which would suggest *nḥḥ* here refers to the oil of olive trees (*Wb* V, p. 618.4-.5). *nḥḥ* is referenced both as a ration for and as an exchanged commodity among the laborers at Deir el Medina (Janssen, 1975, pp. 330–333). *nḥḥ* oil also comes in various qualities, such as *nfr* “fine”; *nfr nfr* “double fine”; and *nfr wꜣb* “fine and pure” (Davies, 2018, p. 161; KRI VII:77ff).

Though chemical testing of botanical remains might be used to identify the modern identifications of ancient substances, this approach rarely brings us closer to equating the ancient remains with their ancient designations. Even if the containers in which the tested substances were found with labels, there is no guarantee that the identified material is the original one to which the label refers. Consider, for example, how many different food products you have stored in your favorite left-over container.

As discussed in Chapter 2.2, determinatives can often help with categorizing particular words in the ancient Egyptian language, but even these can only tell us so much. Let us take the

word, *ʕnh* “life” as an example (Table 4-1). Depending on the determinative, the semantic value of *ʕnh* varies quite drastically: life, sandal, bouquet, ears. The only preserved change here that hints at their different meanings is the silent determinative(s) added to the end of each word. Determinatives thus help us to distinguish the semantic meaning of these words. Note that *ʕnh* meaning “life” includes two phonetic complements that may or may not be present in the other terms (*Wb* I, pp. 193–197).

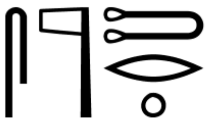
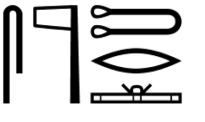
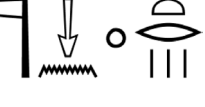

TABLE 4-1. FOUR ENGLISH TRANSLATIONS OF ANKH (LIFE; SANDAL; BOUQUET; EARS).

| Hieroglyphs | Transliteration | Translation (English) |
|---|-----------------|-----------------------|
|  | <i>ʕnh</i> | Life |
|  | <i>ʕnh</i> | Sandal |
|  | <i>ʕnh</i> | Bouquet |
|  | <i>ʕnhwy</i> | Ears |

When examining scent-related material terms, determinatives function in a similar way though are much less consistent (Incordino, 2017, p. 84). In a two-part study completed by Félix Relats-Montserrat (2014, 2016), he concluded that the nose-sign determinative (Gardiner sign D19) generally is used to categorize words relating to smelling, breathing, and emotion, though its use is not consistent. Consider Table 4-2 and the word *sntr* (*Wb* IV, p. 180). We see an incense






pellet in both the first and last example despite the variations in nuance. In the second example, there is the book roll (Gardiner sign Y1), regularly used to reference abstract ideas whereas, in the final example, plural strokes (Gardiner sign Z) are used with no determinative present. For *sn̄tr*, at least, the determinatives help less than the context in which these lexemes appear.

TABLE 4-2. FOUR ENGLISH TRANSLATIONS OF *SENETCHER* (TO CENSE; TO MAKE DIVINE; CENSING; INCENSE).

| Hieroglyphs | Transliteration | Translation (<i>Wb</i> IV, p. 180) |
|---|-----------------|-------------------------------------|
|  | <i>sn̄tr</i> | To cense/purify |
|  | <i>sn̄tr(j)</i> | To make divine |
|  | <i>sn̄tr</i> | Censing (?) |
|  | <i>sn̄tr</i> | Incense |

Some determinatives used in scent-related terms, however, can be more helpful. For example, words referencing liquid smells such as scented oils or unguents often end with a jar determinative (Gardiner Sign W1 or W22; See rows 1–3 in Table 4-3). Scented materials relating to plants and/or trees will often include determinatives of that nature (e.g., Gardiner sign M1), as we see in *bꜣꜥ* and in *tj-šps* depicted in Table 4-3. Additionally, as seen with the term *sn̄tr*, the pellet-determinative (Gardiner sign N33) can categorize terms related to resin-based incense products (ꜥntyw, Table 4-3).

TABLE 4-3. TRANSCRIPTION, TRANSLITERATION, AND CITATIONS OF FIVE TYPES OF SCENTED PRODUCTS WHOSE DETERMINATIVES INDICATE THEIR FORM.

| Transcription* | Transliteration | Citations |
|---|-----------------|---|
|  | <i>b3k</i> | <i>Wb</i> I, p. 423.9–.15; p. 424.2–9 Koura, <i>Öle</i> , p. 221 |
|  | <i>mrht</i> | <i>Wb</i> II, p. 111.1–.10 Koura, <i>Öle</i> , pp. 114ff. |
|  | <i>sgnn</i> | <i>Wb</i> IV, pp. 322.9–323.3 Koura, <i>Öle</i> , pp. 131ff. |
|  | <i>tj-šps</i> | <i>Wb</i> V, p. 243.5–.14 Koura, <i>Öle</i> , pp. 238ff |
|  | <i>ʕntyw</i> | <i>Wb</i> I, pp. 206.7–207.3 Koura, <i>Öle</i> , pp. 214f |
| *The transcription here represents only one variation. See listed citations for additional ways of writing these words. | | |

I might reiterate, again, however, that there is little consistency and these determinatives can be combined or replaced at will. For example, *ʕntyw* can also use the tree determinative. Because it is generally agreed today that *ʕntyw* translates as “myrrh” (cf. Serpico and White, 2000b, p. 442 and Kapiec, 2018), it may be possible to use the determinative to identify which part of the tree the word is referencing (e.g., bark versus resin). Ultimately, however, while we

can use ancient Egyptian product terms to categorize these products into broad buckets, we are little closer to identifying their modern designations. As Incordino (2017, p. 85) states, “Whatever vegetal species these words could actually represent (if it is logical and reasonable to assume that we have to search for only one species referred by each word), the fundamental aspect of investigation should be oriented more to the *use* to which the Egyptians put those products.”

I suggest that our difficulties may not only be issues of translation but are indicative of an emphasis on general categories over specific identifications. As explored in Chapters 1 and 2, how we categorize our experiences varies between cultures. For example, Raven (1990, p. 7) suggests that the ancient Egyptian categorization of materials such as “wax” and “resin” is based less on their scientific make-up and more on cultural values associated with geography, quality, color, quantity, use, and the like.

We might observe the effects of this trend by examining the recipes for particular perfumes. It will become quickly apparent that the specific quantities and plants used to create a specific perfume varied quite drastically. While these variations might be substitutions where, for example, a certain plant was not available locally (Derchain, 1975; Manniche, 2009, p. 1), the fact that these recipes were all identified as the same product suggests that many of the ingredients were less significant than the overall effect or affect. Let us take the mixture Kyphi as an example.

The name Kyphi (Latin: cyphi) is the Romanized form of the Greek κῦφι. κῦφι comes from the ancient Egyptian word *k3pt*, which is likely a derivative of *k3p* “to burn incense/cense” (Loret, 1887, pp. 10–13, with examples). There is only one clear example of this perfume recipe recorded in ancient Egypt before the fourth century BCE and it dates to the Eighteenth Dynasty.

This reference is in a medical text and is listed as a mixture to sweeten the smell of one's house, clothes, or mouth (P. Ebers 852–853:98, 12–14b, 14b–18b; Ghalioungui, 1987, p. 216, no. 852–853). Another possible reference that is unlabeled is a list of six ingredients presented by Ramses III for Ptah at the Temple at Memphis (P. Harris I, 53a, 4–9; Derchain 1975, pp. 62–63). Additionally, similar ingredients are listed together as part of a long list of goods on ostraca Cairo CG25677 (vs. 36-38) and 25678 (rt. 12–16) (Černý, 1935, I.1, pp. 57–8, pp. 78–79; I.2, pl. LXXV and LXXXVI; Raven and Demarée, 2005, p. 82).

There are several Ptolemaic references to this recipe, two at the Temple of Edfu, another at Philae (Edfu II, pp. 203, 207f, 210ff; Kockelmann and Winter, Philae III, no. 48). According to these texts, there are eleven basic aromatic substances used in this recipe. Raven and Demarée (2005, p. 82) suggest that the two versions at Edfu offer alternative names for the first nine ingredients. According to Loret, the two Edfu examples are nearly identical to the Philae recipe after the sixth ingredient and, per Derchain (1975), are largely mythical glosses or unidentifiable products. Ten of these ingredients have been identified on some ceramic dishes now located at the Rijksmuseum van Oudheden, Leiden, which likely date to the Ptolemaic period (Raven and Demarée, 2005). These dishes, Raven and Demarée suggest, were used by the priests of the Osiris Temple at Abydos to manufacture Kyphi. Each dish contains a short inscription listing an ingredient. Of the eleven different inscriptions, ten of them are ingredients found in the recipes for Kyphi at Edfu and Philae. The last ingredient, *ḥsbḳ* “blue pigment” could have been used to color the paste.

Dioscorides (1st c. CE; *De materia medica*, I.24), Plutarch (1st c. CE; *De Iside et Osiride*, ch. 80), and Galen (2nd c. CE; *De antidotis*, II.2) also record recipes of their own. These vary both in number of ingredients (10 to 16 total) and material. By the Roman period, a

reference at the Esna temple laboratory suggests *kꜣꜣꜣ* might have referred to “all aromatic substances” stored in the [*šꜥꜥ*] *n kꜣꜣꜣ* (Vadas, 2020, p. 120).

As we can see in the comparison charts (Appendix A: Kyphi Recipe ingredient lists, Table 7-1 and Table 7-2), despite our inability to translate all of these ingredients, it is clear that there is much variation in the ingredients used to make this perfume. Is this a result of change-over-time? The lack of access to some ingredients? Or perhaps it has more to do with the general impression created by this perfume rather than the exact ingredients of which it was made? It is unlikely that we will be able to decipher this discrepancy. Regardless, I draw this comparison to highlight our lack of knowledge with regard to how aromata were categorized and named.

Seeking to understand such substitutions, variations, or glosses of terms studies such products as “Things.” As outlined in Chapter 2, however, to focus on the material as Object reinforces the binary, unidirectional relationship between the user and the object. In seeking to perceive aromata within their *readiness-to-hand* mode, as part of this trans-corporeal sensory world where the experience engages and interweaves with the cognitive realm, I choose to focus on the experience of scent as its own category. This experience has a material reality in the world, but that materiality is subordinate to its ‘meshwork of interwoven ways of being.’ What remains significant for this thesis, then, is that Kyphi had a SMELL, and that SMELL was a desirable one, regardless of its specific make-up.

It is for this reason that I choose to focus on the experience of scent rather than specific product identifications. That said, it is important to perceive the extent to which the ancient Egyptians desired, accessed, and used aromata in their lives. In the previous chapter, I surveyed the scented materials desired and used by the ancient Egyptians as depicted in art. In the

following chapters, I will move on to investigate the social networks that were built around the procurement, storage, and exchange of aromata.

4.2 PROCUREMENT

The following discussion will focus on how aromata was harvested within ancient Egypt.

4.2.1 RESIN

From where were scented products and raw materials procured? Egypt has no native resin



FIGURE 4-1. EXAMPLE OF RESIN COATED FUNERARY OBJECT. WOODEN FIGURE OF A BABOON ON A RECTANGULAR BASE; OVERLAID WITH PLASTERED(?) LINEN, BM EA50698, 18TH DYNASTY. RELEASED UNDER A CREATIVE COMMONS ATTRIBUTION-NONCOMMERCIAL-SHAREALIKE 4.0 INTERNATIONAL (CC BY-NC-SA 4.0) LICENSE. © THE TRUSTEES OF THE BRITISH MUSEUM.

trees, and yet resinous tree sap is the source material for the massive amounts of varnish and resin used by the ancient Egyptians. We can take Pistacia resin as an example. In a study completed by Kate Fulcher *et al* (2021), this team took one hundred samples of the black organic coating found poured over or painted onto funerary equipment dating from 943–716 BCE. While this date range is outside the scope of this thesis, the tradition of using this (or, at least very similar) material

in funerary preparations dates back to the Middle Kingdom and was, for example, used liberally in the New Kingdom such as to coat the burial equipment and coffin of King Tutankhamun (Figure 3-5; Figure 4-1).

The components Fulcher’s team identified in her study

were a plant oil, animal fat, Pistacia resin, bitumen from the Dead Sea, conifer resin or pitch, and beeswax (Fulcher *et al.*, 2021, p. 7). The authors also state that, “there are aromatic compounds

that could indicate that other ingredients may have been present” (Fulcher *et al.*, 2021, p. 8).

Both the bitumen and Pistacia resin would have been imported.

In another study, Serpico and Bourriau (2001) took twelve yellow and ten black varnish samples from various pieces of New Kingdom period funerary equipment. Both types of varnish were predominantly made of Pistacia resin. To get an idea of quantity, Serpico (2003) suggests an average Canaanite amphora holding 15–17 liters, could varnish at least 8–15 coffins. A single exterior coffin lid thus would take nearly a whole liter itself (2003, p. 227). She notes, however, that coffins were not the only part of the funerary assemblage that was varnished. Rather, most funerary equipment, as well as, sometimes, the body itself, were covered with Pistacia resin (p. 228).

Varnish began appearing in earnest under the reign of Hatshepsut, and increased in use under Thutmose III (Serpico, 2003, p. 228). The amount of Pistacia resin alone moving into Egypt and around the Mediterranean throughout the Late Bronze age must have been considerable, given these examples, not to mention the single ton of Pistacia resin found in the Uluburun shipwreck (Serpico and White, 2000c). The use of resin in varnish is in addition to the incense burned in temple and funerary rituals. The importation of resin is attested at least since the Old Kingdom. For example, in the Fifth Dynasty, 80,000 measures of the *ḥntyw*-resin were offered to the gods by Sahure (*Urk.* I, p. 246.4).

An effort was made within Egypt itself to import and grow resin trees. Inscribed on the walls of her mortuary temple at Deir el-Bahri is Hatshepsut’s expedition to Punt to bring back incense for her divine father, Amun. This depiction shows workers carrying trees set in baskets attached to carrying poles by rope (Naville, 1898, III, pl. 74; Dixon, 1969). The captions of this series of images also mentions the digging up of trees (*Urk.* IV, p. 327.6; p. 352.11). It has been

suggested that the tree pits found in the forecourt of Hatshepsut’s mortuary temple may be the remains of the very ones brought back from her expedition to Punt (Shaw, 2002, p. 317; Dixon, 1969), though this is untestable.

A similar carry-basket mechanism can be found in the tomb of Rekhmire where trees are

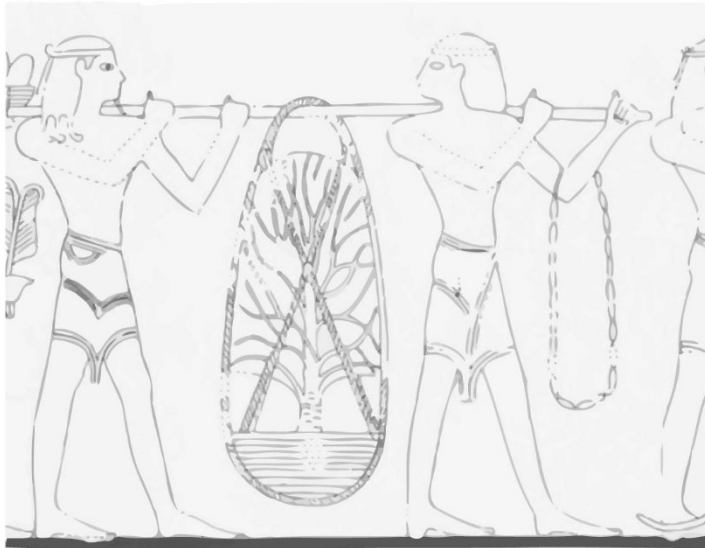


FIGURE 4-2. SMALL EXCERPT OF LARGER TRIBUTE SCENE DEPICTING CARRY-BASKET MECHANISM FOR MYRRH TREES. AFTER DAVIES 1943 II, PL. 17. WWW.METMUSEUM.ORG.

being brought as tribute for the deceased (Figure 4-2). Similarly, such trees figure as offerings in the tomb of Puymere (Davies, 1922 I, pl. 32). Ramses III, when listing all the many offerings and services he gave to the gods, states that he planted incense trees for them near their abodes (Birch, 1876, pl. 7,7; pl. 49, 7). Dixon (1969) makes an interesting argument: in the gifts Ramses III offers

Amun as listed in P. Harris I, are included the wood (*ht*) and seeds (*pri*) of *ntyw*-trees.

Identifying *ntyw* as myrrh, he states that *Commiphora* trees do not have aromatic wood nor do they produce timber “of any value” (p. 60). Thus, he argues, these stem-cuttings and seeds are additional evidence for the desire to grow this species in Egypt as *Commiphora* (myrrh) apparently grows well from stem cuttings. *Boswellia* species (frankincense) reproduces by seed, though some of this genus can be grown from cuttings, as well (p. 60). Therefore, not only were live trees brought back to Egypt, but perhaps so were cuttings and seeds in the attempt to grow these specimens locally. Dixon suggests this “despairing effort” (p. 61) indicates the failure of these attempts. When such trees are scarred for collecting their resin, however, the bark shaved

off the tree is often infused with resin and can be used as a lower-grade incense. Thus, Dixon's interpretation is not the only explanation. Regardless, from these many textual and visual examples, it is clear there was a strong desire to make these trees and their resin more accessible locally.

4.2.2 THUTMOSIS III'S BOTANICAL GARDEN

In addition to resin trees, the ancient Egyptians also expressed a desire for other scented, organic materials. The so-called 'botanical garden' comprises two rooms (XXXI and XXXII), an antechamber and sanctuary. They are located within the *Akh-menu*, or festival hall, of Thutmosis III at Karnak. Room XXXI has four lotiform columns aligned on an east-west access, with two sphinxes situated between them facing away from the sanctuary. The decoration on the walls of the antechamber serve as a testament to the variety of plants known, and perhaps, sought by this ancient state. Some of these plants have been identified by botanists as representing foreign species. The following two inscriptions accompany the images:

rnpt 25 hr nswt-bjtj mn-hpr-r' nh(.w) dt sm gm (j)n hm=f hr h3st rtnw

Year 25 of the King of Upper and Lower Egypt Men-kheperre (Thutmosis III), living forever, plants are found by his Majesty from the land of Retjenu (Syria / Palestine) (Author's translation; Hugonot, 1989, pp. 38f, fig. 28–29).

sm nb hpp hr rt nbt nfrt jmj t3-ntr [jnn b3w] hm=f hft wd3 hm=f r rtnw hrt r shrt h3st mhtjt

Every strange plant and every perfect flower which are in the God's Land [the might] of his Majesty [brought] while his Majesty proceeded to Retjenu to subjugate the northern hill country (Author's translation; Hugonot, 1989, p. 40).

These inscriptions suggest that the plants depicted here are from the land of Retjenu, today recognized as the area around modern Syria and Lebanon. The plants are not identified specifically. Rather, they are referred to as strange (*hpp*) and perfect (*nfr*). Laboury (2007) argues convincingly that the room that display this decoration was the location of the "initiation

ritual.” Such a ritual could only take place in the most sacred room within a sacred precinct where it was possible to view the god as the cult statue. Thus, the four *nḥbwt* (lotiform-columns) aligned on the east-west axis bundled with this diverse range of flora and fauna decoration was indicative of the bountiful world of the creator god, Amun (Laboury, 2007, pp. 30–31). Including both indigenous and non-native plants and animals upon these walls, as well as the four lotiform columns, which likely represent the four corners of the world, the decoration describes through imagery the full magnitude of the territory of the sun god—one that extends beyond the political borders of Egypt proper. Thus, the plants chosen for these walls may be iconic of other cultures, similar to how the blue water lily and papyrus represent Upper and Lower Egypt respectively.

The plants and animals are inscribed distinct from one another without reference to landscape or offerings. Baum (1992) identifies some of the plants depicted, though comments that some are teratological. Following Day (2013b; 2006), our inability to identify some of these plants may suggest their “visual appeal” was sometimes less important than their other sensory qualities. Native plants like lettuce, tamarisk, papyrus, persea, sycamore, and blue water lily are noted, as well as non-native ones such as pomegranates, iris, arums, kalanchoes, figs, and some kinds of conifers (Hugonot, 1989, p. 40; Baum, 1992). That these plants were “from the land of Retjenu” suggests that Thutmosis III may have brought samples, or at least, knowledge of these plants back from his campaigns to the north.

4.2.3 GARDENS AND GARDENERS

As for the procurement of aromatic plants and materials locally, there is little evidence that attests to where it was cultivated, how, and by whom. One category of evidence that is useful to consider is the titles of officials that date to the New Kingdom. One fairly common title is that of “gardener” (*kꜣry*). This title, when referenced in the ostraca of Deir el-Medina, tends to

identify producers of foodstuffs rather than specifically scented materials, like flowers (Davies, 2018, pp. 130ff).

The division between flora cultivated specifically for eating as opposed to smelling was less stark than how we see it today, however. According to Classen *et al.* (1994, p. 42), in the West we tend to distinguish natural materials by their function: food, pleasure (scent), and medicine. I came across an example of such a cultural division by accident once while on excavation in Ethiopia. A paleoethnobotanist on our team found a local basil-variety growing near his trench and he began snacking on it to the horror of the local members of our team. Through some frantic back and forth discussion, during which our botanist feared he had misidentified the plant, we discovered that particular basil variety was used exclusively for its scent as a means of curing cold-like symptoms and was never eaten. Additional discussions with an Egyptian colleague of mine revealed that basil is used similarly in Egypt, particularly in the south, though it also is used, albeit rarely, in food.

A Middle Kingdom funerary garden excavated in 2017 from a tomb courtyard at Dra Abu el-Naga may provide some insight into this issue of categorization (Fahmy *et al.*, 2010; Galán 2019). Necropolis gardens are not unknown. For example, in the story of Sinuhe, the main character was given a fully-equipped tomb that included a garden at the end of the story (P. Berlin 3022, line 306). The garden excavated at Dra Abu el-Naga used a gridded-strategy where it was divided into 30x30cm plots and each square was separated by a low wall of silt. The Middle Kingdom tomb of Khnumhotep III at Beni Hassan depicts such a garden being planted and watered by several gardeners (Murray, 2000, p. 615). This form of cultivation optimizes water conservation and is characteristic of arid areas. Other examples have been excavated from Avaris, Amarna, Amara West, Mirgissa, and Uronarti (Stevens and Chapman, 2014, p. 154;

Parnham, 2021, p. 28). Archaeobotanists have found evidence of coriander, melon, a tamarisk tree, and flowers of the daisy family within the Dra Abu el-Naga funerary garden. These identifications suggest the co-existence of typical food offerings and other plants with sensory- or symbolic-significance in the same space.



FIGURE 4-3. RECONSTRUCTION BY MARCELLE BAUD OF A SCENE FROM THE TOMB OF NAKHT (TT161). IMAGE RELEASED UNDER CREATIVE COMMONS CC BY-MRAH/KMKG.

The Tomb of Nakht (TT161), bearer of the floral offerings of Amun, offers a visual comparison for gridded gardens being used to produce a variety of plants. Unfortunately, due to poor preservation, we must rely on Marcelle Baud’s beautiful reconstructions of this tomb now located at the Musées Royaux d’Art et d’Histoire in Brussels (Figure 4-3; Manniche, 1986). In the lowest register, beneath two registers of partygoers at a banquet, are the gridded gardens over which Nakht is supervising. Above each of the grids, the types of plants being cultivated are depicted. These include a mixture of flowers, lettuces, onions, and flax, not to mention two fruit trees, date palms, and a pool full of fish and blue water lilies. The connection between this garden scene and the above banqueters is clear—here we see the location from which the provisioning of offerings and foodstuffs come, notably the flowers for smelling, wearing, and enjoying. Once again, we can observe the sharing of space for the growing of scented and unscented greenery. It is notable that the vegetation here is specifically identified. Whether it is

the particular symbolic importance of these plants (e.g., the association of lettuce with fertility), their scent, or something else that makes their identification worthy of note, we do not know.

At Amarna, Barry Kemp has suggested that gardens attached to royal and religious spaces may be related to the use of plants grown there in social and ritual displays. There are several gardens known from Amarna of various sizes (Tietze, 2011, pp. 212–226). To the south of Building 200, which lay just to the east of the Walled Village, in an open area (xvi), a layer of ashy alluvial soil formed an even surface 12cm thick. Against the south wall of Building 200, a gridded garden was excavated (Bomann, 1987, p. 50, fig. 4.5 and 4.6). Twenty small plots made up the feature, in five rows of four. The excavator wonders if the open area covered by the alluvial soil outside of the gridded garden was also used to cultivate plants, perhaps a single winter crop, as opposed to perennial vegetables, which may have grown in the plots. Area 10 shows a similar pattern, located just to the east of Building 200, it contained a thick layer of ash and alluvial dust about 15cm thick. The waste from the animal pits next door to these features would have made for convenient fertilizer.

The North Palace at Amarna likewise has gardens. This grand building faces the river and is located between the North Suburb and the North City. The garden court in the north-east corner of the palace was connected to the main inner court by a buried limestone conduit to a deep well (Kemp, 2012, pp. 52–53). The garden court was surrounded by buildings with windows that looked upon the central sunken garden. When first excavated, some of these surrounding chambers were still decorated with painted plaster of marsh scenes (Kemp, 2012, p. 59, pl XVIII).

A pair of sunken, gridded gardens were also found at the South Pavilion at Kom el Nana, in addition to a small garden located in the north-east corner of this same enclosure (Grundon,

1990). Kom el Nana is a walled enclosure that houses a large temple, several gardens, and a variety of service buildings such as a bakery and workshops (Stevens and Chapman, 2014, p. 154). Two of the gardens were located within the north and south pavilions of the temple. One of these measured on average 4.8x2.75m and was sunk about 1.2m below the pavement. The plots were organized in an 8x4 grid pattern. Unlike the Building 200 plots which still contained alluvial soil brought up from the Nile, these were filled with the “same sandy rubbish that filled the entire sunken garden,” which, the excavator suggests, means that they were open and empty when abandoned (Grundon, 1990, p. 41). The team assumes these sunken plots were used for trees, like the ones found in the North Palace. This South House is set behind a sizable pylon and the excavators suggest that this pair of buildings was an “independent focus of interest and activity” and that, given the scale, were designated “an unusual degree of importance” (Grundon, 1990, p. 47). Botanical remains identified include grape, safflower, castor, coriander, beet, celery, basil, olive stones, carrot (*Daucus* species), *Persea*, juniper, black cumin, melon, and watermelon, tamarisk, and winter cherry (Stevens and Chapman, 2014, p. 161).

A family chapel and walled open space near the Walled Village also have evidence of gardens, though these are not gridded (Kemp, 1985). Uncovered in the EES 1921–1922 excavations, buildings 528 and 531 each were found to have small gardens. While the excavations by EES cleared out the sediment from 528, 531 remained intact until re-excavated in the 1980s. Chapel 531 was a small building with a porch that had two stone-lined garden plots. Botanical samples taken during Kemp’s exploration revealed evidence of coriander, black cumin, juniper, beet, basil, white mustard or radish, sycomore fig, winter cherry, a species of *Asteraceae*/the daisy family, Christ’s thorn, acacia, and tamarisk (Stephens and Clapham, 2014, p. 161).

The botanical samples taken from the chapels outside the Walled Village represent a notable contrast from that identified in the rest of the village—namely, that leaves and flower heads were much more common here (Stevens and Chapman, 2014, p. 159). Stevens and Chapman note that olive trees (*Olea europaea*) would be unlikely to survive in this environment, and thus, the presence of olive leaves is notable. They suggest their presence here was likely for the making of floral garlands within the chapels (cf. Hepper, 1990, cited in Stevens and Chapman, 2014, p. 159). They highlight how the diversity of flora preserved through desiccation at these Amarna gardens contrasts with the near “exclusive association of charred material with cereal remains” (p. 156). Thus, these sites provide invaluable information on the daily life of the inhabitants of this region.

In all of these examples from Amarna, plants and trees are being cultivated in a variety of settings, but all on a fairly small scale. The botanical samples reveal that what was growing in these spaces was not all intended to be eaten. For example, wild carrot and celery would have been too fibrous for human consumption (Kemp, 2021, p. 32; Murray, 2000, pp. 632–633). In fact, according to Murray (2000, p. 648), wild celery at this time was more likely valued for its fragrance for garlands rather than as an edible vegetable, evidenced by a garland made from wild celery now at the Agricultural Museum in Cairo (Manniche, 2006, p. 83).

Therefore, another function of these gardens might be suggested. In addition to being present for the viewer’s pleasure, as is suggested by the windows looking into the garden court in the North Palace, many of these plants here attested are sometimes used in bouquets, garlands, and floral collars (Kemp, 2021, pp. 30–33). The small-scale on which these plants were cultivated and their nearness to elite and/or religious spaces adds weight to this interpretation. Just as the image of cultivation of various greenery takes place below the banquet scene in the

Tomb of Nakht, so too would the small-scale cultivation of particular flora be undertaken near the physical places of their use.

Ancient Egyptian temple gardens were places of abundance. With soothing shade, heady aromas, and a striking variety of color; it is no wonder such spaces were considered appropriate for the gods. As Ramses II announces in his temple at Abydos, “he planted many gardens, set with every tree, all fresh and fragrant woods, the plants of Punt” (Mariette, 1880, II, pl. 3). At the mortuary complex of Hatshepsut at Deir el Bahri, tree pits were found in the northeast corner of the forecourt and one on either side of the temple ramp. Two shallow t-shaped pools surrounded by circular “flower-beds” were also found laid to either side as one reached the ramp to the upper terraces, similar to Building 528 at Amarna, though at a larger scale. At the time of excavation, the sediment at the bottom of the pools was dried and cracked as if they had only just been abandoned to dry out (Winlock, 1924, figs. 16–17). These pools were unlined and still contained remnants of papyrus stalks visible to the excavators in 1924. Apparently, a fowler’s throw stick was found among the papyrus stalks (Winlock, 1924, p. 18). From the images published in Winlock (1924, figs. 16–17), I wonder if these “flower-beds” surrounding the basins were actually gridded garden plots.

Visitors to this space, whether mortal or divine, would have traveled through densely lush spaces as they neared the more sacred parts of the temple. In an effort to recreate heaven on earth, such gardens promised the presence of divinity through reference to their scent. As the examples throughout this thesis suggest, it was “plants of smell” and “sweet and fragrant woods” that were so desired for these spaces. As Cornelius (1989, p. 1) puts it aptly, “the garden represented life itself: the temple garden stood for the divine forces of life at work in the cosmos and the necropolis garden for the rebirth of life.” To feel was to live, and gardens were spaces of

exquisite sensory stimulation. Whether through coolness, aroma, color, sustenance, or symbolism, the lush and fragrant freshness of the bounty cultivated in these organized spaces invigorated the soul, body and mind.

The association of gardens with sacred and/or royal settings, such as those at the South Pavilion, North Palace, Deir el-Bahri, and Dra Abu el-Naga, comes as no surprise given the references we have to gardeners operating out of specific locales. Other titles for gardeners include, “Head Gardener in the Mansion of Amun” and “Gardener of the Temple” (al Ayedi, 2006). Given the above discussion, however, it seems that the title of “gardener” was not restricted by the intended use of the produce for which they were responsible.

For example, the title “gardener of the necropolis” may reference individuals responsible for the upkeep of these tomb gardens, as well as the distribution of the produce to tomb workers. In P. Turin Cat. 2071/244, in a journal entry dating to regnal years 10 and 11 of Ramses IX, the “gardeners of the tomb” brought a delivery to the tomb workers in the necropolis, *[hrw] n jnyt jn n3 k3ryw n p3 hr* “[day] of delivery by the gardeners of the necropolis.” The section identifying what produce was included in the delivery is broken, but includes: *sm*-vegetables, *kb*-jars, *tb*-jars, and onions (P. Turin Cat 2071, rt .8; KRI VI, pp. 637ff). The deliveries made by gardeners of the tomb were tracked meticulously in order to ensure that they were meeting their quotas (*b3kw*). For example, O. Černý 22 lists eight gardeners and the number of bundles they each delivered to the left side of the crew working in the necropolis (Davies, 2019, p. 131).

It seems that gardens of the necropolis could be used by the living, as well. In P. BM 10052, while being interrogated about the silver her husband brought away from the Great Tombs, the wife of the gardener Ker of the funerary chapel of Ramose argues that she never saw the silver. Rather, she got new servants by exchanging the crops (*md^c*) from her garden for them

(Peet, II, p. 152, pl. XXXI). It is possible to interpret this example in another way, however: that the wife keeps her own garden to supplement her own income. Either possibility is interesting in that they both imply families cultivated private plots and could sell off their surplus.

The first example suggests gardeners in the necropolis were largely responsible for feeding the workforce at Deir el Medina, whereas the second suggests Ker was specifically responsible for managing the garden of the funerary chapel for Ramose, who was, presumably, deceased. This flexibility of purpose for those with the title “gardener of the necropolis” suggests that their produce may have been equally varied.

An example from the tomb of Nedjemger, the Head Gardener of the Ramesseum (TT138) may provide some additional clarification. The passage of interest is located in the broad hall of his tomb (left half, front wall, bottom register). The deceased, Nedjemger, Supervisor of the Pool (*hrj š*) of the Ramesseum, inspects the bouquets and garlands being presented by two rows of men, saying:

*n3 n 3w [...] r-w-hrw-(3htj) nb m3t jmj [...] jyy [jnj] n mnt n jmn-rw nswt ntrw hn
psdt=f r jrt jw=f nfr r jkr m [...]*

Those of the great ones [...] Re-Horakhty, Lord of Truth: Cause [...] the coming and [bringing] daily for Amun-Re, King of the Gods, together with his Ennead, in order to do it, he being exceedingly good in [...] (Author’s translation; KRI III, p. 384).

It is apparent from this partially broken passage that the flowers and garlands that Nedjemger is responsible for are intended for the temple—specifically for Amun-Re and his Ennead. In another caption, it reads *jr-n nhw* “we make bouquets.” Here, again, Nedjemger and his crew are taking responsibility for the production of bouquets, for which, presumably, the gardens irrigated by or near the “pool” (*š*) of the Ramesseum are producing the material. It seems no coincidence that the term for “bouquet” is similar to “life,” given that the offering of bouquets is often captioned with the phrase, ‘to provide breath to the nose’ (e.g., TT38, South Wall,

transverse hall). Thus, we see again the use of gardens attached to a ritual space to provide materials; though, this time, it is on a larger scale. The flowers for ritual use and display needed to stay fresh so local procurement was an obvious solution. Even Cato, writing in the second century BCE advised agronomists to grow flowers in suburban gardens for garlands, alongside their vegetables (Cato, *On Agri.*, VIII.2)

In another example, the Head Overseer of the Gardens of Amun Sennefer presents two bouquets on the west wall of the transverse hall in his tomb (TT96), saying:

ms st šz sꜥr rnpwt nbt m tpj nt t3 ʿt-nt-ht...jst [...] jrj-pꜥt h3tj-ꜥ jmj-r šnwtj [n jmn] jmj-r jhw jmj-r hntj š n jmn sn-nfr m3ꜥ-hrw sꜥr h3t rnpt nbt n t3 ʿt-nt-ht n hm=f m hrt-hrw nt rꜥw nb r hrp st r hwt-nꜥr n[t jmn] rꜥw nb

Bringing the scent of the marsh and offering all fresh plants in the finest of the orchard...Now [...] the Prince and Count, Overseer of the Granaries [of Amun], Overseer of Cattle, Chief Overseer of the Gardens of Amun, Sennefer, justified, presents all the choice fresh plants of the orchard to his Majesty in the course of every day, in order to administer it at the temple of [Amun] every day (Author’s Translation; *Urk.* IV, pp. 1417–1418).

It is the scent of the garden flora that Sennefer is highlighting as that which is offered to the god Amun-Re on behalf of the King. No specific plants are referenced; rather “all kinds” of plants are offered. Sennefer does not fail to emphasize that it is he who presents these “choice fresh plants of the garden” *every day* so that they can be given to the temple. We are left to imagine the quantity that would have been required by such a major, sacred institution and how the seasonality of plants might have affected their procurement.

Thus, these examples demonstrate that the function of the garden was not unitary. Rather it provided sensory comforts, produce for offerings, and nourishment, as well as necessary ingredients for the fabrication of products required for the functioning of temples, palaces, and homes (Hugonot, 1989, p. 83). As Wilkinson put it, “Function, entwined with meaning, dictated form” (Wilkinson, 1994, p. 1). Whether it was oil for lamps, incense for rituals, or food for eating, the garden and its produce was essential to the lives of the ancient Egyptians.

Growing gardens could not only be under the purview of the royal and religious. At Amarna, a house with an extensive, gridded garden nearly 10x15m was excavated at the southern end of the Main City (L50.9A) (Kemp, 2012, p. 54, fig 2.10). Little documentation is available on this house as it was rebuilt in 1907 by Ludwig Borchardt as his expedition house and has since been repaired and enlarged. It now serves as the field station for the EES expedition. As suggested above by the case of the wife of Ker, private gardens were tended by those able to afford them. Representations of lavish gardens figure in the elite tombs of the New Kingdom. These images typically are dominated by a large pool replete with fish, blue water lilies, and papyrus, surrounded by veritable forests of trees and shrubs such as sycomores, mandrakes, and palms (Cornelius, 1989; Hugonot, 1989).

In the garden where Ipuw works raising a shaduf to water his plants, persea, sycamore fig, cornflowers, mandrakes, and blue water lilies surround him and his house (Davies, 1927, pl. XXVIII). In the tomb of Ineni (TT81), the deceased's house and garden is depicted along four registers (PM I, p. 161). Date and dom palms, sycamore fig, pomegranate, persea, and tamarisk predominate. Accompanying this scene is a unique gridded caption that lists the specific trees cultivated in Ineni's garden by species and number (Brugsch and Dümichen, 1862, pp. 48–9; pl. XXXVI; Baum, 1988). This text identifies numerous specimens cultivated by Ineni, all of which were likely growing locally in Egypt by this time.

What is missing from this narrative so far is the large-scale production of state-sanctioned produce as the procurement of flora and foodstuffs discussed thus far likely supplemented even larger-scale cultivation. We know from various tax documents that gardeners also worked for the Crown supplying grain. Both *h^c*-land and *mjn.t*-land are terms used to describe a royal class of fields set aside to supply revenue to the state. The yield of these fields would have been under

the purview of a local mayor, priest, or other high-official and subject to collection by tax deputies (Gardiner, 1941, pp. 23f).

Jar docketts from Deir el Medina may represent the delivery of such produce. These ceramic labels were written on or attached to jars and amphorae transporting foodstuffs along the Nile. They were used to identify the commodities contained within and to assist with registration once they arrived at their destinations. Other than wine, olive oil (*nḥḥ n dt*) was commonly referenced in these docketts. The ceramic ostrakon fragment Qurna 621/1 reads “[...]the great groves of olive trees for the temple of Ra[...] 32 2/33 hin-measure.” Another example, Qurna 619/5, speaks of an olive tree orchard of a temple of millions of years. The oil was provided to the inhabitants of Deir el Medina by large estates, such as those owned by the Ramesseum in the Delta or the royal estates around Pi-Rameses (Davies, 2018, p. 161).

In the Great Harris Papyrus, it is said that Ramses III distinguished between “fields” and “gardens” in the section listing the works and offerings dedicated to the deities of Thebes, including Amun-Re. The numerical difference between these entries provides insight into the expected differences in yield between these two types of agricultural plots. Plate XI, lines 6–7 read “orchards and gardens, 433; fields, arouras 868168 1/4” (Authors translation; Birch, 1876; Erichsen, 1933). While no exact measurement is provided with reference to the orchards and gardens, even were it to be equivalent with or larger than an aroura, the numerical difference here would be notable. Given what we know from tomb representations of gardens and orchards, as well as references to deliveries made by gardeners such as those analyzed above, it would seem the expectations of production with regard to these terms was drastically different.

From this same document, in the section dedicated to the deities of Heliopolis, the planting of fields for specific products is also mentioned. Plate XXVII, line 10 reads, “I made for

you lands of olives in your city of *Jwnw* (Heliopolis). I supplied them with gardeners and numerous men to make pure superior *nḥḥ*-oil of Egypt for lighting the lamp of your noble enclosure” (Author’s translation; Birch, 1876). *nḥḥ*-oil is a common term used to describe the oil delivered to the artisans of Deir el Medina to light their lamps, as will be discussed later in this chapter. It is notable here that it is specifically *nḥḥ*-oil of Egypt that is mentioned and that is identified with fields of olive trees (*dt*).

Some jar docketts for *nḥḥ*-oil have been found inscribed on sherds of imported Canaanite pottery, suggesting *nḥḥ*-oil could also be imported (e.g., Qurna 645/5). Therefore, it makes sense why many of these docketts identify the oil specifically “of Egypt” (KRI VII, pp. 79ff).

In summary, there are at least three possible purposes to which garden harvests can be put: food, ritual/display, and/or sensory pleasure. None of these categories are at the exclusion of the other, however. In this discussion we have observed a *mélange* of state- and temple-controlled production of foodstuffs and aromata and small-scale production of similar materials for both religious and domestic use. Identifying the purpose or use to which such products were put is more complex than the equation HARVEST=NOURISHMENT. This conclusion is apparent from the suggestion that wild carrot and celery would have been too woody to be edible, despite evidence that they were grown in some of the gardens at Amarna. Thus, in addition to growing “specialty” crops to add flavor and aroma to food, the ancient Egyptians were also concerned with growing plants for creating atmosphere. Scent was most certainly an aspect of this, but other characteristics such as color, the play of light, and shaded coolness were also parts of the equation. I would push back against the argument that growing crops not strictly necessary to live was a ‘luxury.’ As should become apparent throughout this thesis, scent was as crucial to life as air. Procuring scented materials, then, was a staple of ancient Egyptian life.

Let us now turn to what was done with these materials once they were harvested.

4.3 PRODUCTION

Finding evidence for the production of scented oil, unguent, and incense in ancient Egypt has largely been limited to a few tomb scenes, some official's titles, and the Ptolemaic period temple unguentaria. Below, I will incorporate comparative examples from the eastern Mediterranean as well as ethnoarchaeological work that I undertook.

The ideological value of aromata as discussed in Chapter 3 may have contributed to the dearth of evidence for production—evinced a desire to keep the process hidden due to its highly charged, religious value. The lack of archaeological evidence, however, also may be a result of researcher bias. Take the absence of oil presses in Egypt as an example. Unlike Cyprus (Belgiorno, 2017), Crete (Koh, 2008), or the Levant (Stager, 1985) in which perfume production areas and olive presses have been excavated, Egypt has no such evidence before the Greco-Roman Period (Littman *et al.*, 2021).

In Cyprus, a large production area for scented oils dated to the Bronze Age has been excavated at Pyrgos-Mavrorachi (Belgiorno, 2017). At the center of the whole production area is an olive press, around which the other crafts are situated, including weaving, metal working, and perfumery. What the excavators suggest is that all these areas were situated around the oil press because they all required oil to function. For example, evidence of scented oil was found on a spindle whorl suggesting perfume was used to cover the gamey scent of ungulates (Lentini, 2017).

The archaeological remains of this Cypriot perfumery included bowls containing fourteen different ingredients set into a calcareous floor surrounded by small pebbles. Also excavated were querns, pestles, flint blades, and a variety of vessel types including fire stands, funnels,

basins, pitchers, vases, amphorae, and bottles. Evidence of ceramics used for distillation were also found (Lyssiotis, 2008). Archaeobotanical investigations of the ceramics revealed trace evidence of rosemary, myrtle, lavender, bergamot, and coriander, all of which grow locally on Cyprus (Lentini, 2004; 2017). Archaeologists at the site further concluded from the remains that boiling, distillation, and maceration were the processes by which perfumes were produced here. While this assemblage, when paired with the archaeometric analyses, demonstrates that this area was reserved for scent production, without the history of literature on perfume in Cyprus and the careful soil sampling procedures, it might have been possible to misrepresent the area's ancient function. Such investigations help reveal the sorts of social networks that would have been involved in the production of these products, which may be invisible in the ancient Egyptian record.

It is possible that the processing of scented materials took place outside of ancient Egypt's borders, though given the evidence examined here, this seems unlikely, if not infeasible. An emphasis on texts in Egyptology may blind researchers to the realities of the soil. In truth, our evidence for wine production in Egypt likely overlaps with that of oil production as the process of pressing and straining grapes for wine versus crushing organic material for oil can be remarkably similar. So, let's begin there.

4.3.1 WINE AND OIL PRODUCTION

Theophrastus, writing in the fourth century BCE, authored the composition *On Odours*, which details the nature of perfume as it was known and experienced in Greece at that time. He suggests that balanos oil, produced by pressing the nuts of the *balanite aegyptiaca* (*jšd*) or desert date tree, is the ideal base for liquid scents. Its shelf life is longer than olive oil which must be used within a year of processing, and it is less viscous and so takes on odors more easily (Book

IV). Such trees were more common in ancient times than today, and likely grew in Upper Egypt more so than in the north (Serpico and White, 2000a, pp. 392f).

Today, in Uganda, where balanite fruit continues to be processed by hand and consumed locally, the nuts are collected beneath the parent trees during the dry season (December - February). Animals, such as goats and sheep, will spit out the nuts after stripping their external, hard surfaces. Thus, the fruits also can be collected from animal resting places (Okia *et al.*, 2011, p. 84). To process the oil, the nuts are first dried for 3–7 days. Then, the nuts are cracked to extract the seed kernels which must then be dried, pounded, and roasted. Cracking the nut without crushing the kernels is very difficult. In Uganda and Nigeria, the nut is carefully cracked between two large stones. Once the pounded kernels have been roasted, oil can be extracted by boiling the kernel powder in water and decanting the oil. The whole process takes 10–14 days, with the expectation that the women processing the nuts would work through 2–3kg of kernels per day. Overall, 2.5kg of kernels produces 1L of oil, which equates to a 40% recovery (Okia *et al.*, 2011, p. 85). This process is labor intensive; however, it can operate quite easily at the household level. For example, the women responsible for the oil production studied by Okia *et al.* did so for their own consumption and for sale (Okia *et al.*, 2011).

A medical text from the New Kingdom recommends a similar process for the creation of a fragrant ointment for the rejuvenation of the body. The passage reads:

Beginning of the scroll of making an old man into a youth.

One has to get a great many bitter almonds (*ḥmꜣyt*), comparable to 3 bushels. They have to be pulverized and put in the sunlight. After they have dried completely, they have to be threshed like threshing grain. They have to be winnowed until only the kernels of them remain. As for all that comes from this, it has to be measured, as well as sieving the chaff of the threshing floor with a sieve. Measure likewise all those kernels that have come out. Make into 2 parts: one, of those kernels, and the other, of the chaff. Make one part equal to the other.

They have to be set as a compound in water and made into a soft dough. They have to be put in a new pot on the fire and cooked completely and adequately. You will know they have cooked (adequately) by the water evaporating and by their drying out until they are like dry chaff, without moisture in it.

They have to be taken out. When they have cooled, they have to be put in a jug to wash them in the river. They have to be washed adequately. One will know they have been washed (adequately) by one tasting the taste of the water that is in the jug without any bitterness to it.

It has to be put in the sunlight spread out on the cloth of a washerman. When it has dried, it has to be ground on a grinding stone. It has to be set in water and made like soft dough. It has to be put in a pot on the fire and cooked adequately. One will know (it) has cooked (adequately) by the beads of oil coming out from it.

A man shall keep ladling the oil that comes from it with a scoop. It is to be put in a jar after it has congealed into (a substance like) clay, its congealing having been smoothed and thickened. Ladle this oil to be put on the linen cover on the upper side of this jar. Afterward, it should be put in a jar of fine stone.

Anoint a man with it. It is something that repels a cold from the head. If the body is wiped with it, what results is rejuvenation of the skin and repelling of wrinkles, any age spots, any sign of old age, and any fever that may be in the body. (Proved) good a million times. (Translation in Allen, 2005a: Papyrus Edwin Smith, 21.9–22.10 = Vso 4.8–5.10: Verjüngungsmittel)

This passage is an excerpt from the Edwin Smith Papyrus, a Second Intermediate Period medical papyrus that focuses primarily on treating open wounds. The verso, however, contains eight spells and five additional prescriptions for various ailments. The last two of the prescriptions, of which this is one, were written by a different scribe (Allen, 2005a). Allen translates *ḥmꜣyt* as “bitter almond,” an oil that imparts a sweet fragrance when prepared, but a bitter taste. *ḥmꜣyt* alternatively may translate as “fenugreek”—an ingredient that figures prominently in modern, Indian curry recipes (*Wb* III, p. 94.4). Though the spice itself imparts a bitter taste, once it has been prepared properly and combined with other aromatics, it likewise can impart a sweet aroma, similar to that of burnt sugar or maple syrup.

The similarity in production of these different oils is notable. Thus, it can be particularly difficult to distinguish between oil processing and perfume production (Serpico and White,

2000a, p. 405). From the harvesting, dehulling, and separation, to the drying, grinding, boiling, and decanting, the archaeological evidence of such a process would be extremely difficult to identify—likely leaving behind only some evidence of fire, cooking vessels, linen scraps, botanical remains, and utensils, all of which might communicate multiple functions. Pressed cakes of botanical remains also may have been used as animal fodder, leaving behind little evidence of their existence.

4.3.1.1 THE PRESS

What neither of these production methods include is the use of a press to acquire liquid through compression, such as that which is done for olives and grapes. It is the image of the bag press that makes the identification of wine versus oil production sometimes ambiguous in the ancient Egyptian visual record. According to Murray *et al.* (2000), only $\frac{2}{3}$ of the juice of a grape can be captured via treading by foot. Some tomb scenes corroborate this suggestion by indicating that grape scraps were pressed after treading in order to collect the rest of the liquid. While scenes that include images of harvesting grapes and/or treading most certainly reflect the production of wine, those that only represent the pressing process may not, especially when such a depiction is associated with the act of heating something over a fire or oven. When a heat source is present, the bag press is more likely representing the extraction of oil or scent from other plants, like fruits, flowers, seeds, or tubers (Murray *et al.*, 2000, p. 588). Serpico and White (2000a, p. 407) point out that the use of stone weights as presses or the beam press was never adopted in pharaonic Egypt, despite its popularity in Western Asia. These heavier presses evolved around an oleoculture, wherein olive oil was a staple of the diet.

There are three techniques for pressing depicted in tomb scenes, all of which are variations on a torsion bag press (Alba Gómez, 2016; Brun, 2000; Murray *et al.*, 2000). The first

is a large sack with poles attached to either end. These poles are twisted, crushing the organic materials contained within. The liquid that seeps out is then captured in a vessel set below the bag. The second technique is similar to this one, but the bag is attached at one end to a frame and the other to a pole that can be twisted. In the third version, the bag is attached to the frame at both ends and a pole is used to twist the bag from outside the frame. Alba Gómez (2016, p. 195) adds to this discussion by identifying the difference between hot- and cold-pressed methods. When seeds are heated before pressing, more oil can be extracted, but the oil will be of a lower quality. If the seeds are pressed cold, however, the quality will be higher but the quantity of seeds will need to be greater to produce the same amount of oil. Fragrance can be extracted from plant material through these methods, as well.

Confusion between wine and oil production is rampant in Egyptological publications. For example, a series of First Dynasty labels depict a press, which has alternatively been interpreted as a wine press (Petrie, 1900, pl XXIII; Murray *et al.*, 2000, p. 577) and an oil press (Alba Gómez, 2016, p. 203). The depiction of pressing on these seals is the earliest identification of this hieroglyphic sign. As Alba Gómez (2016, p. 204) contends, such presses were likely used for the production of both oil and wine—a trend that continues throughout the rest of pharaonic history.



FIGURE 4-5. OIL MANUFACTURING SCENE FROM THE TOMB OF IYMERY AT GIZA (G6020) DEPICTING BAG PRESS TECHNOLOGY AND THE SEVEN SACRED OILS. ADAPTED FROM LEPSIUS, 1949-59, II, PL. 49B.

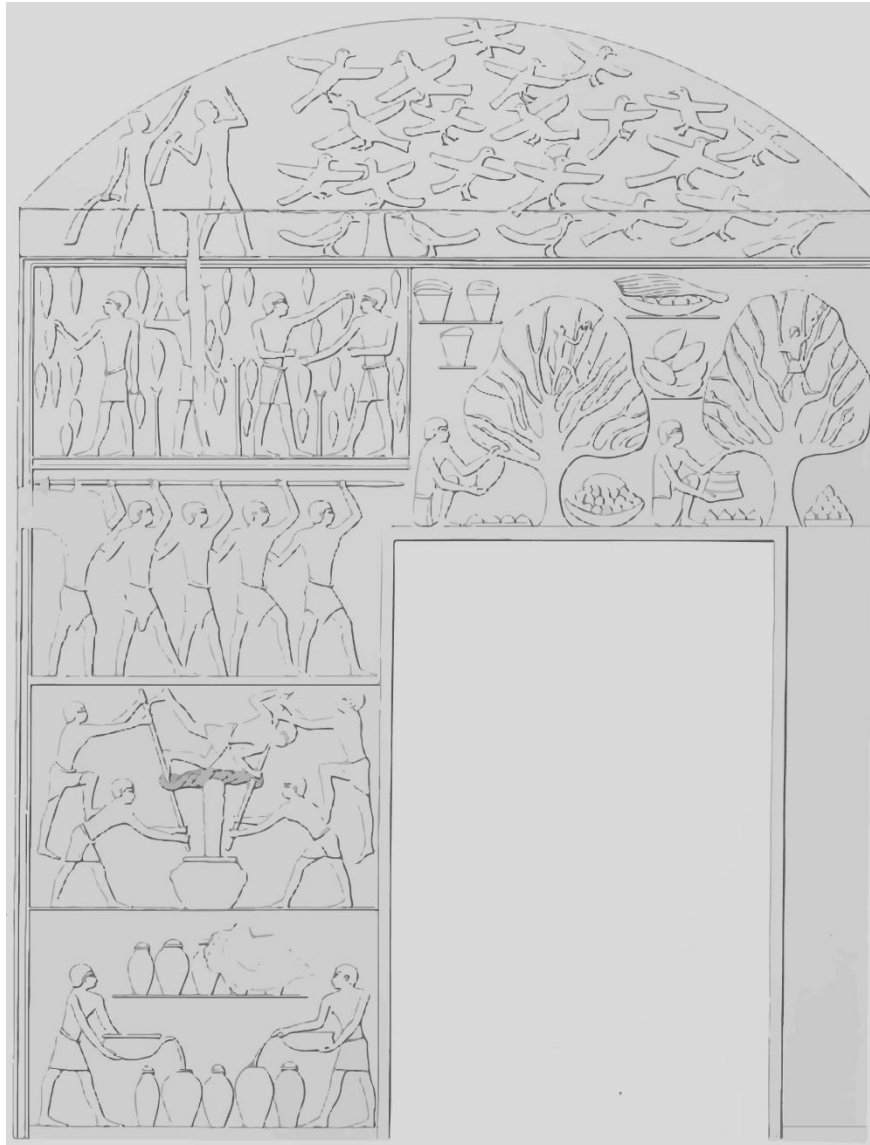


FIGURE 4-4 WINE PRODUCTION SCENE FROM THE TOMB OF IYMERY AT GIZA (G6020) DEPICTING BAG PRESS TECHNOLOGY. ADAPTED FROM LEPSIUS, 1949-59, II, PL. 53B.

The Fifth Dynasty tomb of Iymery at Giza (G6020) is not so ambiguous. In this tomb images of both wine and oil production employing a bag press can be clearly identified (Lepsius,

1949–59, II, pl. 49b; pl. 53b). In Figure 4-4, a bag press is being used to produce *mrḥt*-oil, whereas Figure 4-5 shows the pressing of grapes for wine. The two scenes of pressing alone are nearly identical; it is only from their wider context that their function can be identified. The right half of Figure 4-4 shows jars labeled for each of the seven sacred oils. Figure 4-5, on the other hand, is surrounded by images of harvesting grapes, treading grapes by foot, and the pouring of wine into jars. Of note, however, is the image of pressing grapes for wine is also accompanied by the gathering of fruit from trees. Given the scenes are surrounding a doorway which would prevent the repetition of processing scenes for the tree fruit alongside the grape processing scenes, it seems logical to presume the treading, pressing, and decanting scenes from this image are depicting the processing of both the tree's fruit and the grapes.

Another Old Kingdom tomb, however, this one of the Sixth Dynasty, complicates our desire to categorize these scenes by function. In the tomb of Niankhpepi at Zaouyet el Meitin, we can see the harvesting of *wḥn*-berries which are treaded by foot before being pressed with a torsion bag press (el Shimy, 2003, fig. 6). This scene is similar to the one of harvesting berries that accompanies the grape harvest referenced above in the tomb of Iymery (Figure 4-4). Thus, treading by foot cannot be relegated strictly to the processing of grapes.

Another particularly controversial scene can be found in the Eleventh Dynasty tomb of Bakt III at Beni Hasan (Newberry, 1893, pl. VI; Champollion, *Mon.* CCCLXXXIX.3, .4). According to Murray *et al.*, this scene has alternatively been identified as straining grape juice between the stages of treading and pressing the grapes; cooking *šdh*-wine; preparing plants for oil extraction; the processing of plants for *nwd* (a scented ointment); and the production of grape syrup (Murray *et al.*, 2000, p. 589; cf. Fletcher, 1999, Serpico and White, 2000b, p. 462, el Shimy, 2003, p. 35, and Tallet, 1995). While convincing arguments have been made for all these

interpretations, the poor preservation of this scene will likely deter us from ever identifying it specifically.

Fortunately, the ancient Egyptians do not seem to have been overly concerned with categorizing these scenes by their specific function. Rather, it seems the act of pressing was being emphasized, rather than the specific produce being processed. In fact, a single deity was recognized as lord over both the wine and oil press: Sheshmu. Notably, this god's name could be written ideographically with only the image of a press (Sethe, PT 403a; Gardiner sign Aa23). Shesmu's character reflects a duality inherent throughout ancient Egyptian theology. On the one hand he is brutal and violent, pressing the heads of enemies until their blood gushes forth like red grape juice (Willems, 2014, p. 491). On the other, he is a benevolent deity of the wine and oil press providing sustenance to those in need (Ciccarello, 1976, pp. 43–54). According to Ciccarello, it is not until the New Kingdom the Shesmu adopts the role of ointment-maker, leaving behind his connection with wine-making. For example, in a New Kingdom text, he has been identified as “Shesmu, the ointment maker; *mrht* is in his charge” (Ciccarello, 1976, p. 44). He is also credited with providing ointment to the deceased (Lichtheim, 1945, pp. 198–199). Shesmu continued in this role into the Ptolemaic period. At the Ptolemaic temple at Edfu, Shesmu is named “lord of the laboratory”—he being the one protecting the rooms storing the cherished aromatic oils whose recipes adorn the walls (Ciccarello, 1976, p. 51).

Thus, images of pressing produce in tombs did not only depict the processing of various types of produce. Nor was it indicative of a specific function, such as the production of oil or wine. Rather, similar to Shesmu's duality, such images also may have referenced this metaphor of squashing enemies. This press technology, therefore, was not the purview of a single craft but one whose use was broadly functional.

4.3.2 PERFUMED SUBSTANCE CRAFTS

We will now turn to what is known specifically about the production of perfumed substances. Because distillation was not used in ancient Egypt, perfumed substances were most likely produced by soaking aromatic botanicals, resins, and tree chips in oil or fat. There are two traditional ways by which oils and fats might have been forced to take on the fragrance of aromatics. These are *enfleurage* (cold steeping) and *maceration* (hot steeping). *Enfleurage* involves laying down animal fat onto a wooden board and then strewing petals and/or bark across it. Another board is placed on top and then the whole thing is left to sit. The aromatics would be removed and replaced every so often for as long as it took for the scent to transfer. In *maceration*, the aromatics are steeped in oil or fat, which is heated above a vessel of boiling water—similar to a modern double boiler (Serpico and White, 2000b, p. 461). It is likely this heated mixture would then have been squeezed through a cloth to filter the oil.

Resin could be added to the oily mixtures to thicken them or add additional fragrance. High concentrations of resin, however, would solidify and make them more difficult to use. Varnish is an example of this process. Resin also tends to darken over time, so its addition to oil-based mixtures would make the final product darker and glossier (Serpico, 2003, p. 227).

As for unguents, Fletcher (1999, p. 27) suggests there were two ways to extract fat for such use. Heat could be applied to the fat to melt it, and then it could be poured into cold water to solidify; or animal parts could be boiled and the fat skimmed off of the top. Fletcher (1999) warns us, however, that the smell of such fat would need to be neutralized before use in an ointment, and so wine or wine-soaked plant materials like coriander could be added to absorb the scent and then be removed before adding the desired aromatics. This technique is known in Classical Greek as *stypsis*, and is recorded as far back as the Late Bronze Age in Greece, a time

equivalent to the New Kingdom in Egypt (Shelmerdine, 1985, pp. 38–39). Suggesting animal scent in unguent was undesirable, however, might be an anachronistic interpretation, as, for example, the Ababda make unguent with a distinct animal fragrance that is not considered unpleasant (Wendrich, personal communication, August 2022).

4.3.3 SCENTED OILS AND UNGUENT COOKING

According to el Shimy, an ivory label found in the First Dynasty tomb of queen Neithhotep and now in the British Museum, shows a scene wherein a perfumer is on display before several figures inside a structure. The artisan is stirring something in a cauldron, which may be the *thnw*-oil written out in the lower register. Behind him, several containers of materials rest, likely intended for the scented mixture (el Shimy, 2003, p. 40). Other than the ambiguous scenes discussed above, there are no other perfume production scenes until the New Kingdom: TT93, TT89, and TT175.

Davies (1930) identifies the remnants of a scene of unguent manufacturing in the tomb of Kenamun TT93 (I, p. 55; pl. LXVII). There is very little preserved of this scene. A man is shown bending over slightly to pinch some contents of a jar he holds in his left hand into a dish set onto a knee-high oven. The mixture being heated is stirred by another figure, now lost. Behind the figure holding the small jars, another person appears to be decanting a liquid from one spouted jar into another one set onto the ground. In the lower register, four figures gesticulate expansively as they work to drag a large vessel set on a sled.

A kitchen scene from the tomb of Amenmose TT89 takes up six registers and was interpreted by Davies and Davies (1941, p. 133; pl. XXII) as the preparation of “incense, salves, pomades, etc. for a very large household.” In it, the deceased Amenmose is seated facing rows of

jars, objects set on stands, and piles of “fragrant gums.” The top register is laid out as follows from left to right (adapted from Davies and Davies, 1941, p. 133):

1. A scribe records the delivery of supplies.
2. Two men pour ingredients into a pan.
3. A pan is carried.
4. A pan is set onto a stove and another man stirs the materials as new ingredients are added to the pan from a jar.
5. The contents are removed and placed into other containers.

Davies and Davies (1941, p. 133) suggest that the small figures of trussed geese and couchant oxen are molded from this heated, fragrant mixture. They write that such an effort, “would obviously be a great economy if instead of pouring incense on a pile of burning meat and fowl it were deemed enough to have combustible gums made into the forms of sacrificial victims.” This suggestion is pertinent given what I discussed in Chapter 3.3: that a sweet fragrance was greatly desired by gods and humans alike, particularly in ritual settings.

After two registers depicting offering bearers holding images of tiny geese, oxen, and geometric shapes set atop stands, another register of cooking is shown. This register shows the following steps (adapted from Davies and Davies, 1941):

1. A seated scribe records two rows of large, stoppered amphorae.
2. One man pours the liquid contents of a jar through a filter held by another man into a large dish set onto the ground.
3. Two men carry a dish.
4. A man stirs the contents of a pan set onto a knee-high stove, with one hand to his nose.

5. A small pot sits in a pot-stand behind another figure who stirs a pan set onto a knee-high oven.
6. An overseer holding a papyrus roll faces the workmen supervising their activities. Behind him are large figures of animals including a standing ox, two couchant oryxes, two obelisks, and additional trussed geese and couchant oxen.

Davies and Davies write that the obelisks are similar to those which are “often indisputably formed out of frankincense” (p. 133). According to Raven (1990, p. 16), several New Kingdom offering lists specify the shape of resin lumps used, either as cones, cattle, or geese. Thus, these molded forms likely acted as symbolic replacements for actual offerings. Resin could be considered the offering par excellence because it contained divine energy (Ka) in a concentrated form and could be shaped to meet one’s needs. The lowest two registers of this scene from TT89 show the portioning out of white-gray slabs of material that are then carried off.

Both of these tombs show the processing of scented materials after the initial pressing/treading would have been completed. In the middle register of TT89, we see the amphorae into which the pressed contents were stored. This material is then sieved and heated with additional materials being added throughout the process—perhaps resin to thicken the mixture from the small cup set upon the jar stand near the center of the register.



FIGURE 4-6. UNGUENT PRODUCTION SCENE, TT175. REPRODUCED WITH PERMISSION ©OSIRISNET.NET.

TT175, a tiny, New Kingdom tomb of an unknown owner, shows the most complete representation of scent production known from Pharaonic Egypt (Figure 4-6; Manniche, 1988). The whole tomb only measures 1m x 1.6m. On the north wall, depicted just below two registers of sweetly-fragranced partygoers, the most complete preparation of unguent cooking from ancient Egypt is depicted. The order of actions, however, seems to be occurring simultaneously rather than step-by-step. The actions are as follows from left to right:

1. The deceased is seated, holding a staff, before a well-laden table.
2. A man seated on a low stool uses an adze to chip away small pieces from a log. The chips are depicted in baskets set before him and overhead.
3. Two amphorae, identical in design to those from TT89, are capped and painted with blossoming blue water lilies, likely indicative of their contained scent. A third amphora is open.
4. A man sieves the contents from the opened amphora into an unguent vessel. The liquid drips down into the vessel set on the floor.
5. Behind him is a large unguent vessel painted with blue water lilies that holds an enormous mound of unguent that displays the two-toned color schema popular in head cones of the Nineteenth Dynasty. A man crushes something in a large mortar (perhaps the log depicted before him) as another figure kneels below him. The action of this kneeling figure is not preserved.
6. A man crushes in a large mortar a material set before him in a small vessel set on the ground.

7. A kneeling figure squeezes a small linen bag, capturing the released liquid into a large bowl set on the ground. Behind them another figure crushes with a large, black mortar the material set before and behind him in large baskets.
8. A figure stirs the contents of a large pan set onto a knee-high oven. Above him is a bundle of some material.
9. Behind him, five sealed amphorae are set onto stands and are capped and painted with blue water lilies.

This scene shows the straining of raw materials via a small bag press, the melting of the lipid matrix, the grinding of aromatics, and the boiling of the final mixture—all steps discussed above for balanos oil and bitter almond/fenugreek ointment. Each of these steps would have taken place prior to the decanting of the oil into jars. While the final storage of the material being produced here is represented, the step of transferring the heated mixture into the jars is absent. This step, however, is present in two Old Kingdom mastabas (Mereruka: Fletcher, 1999, p. 28; Nebemakhet G8172: Lepsius, 1949-1959, II, pl. 13).

We find additional references to the manufacturing of fragrance from the sixth century on, not to mention never before recorded recipes. One image from the Twenty-sixth Dynasty (Louvre E11377) and another from the Ptolemaic period (Louvre E11162) both show the same image of women pressing *sšn*-flowers to make perfume. A later Ptolemaic period tomb, that of Petosiris, depicts a process similar to that from TT175 and is labeled “perfumers making resins with a pleasing smell” (el Shimy, 2003, p. 42).

4.3.4 INCENSE MAKING

One process we have not discussed in detail is the making of incense. The title *ps sntr* “incense roaster” gives us little insight into this process (al Ayedi, 2006: Peet II, pl. XV, pl. XVI,

XXVIII). While resins would need to be imported, the preferred shape for incense in ancient Egypt were small pellets or grains. These would have been shaped after exposing resins or resin-mixtures to heat, and could have been formed either by hand or with a mold.

Resin, itself, is used for incense. It can be mixed with fragrant barks and/or burned directly over charcoal. *Commiphora*, *Boswellia*, and *Pistacia* resin trees must be wounded with cuts into the bark to allow the tree to bleed or weep its resin. This gummy substance exuded by the tree is quite aromatic in its semi-liquid form and is released by the tree to prevent further loss of water from the wound. Whereas myrrh is reddish, frankincense is white. This weeping is likely tied to such trees being associated with weeping or bleeding in myths by, for instance, Myrrha or the Eye of Horus (see Chapter 3.1).

A fragment of a scene from the Eighteenth Dynasty tomb of Hepusonb, First Prophet of Amun, shows the harvesting of myrrh trees in Punt, a land somewhere to the south of Egypt. Whether the trees are being scarred or cut down is unclear from the state of preservation. It is this “First Prophet of Amun” who was responsible for supervising the harvesting of these trees, indicating the activities of manufacturing scented materials was likely subsumed under other, more notable titles—like those more obviously associated with king or temple.

Another example can be offered as presented by Trello (2021). After investigating a redistribution list of incense from the tomb of Puimra (TT39), Trello concludes that Puimra, the Second Priest of Amun, was responsible from the redistribution of *sntr*-incense which was manufactured at the Karnak Temple treasury to the other temples under Amun’s domain. As Bursi (2020, p. 206) writes, “By provisioning temples with scented products they were simultaneously venerating and controlling these spaces.” It might be further noted that it is simply *sntr* which is being provided rather than a specific product and that Trello’s titles make

no mention specifically of this role. Furthermore, the suggestion that incense was redistributed from a central temple treasury to smaller temples is an important consideration, but does not offer any insight into how *sntr* may have made it into the general populace.

4.3.5 BOUQUET MAKING

I discussed earlier in this chapter the procurement of plant material for bouquets. Such bouquets feature in ritual and social events and were an important element of display. Gardeners, such as Nedjemger, were responsible both for the procurement of flowers and for the crafting of bouquets. This sentiment is echoed in a stanza from a literary piece that praises the art of the scribe but criticizes all other occupations (Blackman and Peet, 1925; Papyrus Lansing, 4, 7):

p3 [hrw-ꜥr] ꜥr hr jrt htpw shd ꜥgnw j.jr=f grh n b3kw mj nty sw wbn <hr> ht=f

The [florist?] makes floral offerings and brightens ring-stands, who spends a night in working, like one <on> whose body the sun is shining (Author’s Translation; LEM X.5, p. 103).

The name of this worker as written reads something like *hrw-ꜥr*, which Gardiner concludes must be a corruption. Whatever their name, this artisan works tirelessly each evening to prepare the daily bouquets for the temple. The forms these bouquets could take were many and varied. From tall bouquets to small bunches held in the hand, the ancient Egyptians had many terms for identifying their various forms. Some of the names for these various forms are included among the contributions of flowers, bouquet, and garlands by Ramses III to several temples as recorded in P. Harris. Manniche published a chart of these terms (14 varieties, Manniche, 2006, p. 24). As is quickly evidenced, the variety of forms and sheer quantity of items indicates there would have needed to be a veritable industry to support this kind of demand (e.g., nearly two million “bouquets” in just under three years for one type of arrangement), especially given the perishable nature of such materials.

Beyond the extensive depictions of bouquets in tomb scenes, an archaeological discovery in 2007 at Dra Abu el-Naga attests to the demand for such products on a local scale. In the courtyard before TT11, archaeologists uncovered a pit filled with smashed Twenty and Twenty-First Dynasty pottery and at least 50 bouquets (Fahmy *et al.*, 2010). These bouquets were relatively simple, consisting of one or two species wrapped in strips of date palm leaf. The bouquets found were of persea (*Mimusopa laurifolia*), Assyrian plum (*Cordia Myxa*), olive (*Olea europaea*), a rose variety (*Rosaceae*), and grape vine (*Vitis vinifera*). Three of the persea bouquets were wrapped in culms of cereals rather than date palm leaflets (Fahmy *et al.*, 2010, p. 80).

According to Fahmy *et al.* (2010), the species found in this pit were all being cultivated in Egypt by the New Kingdom. Additional evidence of this comes from how the leaves were folded into the bouquet, marking them as freshly harvested at the time of use. Furthermore, the presence of persea and Assyrian plum flower and fruit in the bouquets suggests they were collected and thrown into the pit in late spring/early summer (Fahmy *et al.*, 2010, pp. 80–83). These simple bouquets may have been associated with the funerary rites of some deceased person buried elsewhere in this courtyard, though there are no clear connections.

The contrast of these simple bouquets with the elaborate renditions depicted on the walls of tombs and temples is striking. We can also compare them to the elaborate weaving of floral materials into collars, garlands, and filets (Kantor, 1945). Manniche (2006, p. 24) indicates that bouquets were built up around a core made from a bundle of papyrus stalks. Often these stalks were twined with *convolvulus* vine (Kantor, 1945, p. 207). Flowers such as water lilies, cornflowers, and poppies and fruit like persea and mandrake would then be woven into these stalks making compact bouquets. Sometimes bouquets would be crafted into the shape of a large

ꜥnh, invoking the phonetic link between the words “life” and “bouquet” (Jéquier, 1922, pp. 134–136).

Floral collars were made of berries, flowers, beads, and leaves woven into a papyrus



FIGURE 4-7. BACKSIDE OF FLORAL COLLAR FROM TUTANKHAMUN'S EMBALMING CACHE, MMA 09.184.216. IMAGE RELEASED FOR UNRESTRICTED USE UNDER CREATIVE COMMONS ZERO (CC0).

sheet backing (Figure 4-7). Collars could also be built up by fastening together multiple garlands of plant parts. For example, Manniche (2006, pp. 30–33) writes that the garlands found upon the mummy of Ramses II were made by folding blue water lily petals and persea leaves over a string of twisted palm leaf fibers which were stitched closed with date palm fibers.

These constructions would have been vibrantly colored and vividly fragrant.

For beautiful reconstructions of some

ancient floral adornments see Marina's Heilmeyer's work (Heilmeyer, 2011, pp. 81ff). These elaborate forms are not attested until the New Kingdom. By the Ramesside period, the bouquets became less floral but maintained their complicated construction (Kantor, 1945, pp. 209ff).

4.3.6 MANUFACTURING TITLES

Manniche (2006, p. 31) suggests that the unidentified tomb owner from TT175 was an unguent maker, though the identity of the deceased is unrecorded. This inquiry leads us to wonder who would have been responsible for this kind of work and what evidence we have of

their status and roles. There are some known attestations of titles related to this process from the New Kingdom: oil boiler; oil man; controller of the fat; incense roaster (al Ayedi, 2006). Our ability to interpret the roles and status of such officials, however, is limited.

In the Old Kingdom period, when descriptive captions were commonly attached to tomb scenes, a man involved in the packing and transport of scented unguent states, *mrḥw: m.k sdm.n r3w hmww nfr* “*mrḥ*-oil, look! We hear the utterances of perfect craftsmen” (Author’s translation; cf. el Shimy, 2003, p. 38; Bissing, 1905–11, pl. 23). This caption, like most, lacks grammatical consistency and so is difficult to interpret. Were this interpretation accepted, however, it does suggest that perfumery was considered a craft like carpentry or jewelry making. Thus, the better craftsman, the higher quality product. It remains unclear whether such artisans were attached to elite or royal households or able to operate independently.

According to the stela of Shoshenq from the very end of the Twenty-first Dynasty, “oil men” and “incense men” were responsible for manufacturing oil and incense, respectively, on behalf of individuals. Blackman (1941, p. 92) states that the Shoshenq who erected this stela did so on behalf of his father Nemrat—Shoshenq being the future founder of Dynasty Twenty-two. The stela lists the value in silver of the materials to be supplied by various craftspeople to the temple at Abydos on behalf of Nemrat who was to have a statue erected there. These supplies, such as honey, incense, and oil, were to be delivered daily to dress, cleanse, and equip the statue. In the text, the *ḥnt* “oil man,” is attached to the temple and produces $\frac{1}{2}$ *hin* of oil daily which is stored in the temple treasury and is equivalent to $6\frac{2}{3}$ kite of silver (Blackman, 1941, pl. XII, 19).

Titles such as “oil boiler of the overseer of hunters of Amun,” “oil boiler of the temple of Amun,” “unguent maker in the house of Princess Meriaten,” and “oil boiler of the temple of Khonsu” all indicate that such artisans could be attached to officials and religious institutions (al

Ayedi, 2006, p. 270: Peet II pl XVII; Peet II pl. XVII, pl. XII, pl. XVII). It is interesting to note that many oil boilers are referenced among the guilty parties in the proceedings of the tomb robberies that took place near Deir el Medina.

The rarity of titles that explicitly invoke the manufacturing of scented products suggests that the activities involved in their production were subsumed under other titles, such as “director of works,” “controller of the fat,” “overseer of storehouses,” “overseer of foreign lands” (al Ayedi, 2006). Consider the title “gardener” explored earlier in this chapter. A gardener was responsible for everything from cultivation to delivery of foodstuffs. They worked, supervised, and/or transported the goods from orchards, vineyards, small gardens, and large fields.

The rarity of explicit references to positions related to the production of aromata, thus, makes it difficult to ascertain the jobs of these officials, much less their status. One might assume that more references to such a position would be expected given the importance ascribed to these materials. What might account for their absence beyond the chance of preservation?

Hundreds of years later and across the Mediterranean, the work of perfumers was considered part of the *sordida ars*, meaning they were held in low public esteem as a result of them ‘catering to sensual pleasures’ (Cicero, *De Officiis*, book I.XLII). Cicero, writing in the first century BCE, lumps perfumers with dancers and the *ludus talarius*, a kind of bawdy variety show. Brun (2000, pp. 277f) points out, however, that perfumers were in constant contact with the upper classes and their work was quite profitable. The hypocrisy is notable and we are left to wonder if the absence of these titles in official records in ancient Egypt might be related to this example in some way. The evidence we have reviewed thus far, however, does not suggest scent was associated with “indecent” desires, and so, we must continue our examination.

4.4 COMPARATIVE EXAMPLES

Archaeological evidence of scent production increases dramatically from the sixth century BCE on in the Eastern Mediterranean. For example, excavations at Tel Goren revealed furnaces, jars, and metal and bone implements that suggest the presence of a perfumery under royal control (Brun, 2000, p. 279). Similarly, Roman period excavations at Jerusalem and En Boqeq reveal clear evidence of scent production, including mortars, presses complete with aromatic plant residue, and circular furnaces designed as a double boiler (Brun, 2000, p. 280).

According to Brun (2000, p. 282), by the sixth century BCE, perfumery had shifted from a small-scale process to one that required large, permanent installations, thus explaining the increase in archaeological remains attesting to its production, specifically in Greece. Given our discussion here of ancient Egypt, nearly 1000 years before this time, it is evident that increased demand does not simply equate with material preservation.

4.4.1 THE MODERN PERFUME INDUSTRY

As a result of the limited evidence for the production of scented products from ancient Egypt, I began working with the Institute for Art and Olfaction in Los Angeles in order to become more familiar with current practices in perfume. My hope was to learn to ask better questions of the ancient record as I increased my experience with scented materials. I also spoke with Drs. Safaa Elsayah, Hassam Mehasen, and the director of the Department of Medicinal and Aromatic Plants in the National Research Institute of Cairo, Dr. Elsayed Hassan, as part of this line of inquiry. These specialists were able to provide me with invaluable information on the nature of scent production in Egypt, today.

From my work with the non-profit The Institute for Art of Olfaction in Los Angeles, I learned the various key components to modern, small-scale perfume production. Scents today are

created by a layering of three categories of scent: the base, middle, and top notes. The base note is the scent that is longest lasting, but the least pronounced. The middle notes make up the body of the scent, defining its character and weight. The top note is what is first smelled and is also the first to evaporate. Together the three layers combine to make a full-bodied and complex fragrance. Scented materials, either as processed essential oils or finely ground powders are added in this order (base, middle, top) to a carrier. Carriers today often take the form of an alcohol, but oils are also used.

Pliny the Elder, writing in the first century CE, identified two ingredients for production of unguents: the juice (*sucus*) and the solid body (*corpus*). The first of these was usually an oil of some sort (the astringent *stymmata*), the second being the aromatics or sweetenings (*hedysmata*). Coloring might be added, as well as salt for preservation of the oil, and resin for retaining the scent (Pliny, *NH*, XIII.2).

Today, the carrier or “juice” is forced to absorb the scent of the organic material or “sweetenings” through cold-steeping, the application of heat, or, where a liquid carrier is not used, through pressing. To create a fine scent takes much experimentation and practice, but the overall procedure is not difficult to replicate. The remains of this process, archaeologically speaking, would be sparse. Some stoneware or ceramic bowls, a fire, a (bag)press, some linens, a few utensils, all these materials would be easily missed by an excavator as they are multi-purpose and unassuming.

When speaking with Drs. Safaa Elsawah, Hassam Mehasen, and Elsayed Hassan, I was shown the best method for acquiring the scent of various organic materials. It was explained to me that some plants require distillation to collect the raw oils, while others require the organic materials to be soaked in hot water and/or crushed. For example, thyme, henna, and lavender

best release their fragrances into a carrier through maceration. One kilo of crushed plants are put into two liters of hot water. The containers are then sealed for 24–48 hours and filtered.

Geranium, however, produces the best results when subjected to distillation. The oil in this plant is contained within its glands so it must be cut up or crushed before being steamed. Interestingly, much of the waste from these procedures are scented and put to use. For example, water run-off from distillation can be used in medicine as, for instance, rose water for acne, deodorizers, and insect repellent.

The Department of Medicinal and Aromatic Plants, in concert with the Pharmacological Institute, produces pamphlets for local farmers on the best practices for when to harvest their crops, which fertilizers to use and avoid, how to process their crops to harvest oils, as well as methods for packaging and shipping the collected oils. For example, mint should be harvested after flowering 50%. For harvesting, part of the mint stem should be left in the ground for regeneration and only three cuts should be used. For basil, two cuts are recommended. In contrast, the whole plant is harvested for coriander, anise, and fennel. After harvesting, the plants should be taken to a semi-shaded spot as full sun will cause the plants to brown, thus reducing their value. Plastic-dioxane packaging is refused by USAID so double layers of paper or cotton textiles are recommended and should not be reused.

Dr. Elsayed Hassan informed me that the soils of Egypt continue to produce plants that have a significantly higher percentage of essential oils than any other country in the world. For example, thyme produced in Egypt has 3% volatile oil compared to only 1% in Saudi Arabia. Perhaps this is why Pliny the Elder (*NH*, XIII.VI), Athenaeus (*L.Banq.*, XV), and Theophrastus (*On Od.*, IV) writing across three centuries all agreed that many of the best fragrances came from Egypt.

According to Dr. Hassan, the plants grown today in Egypt for their scent are largely non-native. It is the American, European, and Russian markets that determine what is grown in Egypt. Plant oils such as geranium, jasmine, henna, fennel, basil, mint, and coriander are exported for processing. They are then used in various products, such as deodorants, detergents, insect repellants, and medicine. Plants such as the blue water-lily, mandrake, and cornflower which were so desired by the ancient Egyptians are no longer produced commercially in Egypt. However, similar to how the blue water-lily symbolized Upper Egypt and papyrus Lower Egypt in ancient times, a sense of regionalism continues today wherein certain locales are known for particular products (e.g., geranium in Beni Suef; mint in the Fayyum).

These conversations and practical experiences helped me to formulate my research questions. Considerations of how the scent industry is tied up in economic and political negotiations but also relies on and influences private production is central to my investigation of scent in ancient Egypt. Furthermore, attention to recipe creation, specialist knowledge, and regionalism have proven to be significant factors in examining the ancient networks of production.

4.4.2 ETHNOARCHAEOLOGY IN BENI SUEF, EGYPT

While the actions required for the production of oils and unguents are seemingly simple to execute, a certain amount of specialized knowledge would have been necessary. For example, certain plants are toxic and can cause severe physical reactions if not handled appropriately, such as castor seeds. Use of copper implements can cause oils and unguents to turn rancid more quickly (Fletcher, 1999, p. 27). Furthermore, different production techniques can produce varying qualities of oil. As Fletcher (1999, pp. 26f) indicates: “cold-pressed poppy seeds produce a yellow oil with a pleasant smell and taste for culinary and perfume use, whereas heat extraction

results in a darker oil with an unpleasant smell, more suited to industrial use.” Thus, the ancient Egyptians likely produced and used a multitude of scented products of various qualities and fragrance.

Ultimately, suggestions of lower quality products made from locally available sources would not make it into our elite records. Yet, it seems safe to assume that local weeds like papyrus, blue water-lilies, and culinary aromatics like coriander and fenugreek would have been broadly accessible. According to Classical Greek records, papyrus stalks, when burned, exude a pleasant odor. So, despite limited reference to papyrus as incense in the official records of pharaonic Egypt, it may have been used by the general citizenry (Lewis, 1974, p. 96; Nielsen 2014, p. 109). While a lack of specialized knowledge may have resulted in the production of inferior products, the process itself can be relatively simple and could be experimented with easily. This level of local production, however, is lost to us.

I built upon the information collected in conversation at the Department of Medicinal and Aromatic Plants in the National Research Institute of Cairo and the Institute of Art and Olfaction in Los Angeles by observing fragrance production on a visit I made to Egypt in June of 2019. My hope was to better understand the absence of physical markers for ancient scent production. Ethnoarchaeology can help inspire new ideas regarding old problems, namely the lack of evidence for production. In fact, the procurement of resins and their preparation for use would likely leave little evidence, nor would the collection of oil, fats, and plant material. Furthermore, the preparation of fats and oils, where identified in the archaeological record, might be subsumed under a different craft, like butchery, cooking, or as discussed in 4.3.1, wine-making.

For inspiration on where to search for evidence of fragrance production in ancient Egypt, my friend and colleague Dr. Amr Shahat put me into contact with Eid Kamel Abdel Hameed

Gad el-Mawla, Abd Majeed Rabie, and Wael Rabie in Beni Suef, a Governorate in Middle Egypt known for its essential oil production. I published my experience in a short article in the Cotsen Institute Annual Report *Backdirt* (“Harvesting Scent in Beni Suef, Egypt,” 2019).

Dr. Shahat and I took a ride down to Monshaat Al Omaraa, Ehnasia, which is located in the Beni Suef Governorate in June 2019. We planned to meet with an Eid Kamel Abdel Hameed Gad el-Mawla who owned large distilleries for plants to harvest their essential oils. It was at this very time, in fact, that the geranium harvest was happening, so we were fortunate enough to witness the entire process from harvest to processing.

Through meeting these individuals and experiencing their work, I hoped to better understand the modern processes involved in harvesting essential oils—from the various stakeholders to which plants were highly valued today for their scents. It was not only the processes, but the people who I was interested in. What were their experiences like? What relationships did they form? What was their background? Their expertise?

The green smell of the geranium harvest was the first suggestion that we were nearing our destination. We were greeted by the owner of the distillery and a friend of Dr. Shahat’s high school French teacher. It was remarkable that the entire process took place in the same area, within the geranium fields themselves. The plants were harvested before they began to flower and were transported by all-terrain vehicles (ATVs) to the distillery. The plants were then pressed into large steel tanks to which water was added. The mixture was then heated and the steam collected, from which the oil was captured through cooling. The final step was to separate the oil from any water that had been captured through the distillation process. This was done by simply allowing the water and oil to separate so that oil might be decanted.

The work itself was conducted by men, with a clear hierarchy based on age. There were perhaps fifty individuals working at either distillery that we visited. I was fortunate enough to be introduced at a second distillery we visited to the “grandfather” who had built it. The respect in the room for him was palpable.

The work we observed was seasonal. The men involved in the various stages of processing—from jumping into the tanks to press down the plants, to operating the crane that raised and lowered large, horizontal steel wheels as plumbers into the tanks to press the plants further, to driving the ATVs , and decanting the oil—each had obligations outside of what was expected of them here. The atmosphere was frenetic, with children running around, and the blasting sounds of the furnace, but it was also jovial and eager. The work was physically taxing, but seemed to be enjoyed by those involved.

All were knowledgeable about the process, each man wishing to show me what each piece of machinery or physical act was intended to accomplish. Though Eid Kamel Abdel Hameed Gad el-Mawla owned the first distillery we visited and was the director of the entire operation, he told us that harvesting essential oils was a seasonal hobby he indulged in over the summer to bring home extra cash. During the year, he works as a High School Principal. It is understandable that this type of work would not be year round, as particular crops have very specific times for planting and harvesting, however, it seems surprising due to the extensive organization required and the specialized knowledge necessary for carrying out such an enterprise.

Through conversation, it was quickly revealed that the lack of state involvement in the harvesting, manufacturing, and distribution of the oils was a point of contention among the local population. Not only those working in the fields, but the families with whom we shared a meal,

lamented the lack of governmental support for their local economy. I repeatedly heard reference to the “seven, corrupt businessmen in Cairo” who have complete control over the distribution of essential oils harvested in Egypt, even restricting the amount farmers can receive for their harvest.

A major issue is that Egypt does not have a processing plant that can purify these oils by separating them into their component parts. This purification process is necessary before these oils can be used commercially. What happens is once the oils have been collected, they are shipped to France, where they are processed. Then, Egypt must buy back these oils for commercial production at a much higher cost. I was informed that it is 1300 LE per kilo for export (though it was 3000 LE per kilo before the revolution) and the separated products are imported for 17 times that rate!

While distillation was not used in ancient Egypt to process organic oils, I found this experience of speaking with people involved in similar goals inspiring. First, the lack of remains left behind was striking. That the harvesting, processing, and packaging for distribution all took place in the same area was an important observation, as archaeologically this would have left behind few if any macro-level remains. Plastic containers, funnels, buckets, ATVs, water, fire—this made up the majority of the tools used, other than the distillery itself. All of these materials could be re-used in other contexts, and nothing, other than the microscopic botanical remains, would indicate archaeologically that they were used specifically for harvesting essential oils.

Additionally, the seasonality of the work and the shared knowledge of production among the workforce suggests that even such large scale production is manageable part time. In ancient Egypt, it is interesting to wonder if the lack of specific titles tied to scent production is related to the seasonality of the work. Finally, one can also consider how important centralized support is

for the generation of profit, but also the threat of corruption limiting access to that profit. This notion will become particularly relevant as we begin to discuss the accessibility of scented products to the people of ancient Egypt.

4.5 TRANSPORT AND STORAGE

Information regarding the storage of aromata can provide insight into the extent to which their accessibility was regulated. Due to the nature of our evidence from ancient Egypt, however, this argument would be unduly biased toward large state and religious institutions. Images from tomb scenes showing the transportation of large jars of oil by sled, presumably to or from storage, are known for instance from the Old Kingdom tomb of Kagemni (Bissing, II, p. 13; pl. XXXVI). In this scene, several pairs of men are shown dragging large oil and unguent vessels upon sleds. One figure bends down to add water to the ground to make the transport easier. The scene is captioned, *stꜣ ḥꜣt mrḥt ḥrt-ḥrw ḥpp ḥr jmꜣḥw tꜣtj-zꜣb-tꜣtj kꜣ-gm-nj* “Drawing the chief *mrḥt*-oil daily, which goes before the judge and vizier, the honored one Kagemni.” Thus, this enormous amount of scented product is being drawn *from somewhere* to be brought before Kagemni.

This example, as well as the large temple storeroom depicted in the New Kingdom tomb of Rekhmire (TT100) which includes incense, unguents, and scented oils, support the interpretation that these products were strictly controlled (Davies, 1943, II, pl. XLVIII-L). Upon the south wall of the longitudinal hall, Rekhmire sits supervising the production and storage of a variety of materials for the treasuries of Amun. These products include both locally produced and imported materials. After sealing the storehouses, the workers ‘smell the earth’ before Rekhmire calling out, *prw-ḥd ḥr gsgs m jnw n ḥꜣswt nb(w)t bꜣkw sntr jrp mḥw nn dr-ꜥ n ḥt nbt*

m3ʿw nb(w) t3 pwnt “The treasuries are overflowing with the tribute of all foreign lands: *b3k*-oil, incense, wine of Lower Egypt without end, all the offerings of the land of Punt.”

Religious institutions, such as the Temple of Karnak, would have needed specific places for storing aromata given their prolific use of such materials. For example, two lintels were uncovered at the Temple of Amun in Thebes—one for Hatshepsut and another for Thutmose III. Both are inscribed with similar statements indicating the rooms within were intended for incense storage that will make the temple smell divine (Lacau, 1952; *Urk.* IV, p. 853.8–12). This room was rather small and is reminiscent of the Ptolemaic period laboratories discussed earlier.

It is difficult to determine the extent to which the general population would need to store scented materials. While not directly referencing scented products, there is evidence that local artisans kept their own storehouses by the “riverbank” (*mryt*) to facilitate trade (see Chapter 4.7). For example, BM O. 5637 details how both the house and riverside space (*ʿt mryt*) of tomb worker Nekhemmut was robbed. In addition to various foodstuffs being stolen, both his *mrḥ* and *nḥḥ* were poured out (Blackman 1926, p. 183, pl. XXXVII). As discussed above, production scenes for scented oils and unguents, when depicted, are often directly associated with elaborate banquet scenes. Were that rendering to be trusted, the layout might suggest that on this smaller scale, production was undertaken in direct relation to its use-context. That is, aromata were produced locally for their immediate use or sale rather than long-term storage.

What is most interesting about these specific products in storage is that they each had a rather limited shelf life. Oil- or fat-based products turn rancid, especially in the heat. The amount of time this takes would vary by product, however, and may be impossible to accurately calculate. The social and economic value of these products was in their *use* rather than their accumulation. Similar to the elaborate vessels that hold modern luxury perfumes, displaying

specialized vessels that would have contained these materials may have added value to the act of collecting them. The materials themselves, however, would have needed to be used before they began to turn rancid and/or lost their smell.

4.6 DISTRIBUTION

So far, we have discussed what products were available locally that may have been valued for their scent, as well as what evidence we have for the local processing and storage of such materials. What is left in this chapter is to survey the mechanisms in place for the distribution of these products locally. To do this, it is important to consider how scented products were valued, and the accessibility of these products as implied by these contexts. Much of the evidence for access in the following section is based on ostraca from Deir el-Medina, as these provide explicit references to recognized scented products and materials from across a variety of contexts. Of course, while it cannot be assumed that the patterns observed here translate to the rest of New Kingdom Egypt, the following case study provides some significant commentary on the centrality of scent to the daily life of the ancient Theban.

In order to better understand the value placed on scented products and their production within the Deir el-Medina community, I investigate the prevalence of a series of terms related to scented products. By examining the presence of these terms outside the strictly “religious” or “funerary,” we can work to understand their everyday use value and associated accessibility by this particular population.

Deir el-Medina, ancient *p3 dmj* “the village,” was a planned community established at the beginning of the Eighteenth Dynasty. The earliest dating from the site, other than a few Middle Kingdom tombs, comes from stamped mudbricks with the cartouches of Thutmosis I located in the town’s enclosure wall (Toivari-Viitala, 2001). The town was maintained by the royal office

throughout the New Kingdom period, though it continued to be an important burial site well into the Christian period.

The men responsible for carving, decorating, and supplying the royal tombs lived in this city, along with their families. Work weeks were ten days long, during which much of the worker's lives were spent in camps near the tombs in which they worked. It is understood, then, that the families of these workmen stayed in the village, taking care of the daily business of living. This village is invaluable for archaeological research as it is a contained site, with a clear occupation period.

The "Great Pit" which was found to the northeast of the walled city, is a 52-meter-deep pit complete with stairs leading into the depression. Regardless of its initial function, the pit was used as the villager's trash (Toivari-Viitala, 2001). A stockpile of written records, as well as a variety of other architectural and artifactual materials, has been found there. The written records were most often written on scrap pieces of limestone, or sometimes pottery sherds. These are called ostraca by Egyptologists and they contain not only references to the daily goings-on within the village, but also literary texts, letters, and drawings. It is from documents like these that much of the following analysis has been made.

Charpentier (1981) identified more than 70 terms for oil. Whether each of these words always identify scented/unscented or even solid/liquid products is unclear. Thus, for this analysis, I have focused on the most common terms that are often referenced in concert with scented oils, resins, incense, flowers, and unguent. The main terms that I studied are as follows: *nḥḥ*; *mrḥ* (varnish); *mrḥt* (scented) oil); *sgnn* (ointment); *ꜥd* (fat), *wnm* (fat); *ḥrr* (flower); *snṯr* (incense); and the modifiers *wrḥ*, *ḥd*, and *w(ꜥ)d*. Terms for varnish, garden, gum, incense, and oil do not always reference scented products, though by collecting and translating all examples of

these words within the collections Deir el-Medina Online and Deir el-Medina Database their relevance to this discussion will become clear.

While searching these two online databases, it is important to search not only the transliteration of these terms as “keywords” and as “content” (as these searches resulted in differing lists of examples), but also to search the translations of these terms. In the below chart, the number of references to some of the terms are laid out in comparison to other common materials. As is immediately evident, terms relating to “oil” are nearly as common as those referencing “beer” and “textiles,” whereas words more specifically related to scented materials like incense, gum, or flowers are much less common. This observation is interesting, but not conclusive, as the categories of “oil” and “textiles” are determined by those creating the database rather than necessarily the ancient Egyptian sources.

Additionally, these charts comparing the number of references across these two databases also identifies the restricted access and/or distribution of these products among this community, as they are much less common than the “staple goods” beer and grain. I would highlight, however, that scented products are present and, so, are not unattainable by this population. An alternative suggestion for the fewer number of references is a limited relevance to this population and/or a social decorum that limits discussion of and/or access to such products.

Another interesting point to make here is that the majority of ostraca that reference scented products are written on pottery sherds rather than limestone fragments, which make up the majority of ostraca from this site. While conjecture, this may be because more of these examples, before being deposited in the Great Pit, came from domestic contexts in which pottery would have been more prevalent than a work-related context wherein limestone flakes would have been common.

TABLE 4-4. SCENT-RELATED SEARCH TERMS USED IN DATA COLLECTION WITH TRANSLITERATIONS AND NUMBER OF REFERENCES WITHIN DIGITAL DATABASES.

| Scent-related Search Terms (translation) | Transliterations | Number of References |
|--|--|----------------------|
| Varnish (?) | <i>hry-nḥḥ</i> | 1 |
| Flowers | <i>ḥrr</i> | 23 |
| Garden | <i>ḏḏ</i> <i>kzmw</i> | 4 |
| Gum | <i>ḳmy</i> | 19 |
| Incense | <i>snṯr</i> <i>kzṗ</i> | 38 |
| Oil/Unguent | <i>mrḥt</i> <i>nḥḥ</i> <i>šft</i> <i>šgnn</i> <i>sty</i> | 214 |

TABLE 4-5. NON SCENT-RELATED SEARCH TERMS USED IN DATA COLLECTION WITH TRANSLITERATIONS AND NUMBER OF REFERENCES WITHIN DIGITAL DATABASES.

| Non scent-related terms (translation) | Transliterations | Number of References |
|---------------------------------------|---|----------------------|
| Grain | <i>jṗt</i> <i>jt</i> <i>ḥzr</i> | 649 |
| Beer | <i>jnḥt</i> <i>ṗs</i> <i>ḥnḳt</i> | 220 |

| | | |
|---------|---|-----|
| | <i>ds</i> | |
| Wood | <i>mnk</i> <i>hbn</i> <i>ht</i> | 696 |
| Textile | <i>jfd</i> <i>Msst</i> <i>rwḏ</i> <i>ḥbsw</i> <i>ḥtri n ish</i> <i>dzw</i> <i>šndt</i> <i>pr</i> <i>jns</i> | 335 |
| Silver | <i>ḥḏ</i> | 89 |

The inventory (included as a spreadsheet in Appendix B: Spreadsheet of Scent-Related Ostraca) is a non-exhaustive list of non-literary ostraca and papyri from Deir el Medina that reference scented products and materials. This spreadsheet was built from existing compilations of documents, namely Deir el-Medine Online and the Deir el-Medina Database. Deir el-Medine Online includes non-literary ostraca from Deir el-Medina from the Qurna and Berlin collections (complete) and the Bachit and Burkard collections (incomplete). Because of how ancient Egyptian terms are translated into English and the variants in their ancient spellings and nuances, it is necessary to search these databases with a variety of search terms and fields. Entries from Deir el-Medine Online include a description, transliteration into hieroglyphs and English

phonetics, translations, and commentary for each entry. Full color, digital photos are also included where available.

The Deir el-Medina Database is part of the ongoing research project *A Survey of the New Kingdom Non-Literary Texts from Deir el-Medina* based at Leiden University. The search feature of this database allows users to conduct specific queries in the text corpus, but the database creators explicitly recommend trying different queries with different items or fields to receive a more complete response. An extensive list of published and unpublished resources have been used to create this database and information about those can be found on the database's website under "introduction."

The spreadsheet I have compiled is largely drawn from these databases in which searches were conducted to identify examples that reference scent and/or aromata in some way. The spreadsheet includes the examples' official reference number or collection name, a description of the piece with translation, the scent-related search terms, the artifact's date, where the example is published or its database entry URL, its material, genre, and additional notes. In collecting these examples, I noticed that the contexts in which the search terms I used were referenced included the following: gifting or requests (i.e., letters); lists of people with commodities (i.e., 'feast lists'); work requests; duty rosters (re: lighting the tombs or payments for work); commentary on festivals, rituals, and feasts; and litigation (re: stealing products).

My first conclusion is that terminology for scented commodities was generalized across product types, though determinatives seem to be consistent in reference to product classification.

For example:

mtw=k jr shrw r wh3 p3y sntr w3d j[.dd=j n=k] r jrt p3 wt n t3y=k mwt m mrht

And may you make plans to search for this fresh incense which I mentioned to you in order to make the coffin of your mother with *mrht*-oil (Author's translation; HO 54,4)

The determinatives in this example are quite distinct from each other, identifying clearly the material categories to which these words belong. *snṯr* is a plant-based material that is formed into pellets, whereas *mrḥt* comes in a tall unguent or *bs*-jar. It is possible that the clarifier *wꜣd* “fresh” indicates a particular type of incense resin used for *mrḥt*-oil. We see other examples of clarifiers used with more general terms: *nḥḥ wnm* (LEM V.20, p. 49); *sgnn wrḥ* (O. DEM 230); *mrḥt wrḥ* (O. Petrie 31), so it may be possible to see these words used to reference specific material mixtures. At least sometimes, however, the modifiers reference the product’s function. LEM V.20 indicates that the ancient Egyptians could reference specific oils by their place of origin (Table 4-6; NB: this text is taken up in detail in Chapter 5). Thus, identifying oils in this non-literary context by their function or general category is significant.

TABLE 4-6. LEM V.20 OIL NAMES

| Transliteration (or Transcription?) | Translation |
|-------------------------------------|------------------------------------|
| <i>bꜣk nḏm</i> | Sweet <i>bꜣk</i> -oil |
| <i>ḏftj n jrs</i> | <i>ḏft</i> -oil of Cyprus |
| <i>ḳḏwr tp n ḥt</i> | Fine <i>ḳḏwr</i> -oil of Babylonia |
| <i>ynb n jrs</i> | <i>Jnb</i> -oil of Cyprus |
| <i>nkḏtr n sngr</i> | <i>Nkḏtr</i> -oil of Sangar |
| <i>ḳnnj n jmr</i> | <i>ḳnnj</i> -oil Amor |
| <i>gt n thsy</i> | <i>gt</i> -oil of Takshy |
| <i>bꜣk n nhrn</i> | <i>bꜣk</i> -oil of Nahrin |

It seems that when these product terms overlap, the words themselves likely do not reference particular materials. Rather the speakers were familiar enough to recognize from the context the meaning of these terms. Let us compare O. Cairo CG 25820 and O. Cairo CG 25545+O. Cairo JE 72454 to illustrate how words overlap in their meaning.

O. Cairo CG 25820

Fourth month of Peret, day 2. Day of greasing (*sgnn*) the wicks which one drew from the storehouse. Grease, 8 hin. 200 wicks were greased (*sgnn*) (from?) the 100 *deben* of rags which the scribe brought [...] one divided them among the crews (Author's translation; KRI VI, p. 661, verso; McDowell, 1999, p. 208).

O. Cairo CG 25545 + O. Cairo JE 72454

A jar of *nḥḥ*-oil [for] greasing (*sgnn*) 400 wicks. Year 6, third month of inundation, day 26. Day of giving *nḥḥ*-oil for lighting (*n stꜣ*) to the gang when they came to work. Third month of inundation, day 27. Brought (from) the storehouse, 95 greased wicks (*sgnn ḥbs*) (Translation in McDowell, 1999, p. 209; KRI IV, p. 407 (A 20) and Černý, Notebook, 106, 5).

In these two examples, *sgnn* is used to reference greasing wicks for use in oil lamps. The state provides a limited number of rags, wicks, and grease to the workers for them to use to create light within the tombs as they are working. These wicks may have been of a certain length so as to be used as a timekeeper for the various crews of workmen. Thus, the number of hours that each crew worked would have been regulated by the number of wicks they were provided within a particular shift.

In the second example, which also references the greasing of wicks for lighting (*n stꜣ*), the word *nḥḥ* is used rather than *sgnn*. Once the *nḥḥ* has permeated the wicks, they then become *sgnn ḥbs* "greased wicks." In the first example, a *hin* of *sgnn* is brought to grease 200 wicks and in the second example a jar of *nḥḥ* greases 400 wicks. The act of using grease has two determinatives, one of a person using a stick and the other a jar. This makes logical sense. When it is just the grease, only the jar is used. Whether *nḥḥ* and *sgnn* are being used interchangeably or

to reference different types of grease is unclear. It is also unlikely, either way, that these products were intentionally scented. What these examples do show, however, is that words often used to describe scented products like *sgnn* do not always do so.

It is necessary then to examine the context in which these terms are used together in order to understand their relationships. In HO 54, 4 = O Černý 19, for example, *sntr wzd* “fresh incense” is needed to impregnate the coffin with *mrht* oil. This would suggest that the incense resin needs to be collected so that it might be added to a base oil to create *mrht*-oil. While Janssen (1975) suggests varnish (*mrh*) is distinct from the oil (*mrht*), this example might be an exception. As discussed above, resin can be added to oil-based perfumes to cause them to thicken. Too much resin turns the mixture into a hardened varnish.

Another example reads similarly, “Now I am decorating the inner coffin and the lid. The *sntr*-incense which you brought has run out a long time ago(?). Please send *sntr*, *mny*, and wax (*mnh*) so that I may prepare varnish (*mrh*)” (Author’s translation; Černý, Posener and Koenig, 1986, pp. 21–22, pl. 25, 25A, no IX; Serpico and White, 2001, p. 36). *mny* interestingly may reference bitumen, a substance whose later name “*mnnn*” gives us the modern designation mummy (Serpico and White, 2001, p. 37). A mixture of these three materials would seem to make a substance similar to that of the black varnish discussed in Chapter 3.4.

The second conclusion of this study is that the base oil for perfumes and unguents were agricultural products whose economic value was so standardized (~one *deben* per *hin*) that it was rarely written. This suggests that variations in product type were less important than quantity when it came to such materials. According to Janssen (1975), *mrht*, *sgnn*, and *nḥḥ* all cost around 1 *deben* per *hin*. This conclusion is based on 43 indications of price, among a total of 214 references to these products. This shows a limited effort to identify the economic value of these

products, and the consistency across the examples we do have is quite striking. The agricultural oils, when referenced, often come from royal estates, based upon jar docketts that have been excavated (KRI VII, pp. 76–83).

Kemp (1992, p. 175) argues that the value of grain types was based on the amount of harvest rather than on particular commodities. This conclusion is based on his observations regarding the ancient Egyptian concept of “baking value” or *pesu*. This value expresses the number of loaves or jugs of beer produced by one *hekat* of grain or flour. Thus, it is not the final form that the food takes which is valued, but the amount of raw material required to produce it. Likewise, it makes sense for agricultural oils to be valued equally at one *deben* per *hin*, in the same way that a *khar* of grain is nearly equivalent for both emmer and barley (Janssen, 1975, pp. 127ff). With oil being the base product for liquid perfumes, we must seek to understand at what point the economic value gets applied to the manufactured product.

That the agricultural products necessary for the production of scented oils and unguents were inexpensive and accessible suggests that access to these products was not a prohibitive factor in the production of perfumes and unguents by individuals. That most of our evidence from Deir el-Medina refers to state owned fields is inconclusive due to this site being one established and maintained by the state.

The third conclusion following the examination of the examples collected from the two database archives is that the few examples of fine scented products or materials, though rare, indicate a familiarity with quality variations rather than a complete separation, unconcern, or irrelevance of such products to the daily life of this community. As Janssen (1975, p. 366) notes, oils like *tj-šps*, *bꜣk*, and *ḳnnj* are often used in perfume. Rather, special occasions celebrating notable moments were marked by the presence of such high quality scents. For example, two

separate ostraca recount the provisioning of a woman with gifts of *nḥḥ*, *tj-šps*, *ḳnnj*, *bꜣḳ*, and *sntr* for a particular occasion (O. Cairo CG 25677 and 25678). Additionally, several examples include lists of items and their quantities, which have been named “feast lists.” These lists perhaps are identifying the items present at, needed for, or gifted during a celebratory feast. O. DeM 293’s list, for example, includes *bꜣḳ* and *nḏm ʿd* among other items. Two examples translated in McDowell (1999, p. 68) also add to this conversation. O. DeM 127 and O. DeM 551 both reference the necessity of gathering garlands, incense, and other offerings in preparation for public festivals or rituals.

In fact, such scents were so highly valued that we have evidence of individuals stealing these goods from royal store houses. It seems an odd choice for thievery, given that scented products have a limited shelf-life. For example, O. Ashmolean Museum Nos 1945.37 + 1945.33 mention *mrḥt* and *bꜣḳ nḏm* as some of the items the addressee’s wife stole and was prosecuted for in the *qnbt*. These specialty products were also valued by the state, and their high quality can be identified by their names. O. DeM 187 is a list of items present in the treasury of Amenhotep and it includes a reference to *bꜣḳ n jmn*—suggesting this particular *bꜣḳ*-oil belongs to the god Amun, himself, perhaps being imported from Punt, “the God’s land.” Of note, one of the only disturbances to King Tutankhamun’s largely-intact tomb were the unsealed unguent jars that still showed impressions of the fingers responsible for scooping out the unguent, presumably stolen (Manniche, 1999, p. 86).

The fourth and final conclusion from this analysis ties into our discussion of value. The presence of scents in varying qualities contributes to the maintenance of the cultural value(s) of the experience of smelling beyond that which is strictly religious. In defining a need for such products to establish relationships and mark special occasions, the experience of smelling is

imbued with a social value based on access that extends across cultural contexts. From divinity, to love, to friendships, in myth, literature, and accounting, scent was a necessary and meaningful part of the daily lives of the population of Deir el-Medina.

In P. DeM VI, an individual's concern for their friend is communicated by devaluing their desire for oil in exchange for hearing news of their friend's health. Were this oil of little value, this simple act of asking their friend to disregard their request would hold little significance. Similarly, in a poem where the author compares their love for the dirt of Thebes to the pleasure of foreign scents, their love for their city would be underwhelming were such scents, or their reputation, unfamiliar to the audience (O. Petrie 39).

Such literary and non-literary references reinforce the social and economic value of scent by invoking the intangible emotions of the authors. Were this not part of the daily vernacular of the ancient Theban, these statements would make little sense. Similar to the divine and funerary values of scented products discussed in Chapter 3, these examples also play on the idea of DISTANCE and IDENTITY so prevalent in the religious texts of this time.

Equally important to these themes, and tangentially related, is the ability of scent to establish and maintain relationships, similar to what was established through the earlier discussion on love poetry in Chapter 3.2. The concept of gifting scented oils and using scent to mark special occasions is particularly salient to defining and maintaining relationships. The "scènes des gynécées," studied thoroughly by Joanne Backhouse (2020), can help to illustrate this idea.

These scenes are represented on ostraca and include the 'women on beds,' 'elaborate bed', and 'kiosk' scenes. Typically painted on limestone chips, these Ramesside period ostraca show women at toilette seated or lying down and sometimes caring for a small child. These

images are littered with depictions of flowers, unguent, and scented oils. Backhouse (2020, pp. 88f) links these images with the gift-giving ostraca studied by Janssen (1982; 1997) and Jauhiainen (2009). She writes that Jauhiainen identified five references to the transfer of goods due to *ḥsmn*. While *ḥsmn* is often translated as “menstruation,” Janssen (1980, pp. 141ff) argues that this word is more closely related to the word for natron which means “to purify” and that the translation “menstruation” cannot account for the absences recorded by the workmen at Deir el Medina when their wives and daughters were undergoing *ḥsmn*. Instead, an alternative translation of this term is the purification of women after birth or miscarriage (Toivari-Viitala, 2001, pp. 162ff). As evidence for this discussion, Backhouse cites O. Berlin P. 10631 which speaks of the gifting of goods on the occasion of a woman coming out of *ḥsmn* (2020, p. 89). Both Backhouse and Janssen (1982) conclude that gift giving was an important part of creating and maintaining social relationships at Deir el Medina. Backhouse connects the various paraphernalia depicted in these scenes and gift giving. She links, for instance, the gifting of a large unguent cone by Ankhesenamun to the King Tutankhamun (Cairo JE 61481) to the wearing of unguent cones in bed scenes. She writes “The inclusion of the cone in both domestic decorative schemes and funeral scenes suggests it had a meaning beyond adornment. It appears to be linked to the receipt of offerings and gifts” (p. 96).

Ointment figures prominently as an appropriate gift among friends. For example, P. DeM V and VI deal with the addressee’s failure to respond to a friend's request for ointment (Sweeney, 1998). Furthermore, floral collars, garlands, and bouquets, are linked to the offering (gifting) of life to the deceased. It is interesting to note here that some of the bed scenes depict floral garlands and collars hanging upon the walls behind the female figures. This artistic choice, as discussed earlier for tomb scenes in Chapter 3.5, in concert with the unguent head cones and

the unguent vessels typically shown beneath the bed, help communicate an atmosphere of scent within these spaces. Referencing scent here is thus another time where life and its important moments (e.g., coming out of *ḥsmn*) are marked by scent. That fragrance was an element of gifting and exchange at Deir el Medina implies access to aromata in order to participate socially within the community. In contrast, as we will see in the following chapter, restrictions placed on access reaffirms the social hierarchy by limiting the accumulation of scented products among the general population.

These four conclusions based on references to scent and aromata in Deir el-Medina ostraca, identify the social value of scent in the daily lives of the community. At Deir el Medina, the economic and practical concerns of the population were interwoven with their social and aesthetic demands. This is particularly true in a controlled community where many people's jobs included working with specialized products (e.g., gardeners, artisans, artists, and priests, etc.). Though it is clear that the main attention of Deir el-Medina's population was on work and food, these daily concerns did not exist distinct from festivals, feasting, and friendship. While the references to scented commodities and materials are sometimes obscure and often ambiguous, these products were used by and accessible to the people living and working in and around Thebes throughout the New Kingdom. Access to the rarer oils and materials, however, may have been restricted due to their foreign origin and cost.

The terminology for scent, oil, and fat is inconsistent at the best of times, though occasional functional qualifiers like *wrḥ* or *ndm* may indicate a more precise identification that is no longer clear to us, today. In summary, the social and economic value of scent ensured some level of access to these products by creating demand. Industry support was then relied on to

provide access. There is, however, a spectrum of quality and access ranging from royal contexts and surplus to small-scale gifting and exchange.

Serpico (2003) argues similarly that people living in the workmen's village at Amarna had access to scented materials, particularly Pistacia resin. She argues that the amount of resin depicted in Amarna tombs and identified burned as incense in small bowls throughout the entire site suggests it was not restricted only to the highest echelons of society (Serpico and White, 2000c). This fact as well as the presence of Pistacia resin used as incense in the settlement areas at Amarna, both at the walled village and in the main city, confirms that the "demand for resin was not solely a monarchic prerogative but stretched through the social strata" (Serpico, 2003, p. 228).

4.7 EXCHANGE

Now that we have discussed evidence for the desire and use of scented commodities among the Deir el-Medina population, the question that remains is how such products were accessible (beyond stealing them from royal stores). For this discussion, we will be going on a small tangent to discuss the mechanics of local exchange. This subject is much larger than the narrow lens of scented materials and so will be much broader than what I so far have covered. References back to the exchange of, specifically, scented commodities, will be made where relevant. The majority of the following analysis, however, is intended to identify the mechanisms by which such products reached the ancient Egyptian population, which will also address a blind spot inherent in some Egyptological research regarding the status of merchants in ancient Egypt.

Written and visual data from Deir el-Medina reference that the local community would go down *r mryt* "to the riverbank" to exchange goods. Ostraca mention the *mryt* occasionally (34 examples are listed in the Deir el Medina database). For example, O. DeM 00550 asks, *jh pw*

pꜣy=k [...] *ꜥd r mry* “Why are you [taking] the *ꜥd*-fat down to the riverbank?” (Author’s translation; Sauneron, 1959, VI, p. 1, pls. 1 and 1a). In this example, despite it being broken, the meaning is clear. The author is questioning why the addressee has gone to market with their unguent when they have need of it. The Deir el Medina database entry writes in the description of this ostrakon, that “fat” is an unlikely translation of *ꜥd* in this case due to the determinative. Given that the pustule determinative (Gardiner sign Aa2) is often used with words referencing scented products, this reference here likely indicates a fat-based perfume, i.e., an unguent. It should be noted also that the *mryt* is not only used to reference a riverside market but is also a place where various forms of punishment and litigation are carried out (Davies, 2018, p. 276; McDowell, 1999). In this context, however, it is likely that the intention was to exchange the product for something else.

This example suggests that unguent would be desirable in a market-setting, but also something an individual would wish to keep and use—something implied by the question in the text. Scented products, like unguent, have an inevitable expiration date wherein the base material turns sour. Rendered animal fat lasts anywhere from three months to a year. Olive oil lasts for a year or two before going rancid. After that, such materials will begin to emit a sour smell, likely making the desirability of the scented product disappear. Again, this conclusion would suggest that the value of a scented good is created through its use rather than its accumulation. Unlike silver or linen, the value of perfumes is largely built from the act of exchange and/or its use rather than its quantity and accumulation.

In this same example, we see a conflict over the value of this unguent. Is the author better served by employing its economic value through exchange at the *mryt* or through its use and display? The answer to this question would depend on the goals of the individual. In a society

without standard currency, certain goods were often accessible only through barter and trade. The specialized nature of work in ancient Egypt also indicates the need for a marketplace, wherein farmers might exchange their surplus with weavers, craftspeople with fishmongers, etc. Reliable evidence for this process is minimal.

The Nile certainly provided the means by which regional goods could be exchanged. Two papyri, P. Leiden I 350 Verso and P. Turin 2008+2016, known as ship's logs, provide insight on this topic. According to Janssen (1961), these papyri date to the Nineteenth and Twentieth Dynasty respectively and record the movement of people and goods traveling up and down the Nile. Goods owed or gifted to individuals would be transported on particular ships to their intended destinations. Another papyrus, P. Brooklyn (35145A), this one dating to the end of the Amarna period, also includes ship logs (Condon, 1984; Zingarelli, 2020, pp. 44f). On the recto, women listed with their names, parent's names, and birthplace, are stated to have exchanged pieces of clothing and honey in several places along the *mryt*. On the verso, no names are listed but the same quays are present, followed by a variety of goods. Most of these goods are foodstuffs like bread and vegetables, but also included are myrrh and some tree variety (Zingarelli, 2020, p. 47).

The bartering process was not restricted to the New Kingdom period. Earlier, as accounted by the Twelfth Dynasty papyrus, P. Reisner II, section d, the message states that a shop owner should store their goods near the river so that the goods can be loaded onto a ship (Wente and Meltzer, 1990, no. 41). This example hints at the practice of regional exchange in which the goods produced by individuals in one place could be transported to another location along the river by ship, presumably for exchange there.

Other evidence of local exchange comes from market scenes depicted on tomb walls. While many of these scenes date to the Old Kingdom, there are a few examples from the New Kingdom. Markets are largely depicted along the riverbank, which serves as the place for exchange. Livingstone-Thomas (2011) suggests that the Old Kingdom evidence from these scenes indicate about 40% of the materials being depicted are “non-perishable” goods, which include especially “oils/perfume” (both of which are actually perishable, but not in the short term). Other goods include sandals, jewelry, and other foodstuffs. The lack of staple commodities like bread and beer is notable. As Jun Yi Wong (2017) states, “These markets functioned as a primary source for goods that were not obtainable locally—for instance, wine production was exclusive to the Delta and Fayum” (p. 38). Eyre (1999) argues similarly, stating that the local market was a structural necessity for the distribution of goods and perishables not produced by the household itself.

In the following discussion, I will focus on scenes of exchange that take place dockside. Note that other scenes of exchange that do not take place at the river exist, including Huy and Kenro (TT54; Pino 2005), Manu’s tomb at Amarna (TT49; Davies 1906 pl. xxiv) and Nedgemjer’s tomb (TT 138; PM 1, 1, 251f).

In the riverside market depicted in the tomb of Ipuy (TT217), two women sit on stools next to baskets filled with goods (Davies, 1937, pl. 30). They exchange two loaves and two fish for grain that is dumped into their basket by standing men. Both of these women are wearing head cones and elaborate linen dresses typical of Ramesside period tombs. Beneath this register men walk with a donkey toward the ship carrying grain sacks. Before them another woman wearing a head cone reaches out toward a bundle held above another man’s head. He is facing away from the ship. Behind him a man disembarks holding a large, complex bouquet. To the

right of the ship, more pairs of women with their baskets are depicted exchanging goods with men who carry sacks. No supervisor is present, contrary to the larger registers set above and below this market scene. This suggests that the exchanges are taking place privately rather than on behalf of an institution (Zingarelli, 2010, p. 37).

The market scene of Khaemhet's tomb (TT57) likewise depicts a riverside exchange (Pino, 2005). Several large ships filled with active figures are shown in port with disembarking sailors carrying vessels. They are met by three men crouching on the ground and offering various goods for exchange.

Kenamun's market scene (TT162) is similar to Ipuw's and Khaemhet's but it includes foreign traders, perhaps from Syria (Davies and Faulkner, 1947). Several permanent-looking kiosks are set up to greet the disembarking sailors. Materials like sandals, linens, and foodstuffs are offered by male and female sellers in exchange for variously shaped vessels carried by the sailors. A sealed amphora, a stirrup-jar, and a *bs*-vessel can be tentatively identified suggesting the contents within may be wine- or oil/perfume-related. On the other side of the kiosks, the fine goods of the Syrians are presented to Kenamun. Again, no supervisor is present at the dockside exchange.

The tomb of Siuser (TTA4), recorded only by early antiquarians, included a market scene very different from those discussed above. One drawing of a market scene from this tomb completed by Hays and discussed by Manniche depicts large groups of women gathered around lone male figures across three registers along the left side of the scene (Manniche, 1987, pl. 7, 14). Near the center of the image, in the middle register, women wearing head cones tidy a pile of goods set beneath a vessel. An inscription accompanying this scene reads "meat, poultry, fish, all kinds of sweet herbs, ointment of *mrht*-oil, myrrh ointment" (Translation in Zingarelli, 2010,

p. 41). Beneath the broken section, in the bottom register, two standing women exchange goods with two male figures over two low tables. To their left a series of women are clapping and beating out rhythms on drums. This element of noise making and merriment accompanying a market reminds me of farmer's markets today which often feature local musicians. To the right of the break, Siuser supervises his scribes recording various deliveries.

These depictions all show the act of exchange which occur alongside the *mryt*. A mixture of foodstuffs and manufactured goods are present. In the case of Kenamun and Siuser, scented products are well represented. When compared to the Old Kingdom market scenes, Livingstone-Thomas (2011) states that of the 10 marketplace scenes of the 5th and 6th dynasties, 40.3% of the exchanges visible in these scenes depict nonperishable goods, of which "oil/perfume" makes up 20%. Stable perishables like bread and beer were the least common. Apparently, the exchange of scented material was relatively common in this early context.

The lack of supervisors in these scenes suggests that this bartering took place privately, outside the purview of a centralized power. According to Livingstone-Thomas (2011, p. 564), scholars have debated whether the market-place was intended for local populations to access commodities they normally could not access or they were intended for the exchange of goods by elites. Others have associated these markets with the great estates of the elite. Regardless, these markets served as places for the exchange of goods by the population.

Women are central in these scenes, as they are often the ones conducting the exchanges. Sailors offload grain into the women's baskets and then are offered other goods in return by women (e.g., TT217). This characterization seems in line with the earlier observation on the material of the ostraca from Deir el Medina which often appear on pottery rather than limestone, suggesting a domestic origin. The women in this community would have been left to take care of

the home and the daily affairs in the village, whereas the workmen would be spending much of their time in the desert hills working among the tombs where limestone chips were plentiful.

The processes of exchange are not all written down, as written material tends to be the exception rather than the rule. Literary masterpieces like the Eloquent Peasant and/or the rare archive such as Hatnub's letters of the Middle Kingdom provide valuable insight into the existence of local exchange, but they are far from the whole picture. For example, Kathlyn Cooney argues that because the Deir el Medina workforce received surplus grain for their state-related work, they could use this surplus to exchange for other types of commodities and foodstuffs not produced by themselves (2006; 2007; 2008; 2018). Their extra time, thus, might be spent producing materials like coffins and beds for exchange on the private market.

5 SCENT AS PROCESS

Thus far, I have argued that there is an emphasis on the generalized experience of scent rather than on specific aromas. Due to the clear association of scent with life and identity, access to the experience of pleasant scents was foundational to ancient Egyptian ways of being. Because one did not have to access a specific recipe or material in order to experience pleasant scents, a larger proportion of the population was able to participate in this aspect of ancient Egyptian social life. However, social regulation limited access to certain high-value, pleasantly-scented products and so power was maintained in the hands of the few. This narrative is the subject of the present chapter.

For now, let us discuss two texts, contemporary in time, that illustrate the spectrum of accessibility within this social negotiation. The first text is a hieratic ostrakon (O. Petrie 39) that recounts the great love its author has for the city of Thebes. The scribe writes:

*jn wj r njwt=k jmn p3[y]-mr=j sw mr m njwt=k r ʕkw r ḥ(n)kt jmn r ḥbsw r sgnnw mrr(=j)
jwtn n dmjt=k [...] r wrḥ n ky[...] t3*

Bring me to your city, Oh Amun, the one whom I love. He loves your city more than bread, more than beer, Amun(?), more than clothing, more than *sgnn*-unguent. (I) will love the dirt of your town [...] more than the anointing oil of another [...] land (Author's translation; O. Petrie 39).

Here, the scribe is expressing love for Thebes by identifying materials that are desirable, but are less lovely than the city itself. Bread and beer are food staples on which everyone must live. Clothing and (scented) unguent are often listed together among high-end, luxury goods. In the last comparison, the author states that *wrḥ*-oil, a term usually restricted to ointments used in sacred rituals involving anointing, even when it is imported, is less desirable than the dirt of Thebes. How unimpressive this closing statement would be were scented oils to lack value according to the intended audience.

The statement that the dirt of the city, mixed with animal and human effluvia and the decaying remnants of human and animal life, could be more desirable than an imported, scented oil obviously intended to have a significant impact on the audience of this text. Were it not, the extent of this writer's love of Thebes would be lost upon the reader. I would like to compare this text, likely written by a scribe at Deir el-Medina, with one written about a royal visit of the King and his entourage.

This text is a Late Egyptian Miscellany. This genre of papyri is made up of continuous collections of short compositions, likely serving as practice texts copied by scribes-in-training. Papyrus Anastasi IV (BM 10249) dates to the first year of Seti I's reign. Contained within it is a text titled *Command to make preparations for Pharaoh's arrival* (LEM V.20, p. 49). The text enumerates an extensive list of goods needed to have ready for the King's arrival, *djt grgt r-ḥst pr-ꜥꜣ ʿ.w.s* "Causing to be ready before the pharaoh (arrives)" (LEM V.20, p. 49, line 14). The goods seem to be organized largely by type. For example, 15,2–15,5 lists a series of various scented oils. This section is then followed by a list of animals. The oil section reads:

...*mjtt snṯr bꜣk ndm dft n jrs kḏwr tp n ḥt ynb n jrs nkḏtr n sngr ḳnnj n jmr gt n thsy bꜣk n nhrn m nḥḥ ḳnw n tꜣ mnjwꜣ r sgnn mšꜥ=f nt ḥtrj=f*

Likewise, incense, sweet *bꜣk*-oil, *dft*-oil of Cyprus, fine *kḏwr*-oil of Hatti, *ynb*-oil of Cyprus, *nkḏtr*-oil of Babylonia, *ḳnnj*-oil of Amor, *gt*-oil of Takhsy, *bꜣk*-oil of Nahrin, being many oils of the mooring posts/port in order to anoint his army and his chariotry.

These foreign oils are all categorized under the term *nḥḥ*, often a general word for oil. However, many of these terms for oils, such as *dft*, *kḏwr*, and *gt*, are hapaxes—only appearing in this text. It is an interesting list for several reasons. First, it is one of the only sections in the text which explicitly identifies the intended recipient of these goods, namely the army and chariotry. The majority of the text appears to be intended for the *pr-ꜥꜣ*, or pharaoh. Other (scented) products and materials are included elsewhere in the text, but not as a major section. For example, references

like *ḥrr mꜣḥ gꜣy* 100 “100 bowls of bouquets and wreaths” (50,13; 14,6), *sft mnw ḳnw* “many jars of *sft*-oil” (15,10), and *bꜣḳ n j[rsj]* “*bꜣḳ*-oil of Cyprus” (17,8; 54, 9) are scattered throughout in the text. These references are kept distinct from *nḥḥ wnm* “edible oil” (15, 9–10), except for *sft*. According to Kapiec (2018, p, 203), *sft* is never referenced outside the context of the seven sacred oils. And yet, here we see it listed alongside, *nḥḥ wnm ꜥd srjt smjt sft mnt ḳnw* “eating oil; goose fat; cream; many *mnt*-jars of *sft*-oil” (15, 9–10). Again we see the flexibility of these terms. Similarly, *bꜣḳ*-oil can be “sweet,” “of Naharin,” or “of Cyprus.”

That scented oils were intended for the forces of the King is not unknown from the ancient world. According to Pliny the Elder, using scented oils as prizes for soldiers helped Rome to conquer the known world (*NH*, XIII.iv). These oils are imported from the Mediterranean, from the Hittites to the Babylonians, and perhaps reference the extent of campaigns done by these armies. It is curious that none explicitly reference places to the south, however. One must wonder if the unmodified terms “*sntr*” and “*bꜣḳ ndm*” fill this gap or references something more local.

Furthermore, this list highlights that a large variety of specific scented oil types were known and accessible. Therefore, the ancient Egyptians did certainly have recipes that they valued and likely used for particular contexts. This conclusion is seemingly contrary to much of what I have been arguing, but in fact it is not, because even if a social group or locality valued a specific composition of scented oils, the ancient terms for scent do not denote a specific recipe. This absence, however, makes the emphasis on atmospheric scents in general semantically, lexicographically, and in the visual arts, as discussed throughout this thesis, even more striking, given the occasional preference for particular recipes.

This list of specific oils is reminiscent of the Third Dynasty doctor Hesire's Old Kingdom tomb in which he had inscribed a gridded list of 39 fragrant oils. This tomb scene identifies these products by their origin (Egyptian or not; Upper or Lower Egypt) and quality (e.g., "first class") (Altenmüller, 1976; Manniche, 1999, p. 108). It is significant that the context in which we find this detailed list so early in ancient Egyptian pharaonic history is in the tomb of a doctor, or *swmw*. The connection between scented products and healing, between fragrance and life, is a recurring theme in the ancient record.

Returning to the text, it suggests that foreign oils, or "oils of the port," were highly valued and appropriate for royal visits. Thus, it associates power and luxury with variety and quantity of aromata rather than specific goods. In relation to this point, this text indicates that scented oil was an appropriate gift for visiting royalty and their court. As discussed in the previous chapter, scented products were desirable not only as gifts for royalty, but to mark a variety of special occasions among the populace.

I introduce these two texts to support my argument that the experience of scent was highly valued by all ancient Egyptians of whom we have record, but the quality and quantity of the materials to which one had access was influenced by one's status. While in the first text, a scribe employs the desirability of foreign oils to highlight his love for Thebes. In the second text, a vast stockpile of imported, scented oils must be gathered to prepare for a royal visit. Thus, we see this narrative trope operating on two distinct scales.

In summary, the inconsistency of terminology for aromatics, both in their context and use of determinatives, when compared with the standard repertoire of visual markers for scent emphasizes the need to express a general category of experience rather than access to specific products or materials. This equation increases social participation by introducing diversity. This

increased participation then results in competition when products and materials become restricted either from natural barriers (e.g., no resin trees grow in Egypt) or from societal regulation (e.g., certain oils are only appropriate for use in ritual). Ultimately, a social hierarchy is formed wherein aromata are desirable (as seen in the city poem), but only wealth and power allows for unregulated access (e.g., the oils of the port text).

Having identified from where aromata were sourced locally, their methods for manufacturing, and the extent to which they were accessible, I will now address the value and accessibility of foreign aromata and how restrictions placed on their accessibility contributed to the maintenance of a social hierarchy.

5.1 THE MECHANICS OF FOREIGN EXCHANGE

To better understand how aromata moved around the eastern Mediterranean into and out of Egypt, this investigation will now turn to the people carrying out the mechanisms of exchange so that we might better understand the processes at hand. It was traders or merchants who were responsible for exchange during this period, namely the *šwjtj* “trader, merchant, commerce agent.” The *šwjtj* are attested in both official and non-official contexts beginning in the New Kingdom. These agents are recorded working for temples, for state officials, and for the local populace. There is only one earlier reference recorded from the Old Kingdom known to this author (Montet, 1925, p. 320, n.1, cited in Zingarelli, 2010, p. 15, p. 71).

One might assume that because such merchants were responsible for acquiring imported goods for the state and other high officials, the *šwjtj* might have had an elite status. Such was not the case, however. At least by the third century, ancient Egyptian merchants were not well respected. According to the extensive wisdom literature poem of Ankhsheshonqey, “A thousand servants are in the house of the merchant. The merchant is one of them” (Simpson, 1972, p. 519).

This poor reputation may partially explain the lack of written attestations to this class of people generally across ancient Egyptian history and within Egyptological literature itself. The merchant serves others rather than working for himself. They operate outside of the state while also being an important figure on which the state's economy relies. As we will explore, the limited references to merchants in the ancient Egyptian material are not mirrored in the contemporary societies of the time. To begin this examination, however, we must start with the myth of redistribution.

5.1.1 THE MYTH OF RE-DISTRIBUTION

Access to scented raw materials (e.g., trees, resin, flowers) and products (e.g., unguent, oils, incense) depended on elaborate trade networks that crossed not only into Nubia and the Levant, but farther south into the Horn of Africa, east across the Arabian Peninsula, north into Anatolia and Greece, and west across northern Africa. Many of the materials procured for the scent industry, such as Pistacia resin, myrrh, olive and almond oil had to be imported, though some materials like balanos oil, *Cyperaceae* (“sedge”), *Nymphaea caerulea* (“blue water lily”), and moringa oil could all be collected locally in Egypt (Manniche, 1999). These extensive trade networks, however, are typically referred to in Egyptological literature as foreign traders coming to Egypt to exchange goods or, more commonly, to “bring tribute”—such as to the Middle Kingdom forts in lower Nubia (Manzo, 2015), or to the Old Kingdom caravan stop at Balat (Moreno Garcia, 2017, pp. 97f). Typical references to ancient Egyptians going out to trade products are framed as royal missions (often to Punt) and Egyptological literature has been situated within this narrative. For example, at the Red Sea port sites Wadi Jarf and Wadi Gawasis only evidence of state-organized expeditions have been uncovered (Tallet and Mahfouz, 2012), rather than any hint at small-scale or private trade missions.

Trade performed on behalf of the state, such as that attested in the tombs of state officials from all periods (e.g., Harkhuf of the Old Kingdom, Setka in the First Intermediate Period, or Vizier Khety in the New Kingdom) was undertaken by individuals. Tomb scenes like those of markets in Nebamun, Ipy, or Khnumhotep, demonstrate the scales at which individual water-side markets were taking place alongside the official business of the tomb owner, who like the treasurer of the granaries of Amun, Khnumhotep, were buying products on behalf of the state in the interest of maintaining the centralized power structures of the time.

What would evidence of private trade look like? In fact, archival tablets of elite individuals financing missions to Egypt from Ugarit have been found (Heltzer, 1978, p. 12, PRU, VI, 14 (RS. 19.50; PRU, V 116 (KTU, 3.8)), in addition to references to a rather elite merchant class that existed from the Levant through to the Mesopotamian valley in the Late Bronze Age (Heltzer, 1978, p. 11, KTU.4.548, PRU, III, 15.138 + 16. 393B; 15.109 + 16.269; 16.206; 16.285; 16.238).

In the first part of this investigation, I will suggest that our modern interpretation of ancient trade involving Egypt has adopted the ancient Egyptian sources at face value—that trade was strictly controlled by the central powers and so, in times of decentralization, trade broke down. Moreno Garcia’s well-crafted essay on “Trade and Power in Ancient Egypt,” which examines evidence of trade in Middle Egypt from the late Old Kingdom through the Middle Kingdom states that it “would be a mistake to consider foreign trade as a royal monopoly” (2016, p. 92.) This publication, however, is limited mostly to examples of royal expeditions organized by the King, a few market scenes in tombs, and the foreign materials themselves. Despite such limitations, Moreno Garcia still demonstrates convincingly that even in times of “decentralization” (i.e., the Intermediate Periods), trade continued. For example, the Kamose

Stela from the end of the First Intermediate Period indicates that Egypt was continuing to import materials from all over including oils, resins, cedar, gold, silver, and copper (Simpson, 1972, pp. 345–350). Thus, the nature of control over the accessibility of certain products such as foreign resins or oils likely would have shifted over time between the two extremes—strict regulations from the center and private/local control.

With goods from Cyprus, Syria-Palestine, the Levant, the Mycenaean Aegean, and Egypt all crowded into its hull, the Uluburun shipwreck embodies the complex network of exchange going on in the region at this time. But can we really say that the cargo of this ship must certainly represent a stately gift? Likely no. While some scholars, like Bachhuber (2006), have commented upon the similarity of this cargo to the lists of greeting-gifts from the Amarna letters, there are other plausible explanations. First, it might be noted that the perishable elements of the cargo have not been preserved and secondly, the crew of the ship was likely inter-mixed, reflecting the diversity of the material aboard. Should this be so, would it not make sense for this ship to represent a trading venture which represented multiple interests? Yes, of course, perhaps it was a royal gift being sent to some palace in the Aegean, but it seems absurd to assume there was no private trade functioning alongside this supposed state-led venture.

So this is where we can discuss the major issue with our data from Egypt, which should be nothing controversial despite it being rarely taken as the central focus for analysis. As Liverani (1990) has presented it, the Egyptian state had two main ways for self-presentation in the Late Bronze Age/New Kingdom because of the simple fact that Egypt could no longer keep up a pretense of being the center of the world—where goods move toward the center as gifts, booty, or tribute. In this model, materials goods, namely ones identified as the staples for life, were supposedly re-distributed to the provinces in the form of rations and gifts. While this

agenda of propaganda was certainly maintained throughout the Pharaonic period, we get a glimpse of this sham breaking down in texts like the Amarna letters or the tale of Wenamun, when a system of reciprocity is instead taken up and Egypt must identify its place as only one among several strong states. In this model, perhaps as a way of saving face, a “brotherhood” is formed between players in which goods are said to be gifted to one another to solidify bonds and to create a gift-debt, an example of which we can examine in the *Tale of Wenamun*.

There has been no agreement as to whether the story of Wenamun can be interpreted historically, politically, literarily or some combination therein. Regardless, what I have found fascinating is the manner in which trade is portrayed. Wenamun, the *smsm h3y(t)* or ‘Elder of the portal’ is charged with traveling to Byblos to receive timber for the construction of a ship dedicated to Amun. His captain, *mn-gbt*, apparently has a foreign name. This name, however, could more-literally mean “there is no problem” were it to be considered homonymic. This translation is ironic considering all the issues Wenamun is to face later in the story (Winand, 2011, p. 551). Mengebet’s crew is referred to as “Syrian” by the harbor master at Byblos and the captain himself as a ‘barbarian’ or *drdr* by the non-Egyptian Tjekerba‘al (lit. Ba‘al remembers), one who might also himself be considered a *drdr* from the ancient Egyptian perspective.

The Syrian captain was hired by Smendes at Tanis to carry out this venture (*mšc*), demonstrating how the central government was dependent on private exchange mechanisms for its own needs. Wenamun boards this ship as the king’s representative and envoy. Later in the story, Wenamun and the harbor master at Byblos (*jmy-r3 mr(w)*) are discussing the cedar Wenamun was sent to collect from there. In this conversation, Wenamun presents his desire for cedar as an expectation on behalf of Amun, but he is told that he must pay for the cedar before it will be handed over. It appears, thus, that Wenamun has been fully taken in by the myth of

redistribution, namely that all goods move toward Egypt as tribute. The whole exchange is presented as a gift and a counter gift, but in the end it is described as fulfilling a demand for a good through payment. This exchange embodies the duality of self-presentation inherent in the “myth of re-distribution” laid out above and discussed by Liverani (2001). Wenamun is presenting Egypt as the center of the world to which all goods are directed, while Tjekerbaal demands payment for his goods. As the story goes, Wenamun says to the harbormaster,

*j.jrw pꜣy=k jt, j.jrw pꜣ jt n pꜣj=k jt, jw=k r jrww=f m-r-ꜥ jw=f dd n=j mntw j.jrw sw m mꜣt
jw=k r djt n=j n jry sw mtw=j jry sw*

“What your father did (and) what the father of your father did, you will do also.” And he [being the harbor master] said to me, “They did it in truth. You will pay (lit. give to) me for doing it, and I will do it” (Author’s translation; LES 67: 2,5–2,6).

According to this passage, trade could be understood and recorded according to either model, that is, with reciprocity (exchange of gifts and work or mutual aid) or redistribution (centralization of surplus through taxation and corvée) (Liverani, 1990, p. 205). The redistributive model was applied at different scales—from the family/village setting to the international stage where states are described as individual persons. The redistributive model is purely ideological, while the reciprocal pattern is based on a “complex multi-centered political world with many states existing, and each one centralizing surplus for its own sake” (Liverani, 1990, p. 206). This conversation is further complicated by the nature of the Egyptian presence in the Levant at this time. Whether elite emulation, resource mining, or direct rule, each model affects our understanding of how and why goods were exchanged between and through these places (cf. Bader, 2017; Mumford, 2017; and Burke, 2009; with Higginbotham, 2000; Ahituv, 1978; Na’aman, 1981).

Another aspect of trade that should be considered is how the exchange of goods was framed by the ruling elite. The ancient Egyptian state propagandized that there was only one

center (Egypt) and that all goods moved to that center. Through the process of redistribution, these goods would then be recirculated among the people. What happens in the New Kingdom period, however, is the need to recognize the existence of other major empires and that those players were not inherently inferior to the ancient Egyptians.

Through a policy of peer polity, gifts were exchanged which obligated a return by the other policy makers. The archive of political correspondence known today as the Amarna Letters presents this narrative. The reciprocity or peer polity model is recorded in this intra-state correspondence with symmetrical statements like, “What my brother has in his heart I will do, and let my brother do what I have in my heart” (Rainey and Schniedewind, 2015, EA 20). Such phrasing contrasts with examples espousing the redistributive model wherein all goods are cast as being directed toward a center. Take this stela for example (CG 34025), in which is written a statement first inscribed under Amenhotep III at his funerary temple originally set behind the ‘Colossus of Memnon’:

dj=j hr=j r rsj bjzy=j n=k dj=j phr n=k wrw k(3)š hs hr jnw=sn nbw hr psd=sn

dj=j hr=j r mhtj bjzy=j n=k dj=j jwt n=k h3swt phw stt hr jnw=sn nbw hr psd=sn ms=sn n=k d(s)=sn m msw=sn sbt r djt=k n=sn t3w n cnh

dj=j hr=j r jmntt bjzy=j n=k dj=j jtt=k thnw nn whn=sn kdw mnnw pn hr rn n hm=j phr m sbtj wr hr tk[nw] r pt grg m msw hry jwntjw

dj=j hr=j r wbnw bjzy=j n=k dj=j jwt n=k h3swt n pwnt hr h3w nb ndm n h3swt=sn r dbh htpw m c=f ssnt n dd=k

I shall offer my face to the south, my wonders being for you, that I might cause the great ones of vile Kush to turn around for you, bearing all their tribute on their back.

I shall offer my face to the north, my wonders being for you, that I might cause the countries of the ends of Asia to come to you, bearing all their tribute upon their back. May they offer to you themselves through their children, so that one might travel in order for you to give them the breath of life.

I shall offer my face to the west, my wonders being for you, that I might cause you to seize Tehenu without them escaping. This fortress having been built in the name of my majesty, surrounded with a great wall drawing near to the sky, it being established with children of the chiefs of the bow people.

I shall offer my face to the east, my wonders being for you, that I might cause the countries of Punt to come to you, bearing all the sweet plants of their countries to ask for peace through his hand, breathing on account of your giving.

(Author's translation; *Urk.* IV, pp. 1656,5–1657,5; Liverani 1990, p. 209; Grimal 1986, pp. 449–466).

Amenhotep III lauds his own efforts at collecting tribute for his god Amun. The King simply looks north, south, east, and west and so causes tribute to be offered from those places. This all-encompassing power implied in this passage depicts a world under the purview of this one Egyptian god, with all goods moving to him.

Because of the nature of our evidence, which privileges the myth of redistribution by recording the state's agenda, it is understandable why generalized trade is so poorly represented in the data. Where can we look for evidence? From the Egyptological perspective, what is often considered evidence of "trade" is the presence of foreign material goods in Egypt, depictions of markets in tomb scenes, the Amarna letters, shipwrecks, and various examples of written evidence. But the success of these investigations is limited.

For instance, here I recall the now-dated "pots and people" discussion (Kramer, 1977; London, 1989). According to a debate that defined much of the literature of the 1980s and 90s, the presence of pottery in archaeology does not indicate the presence of a certain ethnicity. In this line of thinking, the presence of foreign goods in Egypt tells us very little in regard to how those items ended up where they were found. We might assume contact between cultures or regions, but even the nature of that contact whether it was direct or indirect is suspect. For

example, Shirly Ben-Dor Evian (2013) demonstrates effectively that a particular type of ceramic decoration disappeared from Egyptian contexts by the time of Ramesses III, and then reappeared in Early Iron Age Philistine after a short gap in time. The influence between these cultures is clear, but it does little to help us understand how material goods and/or ideas were traded between geographic places nor their local value (economic, ideological, aesthetic, political, etc.).

Similarly, the tomb scenes of dock-side markets from the New Kingdom offer only limited direction. Most of these scenes, as discussed in the previous chapter, provide some insight into the mechanics of riverside (*mryt*) exchange; for example, we have the tomb of Kenamun (TT 162), which depicts a Syrian crew working the ships. Yet, the patrons of such an expedition remain unknown. Kenamun's market does suggest that there is 'official' business taking place wherein goods are presented to the tomb owner in addition to dockside/local trade between the sailor-merchants and the people in their stalls (Zingarelli, 2003). When viewing these scenes, you can almost hear the marketplace sounds of disgruntled animals, individuals hawking their wares, as well as taste the aromas of exotic spices mixed with manure and sweat, yet we continue to be unsure of the dynamic processes behind these depictions and so must return to the people driving these processes: the merchants.

5.1.2 THE NATURE OF MERCHANTS

I am interested in researching the mechanisms directing trade in the Eastern Mediterranean in the Late Bronze Age because the products that I research are often assumed to have been luxury goods, either because many of our documents seem to suggest they were used by elites and royals in specific contexts or simply because they come from distant places. Given the discussion throughout this thesis, however, the use of aromata in mundane contexts is well attested, as is their value outside the strictly 'religious' and 'funerary.' However, if such a

restricted use-context were the case, these ‘luxury goods’ would, by assumption, only be available to those who could afford them or to those who were gifted them under the system of redistribution. We now must consider instead that the myth of redistribution is something that has appeared in scholarship due to the biased nature of the extant sources which, understandably, largely represent centralized, elite or royal power and control.

Some evidence suggests that aromata were in fact in use in non-elite contexts, as discussed in the previous chapter. In fact, even some royal sources describe these products as staples, being gifted or rationed out to individuals such as refugees or workers alongside bread and beer and clothing—items that would not be argued as being anything other than basic necessities (e.g., Davies, 1943, pl. LVII).

What exactly distinguishes between “staple” and “luxury” goods? Is it the effort required to access them, their rarity, or perhaps their local economic or aesthetic value? I will explore this division between “staple” versus “luxury” goods by reviewing the argument presented by Dimitri Nakassis in “Reevaluating Staple and Wealth Finance at Mycenaean Pylos” (2010). Nakassis argues that the distinction between these terms is less useful for study than an examination of the *transferability* or *convertibility* of a good. This shift in focus requires researchers to investigate goods upon a staple-to-wealth scale rather than to categorize goods as one or the other.

Like the ancient Egyptian political systems just described, Nakassis states that Mycenaean palaces were once considered centers of redistribution that supported an economy “dominated by staple goods (staple finance)” (p. 127). Recent publications, however, have suggested that the Mycenaean palatial economy relied more heavily on the production and exchange of costly prestige goods (a wealth finance economic system). In a wealth finance model, the palace controls the means of production. These finished wealth-goods could then be

exchanged for goods and services or gifted as non-fungible markers of status. Often these two models work in tandem wherein staple goods are used to support attached specialists who produce prestige goods that are used in the wealth finance system. Staple goods can be defined as everyday materials required for subsistence, whereas luxury or prestige goods are typically durable, transportable, and of a high value (p. 128).

In focusing specifically on the Pyliaic state, Nakassis suggests finance is better measured along two continuous axes: one which measures the material involved (from staples to wealth) and the other which measures the extent to which the goods allocated are convertible or transferable” (p. 127). For example, oils can range from basic, locally-available cooking oils to rare, imported perfumes. The transferability of this product then depends both on its location on the staple-wealth scale as well as the context in which the owner/buyer wishes to exchange it. This scale is reminiscent of the concept “spheres of exchange” in which goods of similar value are exchanged with one another due to an equivalence of transferability (Kopytoff, 1986).

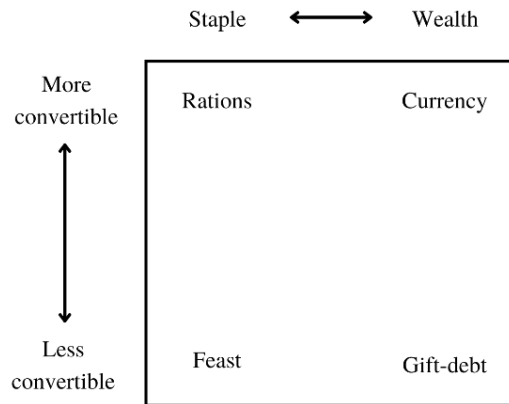


FIGURE 5-1. TYPES OF STAPLE AND WEALTH FINANCE. ADAPTED FROM NAKASSIS (2010, FIG. 7.1).

In the ancient Egyptian context, this phenomenon happens with high-quality scented oils and fine linens wherein they often are found listed together, one after the other, such as in the Nauri Decree (KRI I, p. 48, lines 14–15). If one is unable to participate in the exchange due to an

unavailability of equivalent material, this reinforces the established power hierarchy by denying access to that type of exchange. This consequence suggests that these economic models are also representations of political, ideological, and social systems. In fact, we must consider alongside Nakassis' visual representation (Table 5-1) how narratives of power influence where vectors appear along the scale. For example, economic exchanges such as feasting can be ripe with overlapping social, political, and ideological implications—from the display of wealth as an indicator of status, to the generation of gift-debt, to the ritual invitation of divine beings—and these considerations affect where feasting should be placed in this model.

Nakassis concludes after a quantitative study of Pylian administrative texts that the palace economy at Pylos is better characterized as a “prestige economy.” Both staple and non-staple goods are used in “symbolic exchanges to promote solidarity and ensure allegiance” (p. 139). The goal of elite exchange was to accumulate “symbolic profit” or *prestige*. This conclusion, however, may be influenced by the nature of our sources—that they are administrative texts from the palace. The elite population is driven by a desire to accumulate non-convertible goods to maintain their ideological wealth and status. Nowhere is this perhaps more obvious than in the stockpiling of perfumes, whose value rests in its use rather than its storage due to its limited shelf-life and evanescence.

Given the contexts discussed so far with regard to positively scented materials, I have sought to establish an innate need among the ancient Egyptians for such products regardless of status. That, in fact, scented products were a necessary part of being an ancient Egyptian. Does that make scented products staple goods? The answer to this question is complex. I argue that it is through the restrictions placed on the less fungible versions of these scented products (either regarding quantity or quality or both) that power dynamics were created and maintained.

For example, one might guess that prestige oil-based perfumes could be cut with cheaper products to make them more widely accessible, the scented raw materials being needed in much less quantity than the base products and oils. This premise is similar to what has already been established for textiles. Linen textiles came in a variety of qualities, which has been well established within the field of Egyptology (Janssen, 2008). Just how everyone needed clothes to wear, so too were oils an essential product. Like textiles, (scented) oils came in various qualities and people would acquire them at the quality which their pockets allowed.

The accessibility of a variety of oil products to a wider proportion of the population, however, would require the existence of a merchant class. This merchant class likely operated under foreign contacts (both private and state-organized), but could be hired to work for individuals or work alone. They would have needed sources of independent wealth, but could also be attached to institutions and states, ultimately trading goods based on demand or need. These individuals then would be outside the state systems, largely unattached to geographic locations because of their need for fluency in the demand of non-local products around the Mediterranean. They would require contacts and contracts, but also state-support to help protect their cargo.

Roads between states would need to be maintained and controlled, ships would have to be available both for purchase and for hire with crews familiar with the coast lines and ports and their associated rules and taxation. With all this logical supposition, then, we are left to wonder why such a class is nearly invisible in ancient Egypt. Just like how Wenamun says a Syrian crew sailing for Egypt would be Egyptians, just like how he fails to receive cedar from the Byblos port master as “tribute” but only in exchange, these merchants become subsumed under the verbiage of state propaganda. As recorded in Wenamun, by the end of the New Kingdom as the

centralized state begins to weaken, the myth of redistribution is breaking down; that port master in Byblos has no qualms about speaking plainly to Wenamun, who apparently has been fully duped by the myth of redistribution.

Castle has collected evidence for the existence of trade in his 1992 article “Shipping and Trade in Ramesside Egypt.” The possession of ships by temples and by the palace is well documented, as well as tariffs required for the transport of goods on the Nile (Castle, 1992). For example, EA 39 indicates that Cypriot merchants on ships were typically approached by the “customs inspector” when they arrived in Egypt (Rainey and Schniedewind, 2015, p. 355). Also, earlier in the Middle Kingdom, tax exemptions for ships belonging to the Osiris Temple at Abydos returning from Nubia were recorded in the Nauri Decree. The soldiers in the Egyptian fort near Nauri are told not to take anything from these ships bearing tribute (KRI I, p. 56, pp. 84–86; Griffith, 1927). There is also evidence of ancient Egyptian merchants taking part in the economy of Ugarit, however, this information is recorded in Ugaritic texts rather than Egyptian ones (Singer, 2011, p. 77: KTU 4.352 = RS 18.042.4 = PRU 5, no. 95; RS 16.136 = PRU 3; RS 15.011=PRU 3,19; Castle 266, FN 93: RS 18.285[A] = PRU 5 126: 4–5). Additionally, EA 313 also discusses 13 merchants from Egypt who were lost in an attack (Rainey and Schniedewind, 2015, EA 313).

There is one word in the Egyptian context that is translated as merchant, *šwjtj*. The limited examples we have of the word suggest that they functioned exactly like the *tamkars* of Mesopotamia and the *mkrm* of the Ugaritic texts. These traders can be attached to the state, to temples, or to individuals, and they can also be unattached (Castle, 1992, pp. 250ff). They can have titles (e.g., “Overseer of the *šwjtj* of the Aten temple” (Taylor 2001, no 1637; *Urk.* IV, p. 363) and also traffic in stolen goods (P. BM 10053). They can be creditors and are often attached

supplied by the temple. Ramses II states, “I made grandiose your treasury, it being filled with everything of desire which I have given to you together with your revenues. And I gave to you a *mnš*-ship bearing deliveries on the Great Green, Bringing in for you great [marvels of] God’s Land, while traders trade, carrying their orders, and their work products consist of gold, silver and copper” (Translation in Spalinger, 2009, p. 71). This passage suggests that the crown supplied a ship, and perhaps merchants, to the temple to undertake trades on their behalf so as to provide the treasury with expensive goods of foreign lands.

In a passage from P. Bologna 1094 (LEM I.8, p. 5, line 6), a scribe writes to his lord asking him to “seek the merchant” to see if he has returned from Charu (Palestine). It is unclear here if this merchant is working for this scribe or for himself. Regardless, it seems that these individuals writing a letter to one another expect access to his goods.

Bankes Papyrus I (late Nineteenth/early Twentieth Dynasty) records a letter where a builder hires a merchant to take care of some business regarding an abducted servant and her child outside of town (Edwards, 1982). The merchant is told that the builder confronted the merchant’s superior, a commander of troops, about the issue and that the merchant is to return the servant to the builder. This example demonstrates these merchants could be attached to particular people, in this case a military commander, but also serve individuals, presumably for hire or at the direction of their supervisor. And, in this case too, it should be noted that the merchants are not trafficking in goods but in people. The letter itself, however, is addressed to Imen-chau, the merchant of Amun-[Re], which may suggest merchants could work for multiple contacts.

The collection of documents known as the tomb robbery papyri also make mention of these merchants. It is to these traders that stolen goods from the necropolis were offloaded. For

example, P. BM 10068 records a list of at least 14 merchants from whom gold, silver, and linen was recovered by the vizier Khaemwaset and the chief priest of Amun-Re Amenhotep (Peet II, pl. XI, rt. 4). The document indicates that the merchants received these goods from the thieves. Among these “traders of every house” were merchants working for army commanders, temples, a singer, themselves, and one “belonging to the chief of the Hittite troops.” P. BM 10053 also includes several *šwjtj* merchants among a variety of other individuals named by their professions as having stolen goods in their possession (Peet II, pl. XVII rt. 1:10, 2:12, :13, 3:1, :2, :6, :10; pl. XVIII: rt. 4:4, :5).

In the Lansing papyrus (Twentieth Dynasty), we see merchants functioning as traders working along the Nile. They are depicted as constantly moving and redistributing goods. It is unclear if they are working alongside tax collectors or are themselves tax collectors, so we cannot make conclusions as to whether these merchants work for the state or not. The passage reads:

t3 šwjtj ḥd ḥnty jw=s ḥn mj ḥmt f3y 3ḥt njwt r kt jw sdbḥ p3 jwty ḥr-jw ḥtrj f3y nbw p3 sbk n jnr nbt

The merchants travel downstream and upstream busy like copper, carrying goods (from) one city to another, supplying the one without, whereas the tax collectors carry (away) gold, the most precious of all stones (LEM X,5, p. 103, lines 4.8–4,10).

In this example, the merchants are bringing goods to where there is demand. This statement implies an awareness on the part of the merchants on where their goods are most desired and are also in possession of the means to travel between these places. In this example, the merchants apparently work along the Nile rather than traveling abroad as we have seen in some of the above examples. Their relationship to the tax-people, however, is unclear.

This same passage continues:

*n3 jswt mnš n pr nbt šzpw t3y=sn sbw wd=sn r kmt r d3hy ntr n z nb m-^c=f bw dd=tw w^c
jm=sn jw=n ptr kmt grw*

The ships' crews of every house have received their loads so that they may depart to Egypt and to Djahy. The god of every man is in his hand. Not one of them says: "We shall see Egypt again" (LEM X,5, p. 103, lines 4.10–5.2).

This example provides us with our first example of Egyptian merchants leaving Egypt, as well as a hint as to why merchants were not well respected. A primary desire of the ancient Egyptians was to live in Egypt, die in Egypt, and be reborn there. Thus, the idea that this profession might take you from your home and prevent you from returning suggests that it goes against one of the ancient Egyptians' core ideologies.

Another excerpt from P. Lansing which discusses the poor lot of the farmer reads, *t3y=f [hmt] h3ytj m šwtjw bw gm st nkt r db3* "His [wife] has fallen to the traders, but she finds no product in exchange" (LEM X,6, p. 105, line 10–11). Here, the farmer's wife(?) "falls" to the trader, but there is no profit to be made. This example suggests merchants worked with individuals of all classes, rather than only trafficking in high-end goods. It also may suggest that they could be sought out to provide a loan (Zingarelli, 2010, pp. 71f).

Thus, we have examined several references to these merchants, traveling abroad to Charu, functioning as overseers of other merchants attached to the Aten temple, as foreign merchants working for local institutions, and as the people to whom you unload your stolen goods. These examples show the diversity encompassed by this title. Overall, merchants functioned as lenders or traders, intent on making a profit. The state was not always a participant in the exchange, though it seems being attached to government officials or institutions like temples was a desirable position.

So, merchants worked in both official and non-official contexts. They could be low or high status, overseers at a temple or arrested for selling stolen goods. They can be attached or

independent. Most of the merchants mentioned in the tomb robbery papyri are attached to military or other state officials, while from our first example we saw a merchant being hired by someone other than his supervisor. And they can work locally or travel abroad, and can be foreign or Egyptian.

But what about farther afield? What is going on in those places outside Egypt with whom Egypt is exchanging goods? Well, while Egyptian material abroad, including from shipwrecks, continues to be problematic for the same reasons covered before, we have a very interesting and well-studied word we might consider in comparison with the Egyptian *šwjtj* that we just discussed: DAM.GAR “tamkar.” These tamkārū have served similar functions to the Egyptian *šwjtj*.

The tamkārū-merchants date at least back to Old Akkadian (ca. 2000 BCE), the term perhaps coming from the Assyrian term “to traffic” (Johns, 1904, p. 281). In comparison with TLA’s 12 examples of the term *šwjtj*, Lesko’s 12, or the 10 examples from the *Wörterbuch der Ägyptischen Sprache (IV)*, the Assyrian dictionary has 15 pages of examples of *tamkāru* (CAD 125–140). They worked as creditors and as middlemen attached to individuals, states, and institutions. They traded locally within their districts as well as facilitating trade among and across various states including Ugarit, Hatti, Mari, Amurru, Ura, Larsa, Alalakh, and Nuzi. They also could have different nationalities, such as in one example where a woman is told to marry either a native Anatolian or an Assyrian trader of her choice (CAD 130, 3: Alp AV 484 Kültepe n/k 1414:8). The title “overseer of merchants” is also attested in Assyrian. Through time, the extent to which these traders maintained their independence fluctuated with the strength of centralized rule in Mesopotamia (Bachhuber, 2006, p. 89). For example, the Code of Hammurabi greatly restricted their freedom (Johns, 1904).

In the Amarna letters it is quite clear that these merchants, or *tamkārū*, are identical to the *mār šiprim*, or messengers (literally - son of the letter). Consider this example from the Amarna Letters (EA 39) wherein the king of Cyprus urges the Egyptian king to return his messengers quickly, for these men are his merchants: “as for my messengers send them quickly and safely so that I may hear of your welfare. These men are my merchants” (Rainey and Schniedewind, 2015, EA 39). This theme of kings desiring the quick and safe return of their merchants also is taken up in EA 8 where the king of Karaduniash seeks reparations from Egypt for the theft and murder of his merchants in Canaan. In comparison with Wenamun, who also faces theft among other violent attacks, it is clear why these kings desired the safe passage of their merchant-messengers as it is through these messengers that relationships are maintained between the powers. Thus, it was the responsibility of the state to protect traveling merchants as their prestige economies were thoroughly dependent on the merchant’s movement through the landscape.

The desire to protect the passage of messenger-merchants is proclaimed by Thutmosis III on the Gebel Barkal stele, “I [have set] my terror in the farthest marshes of Asia, there is no one that holds back my *wpwtyw*-messenger!” (Redford, 2003, p. 114, cited in Morris, 2018, p. 127). I would suggest that the Egyptian *šwjtj* were in fact identified with the messengers referred to in the Amarna letters, as others have done also (Holmes, 1975; Cline, 1994, p. 85; Oller 1995; Wachsmann, 1998, p. 307; Bachhuber, 2006, p. 47; Singer 2017). This point of comparison would help to explain the absence of references to merchants in the Egyptian context given it was their diplomatic service that was highlighted rather than their work in trade. This ambiguity allows the state to ignore the existence of unregulated trade by emphasizing instead the merchant’s role in political negotiation and/or the exchange of ‘gifts.’ These “messengers” then might be redefined as state-attached merchants. Thus, merchants carried messages, serving

diplomatic functions, and could be high class royal officials or simple foot soldiers (Holmes, 1975).

A stanza from The Satire of the Trades provides another interesting point of comparison.

It reads:

The runner (*shsh.tj*) is going abroad,
Having bequeathed his affairs to his children,
Fearing lions and Asiatics.
He is beside himself until he is (back) in Egypt,
Reaching there from the fields...
He is not one who returns happy hearted (Hoch, 1991, paragraph 16).

The job of this “runner” is to go abroad. He faces dangers along the road, including attacks by foreigners, and desires nothing more than to return to Egypt. I believe it is possible that this term *shsh.tj* may be another way of referencing these merchant-messengers. It is reminiscent both of the example from P. Lansing where the return of the *šwjtj* from Charu is doubted and of the dangers of the roads discussed in the Amarna Letters.

This international merchant-messenger class worked outside geographic borders, which might explain why it is so difficult to nail down and identify them as a profession. Merchants, at least according to the ancient Egyptian and the Levantine and Mesopotamian evidence, were not tied down by their place of birth. Additional evidence for the taxing of foreign traders entering Egypt, or the hiring of ships like at the start of the tale of Wenamun, if examined from this larger perspective becomes simpler to grasp. As laid out so clearly in Wenamun, when asked about the Syrian crew he sailed with out of Egypt, he responds, *jn bn mnš n kmt hr jzt n kmt n3 nty hnw hry ns-sw-b3-nb-dd nn wn (m-)dj=f jsty h3rw* “Are there no ships of Egypt with a crew of Egypt, the ones which sail under Nesbanebdjed (Smendes)? There are none with him that are a Syrian crew” (LES 67, pp. 66, line 7 – 67, line 6). Thus, ships belong to those who hire them or to those

who lead them. In fact, what may have been the norm and which we might relate back to the initial discussion of the Uluburun shipwreck, is that these mercantile ventures were likely supported by multiple sponsors or patrons as in KTU 3.8 = RS 19.066 in which several people collected together 2000 shekels of silver for a tamkārū operation to Egypt (Heltzer, 1978, pp. 141f).

Thus, trade in the eastern Mediterranean paints a complex picture. For example, the Mycenaean context seems to be similar to the ancient Egyptian one where narratives of redistribution have blinded scholarship to the importance of merchants to a successful trading industry. If we consider that perhaps our sources are intentionally trying to hide this class of untethered people, unable to claim them as their own, we can find them in new places, like in the above passage from the Satire of the Trades. The merchant-messenger must always travel, facing many hardships and rarely returning home. They are necessary to the functioning of the state but also just independent enough to be threatening and so they are subsumed under other titles and functions, restricting their power but not their movement.

Furthermore, that this whole discussion has sought to differentiate private from state-sponsored trade is likely a contrived dichotomy. Consider how in the tomb robbery papyri, the *šwjtj* are often attached to military men. As Morris (2018) states, many Egyptian military bases “tended to be situated particularly at harbors and along the major thoroughfares that would be utilized by caravans and merchants” (p. 127). Thus, the state-sponsored expeditions such as those sent to Punt by Hatshepsut or those recorded in the annals of Tuthmosis III likely were accompanied by private commerce.

Trade functioned at every scale which supports the idea that the Uluburun shipwreck was not strictly a state-led venture but likely had multiple sponsors. It is important to consider these

questions when analyzing ‘luxury’ goods specifically because we need to understand their method of distribution in order to define their transferability and understand who had access to what materials. Luxury goods could just as easily be defined as examples of daily staples depending on their accessibility. To understand a full picture of what was going on in the eastern Mediterranean at this time, we have to use multiple approaches to data and not examine it just from one hyper-specialized perspective because traders were likely not defined or restricted by their geographic origin but only by their skills (e.g., verbal; sailing), accumulated wealth, and fluency in goods and cross-cultural demand.

5.2 SCENT AS A SOCIAL SEPARATOR

Given this discussion on the evidence of the ancient Egyptian merchant, I will now return to the examination of scented materials and their value in society. Aromata are often reduced to ‘luxury goods’ in scholarship, but many of the examples discussed in this thesis suggest these products and, more specifically, their scent was a basic necessity of life. Access to pleasant scents was crucial to one’s continued existence, as basic a need as bread and beer. Industry support, such as merchants attached to temples or officials, likely facilitated access to non-Egyptian, scented materials, like Pistacia resin, which seems to have been rather widely used. Diego Espinel (2018) discusses a similar pattern discovered regarding access to *sntr* in the Old Kingdom.

Thus, this discussion on the nature of the ancient Egyptian merchant is an investigation into the evidence for private exchange in the eastern Mediterranean of the Late Bronze Age as a way of questioning how scented materials may have entered Egypt and who would have had access to them. Essentially, the purpose of this chapter so far has been to investigate the mechanisms by which non-local, scented products and materials became accessible to the ancient

Egyptian population. Did it fall under the redistributive model by which such ‘luxury’ materials were sent to the center as tribute and then redistributed around the country or is there evidence its exchange was individually achievable?

It is obvious from our evidence that scented materials were highly sought out by the state. Massive expeditions were undertaken by Hatshepsut, as well as by earlier pharaohs (Bard, 2018, p. 176; Diego Espinel, 2017), to bring back the scents of Punt, among other goods. The political expenses alone and complexity of organizing a large expedition resulted largely in state-organized missions (Bard, 2018, pp. 177ff). Aromata in great quantities are also mentioned among the goods listed in the “annals” of Thutmosis III (Redford, 2003), as the tribute presented to Ramses III and offered by him to several temples in P. Harris (P. Harris I) and as high-value gifts exchanged between the dominant powers of the eastern Mediterranean (Rainey and Schniedewind, 2015). As we might harken back to the comparison with which I began this chapter, one of the notable differences between the examples introduced in this chapter and in the previous chapter is largely in terms of quantity. The state was able to collect heaps of the stuff, whereas our references to this material in the texts of Deir el Medina is much smaller.

This is the narrative the state was selling. However, the evidence discussed from Deir el Medina, when compared with this chapter’s review of the existence of a merchant class, suggests that these state ventures were not the whole picture. People did not have to be gifted these products in order to have access to them, and their use was a necessary part of social life (e.g., gifting, setting up/maintaining social hierarchies and relationships, celebration of special moments, identity making, etc.). Scent was a staple good, one necessary for life.

Perhaps the limited number of references that use “merchant” as an official title was intentional—the state devaluing the merchant’s role as a way of underselling their dependence

on this class of people. The lack of evidence on the production of scented products is also an interesting pattern reviewed in the previous chapter. This absence contrasts directly with evidence of textile production but is reminiscent of the absence of direct evidence for faience production. The intentionality behind this lack, however, is left to speculation. Was the process of production ritually protected? Was depicting the process outside the accepted parameters of decorum? Did the myth of redistribution mean that the production of these finished products were under the sole ownership of the state? Have the written and artistic depictions of these processes not survived?

Storing these products at temples kept much of this material out of circulation, effectively limiting who could use it to gain power or influence. Scent, then, functioned as a social separator, distinguishing the ‘us’ from the ‘other.’ Because ancient Egyptian ideological systems depended on the use of aromata in their rituals, temples had to be capable of sending out their own agents to purchase scented materials. The quantity achievable through merchants, however, was unlikely to match the expeditions of state and temple.

We can compare the gifting of scented products between friends of Deir el Medina (e.g., O. Cairo CG 25677 and 25678; P. DeM V and VI) and the diplomatic gifts exchanged between states in the Amarna letters or the evidence for private trade and the massive expeditions undertaken to retrieve myrrh from Punt advertised on the walls of Hatshepsut’s mortuary temple. We can even reflect on the various scales on which gardens were established, from the small plots at the South Pavilion at Kom el Nana growing plants for bouquets to the massive gardens depicted in the tomb of Nakht (TT161).

Scent functioned as part of an ongoing social process, a negotiation between social players. Organic and cultural restrictions, from the lack of resin trees in Egypt to the emphasis on

centralized exchange and redistribution, heightened the use of scent as a source for economic and political power, which was driven by, maintained, and legitimized through its ideological value. Up until now, however, the evidence reviewed here has been thoroughly biased toward examining the interactions of Egypt with its *northern* contemporaries. Let us turn to why this is so.

Expeditions to Punt have been well discussed in Egyptological literature (e.g., Bard and Fattovich 2018; Glenister, 2008; Bradbury, 1996; Fattovich, 1991). The complexity, size, and organization has all been thoroughly recorded and analyzed, from identifying the exact location and products of this land, to reconstructing the land and sea routes, to defining its ideological significance (e.g., Creasman, 2014; Tallet and Majfouz, 2012). The scented materials native to the regions south of Egypt, namely the plateaus of Somalia, Ethiopia, Oman and Yemen, and highly prized by the ancient Egyptians included *ḥntyw* “myrrh” and *sntr* “frankincense(?)” (Diego Espinel. 2017; Incordino, 2017). The exact identification of these terms likely fluctuated between indicating exact products and being more general terms for scented, resins. References to aromata in the context of these expeditions are related to seeking to please the gods or to perform other rituals (Aufrère, 2005).

Given the focus of this analysis has been on identifying the widespread access and use of aromata in ancient Egypt during the New Kingdom, these state-led ventures to collect these highly regulated resins has been set aside. The chemical analyses of aromatic remains in the contexts discussed in this paper, on the other hand, have identified the genus *Pistacia* repeatedly. This material has cropped up again and again as incense burned in small bowls throughout the site at Amarna, on the Uluburun shipwreck, as part of burial assemblages, and in the amphora imported from the Levant studied by Bourriau and Serpico (Fulcher *et al.*, 2021; Den Doncker

and Tavier, 2018; Serpico and White, 2000c; Stern *et al.*, 2003; Serpico, 2004). I would like to suggest that while the southern aromata like myrrh was a controlled substance restricted by the state and highly desirable for ritual contexts, Pistacia resins were a mid-range good, accessible to those with a small amount of surplus wealth. It is likely, too, that even the poorest of the ancient Egyptians had some access to good smelling materials. For example, strewing herbs such as cypress fronds and blue water lilies would have been easily accessible. This observation of varying qualities of aromata, further substantiated by the fact that religious texts sometimes add additional qualifiers such as *ḥꜣtt* “best” to the names of scented oils, demonstrates how important scent was to all levels of ancient Egyptian society.

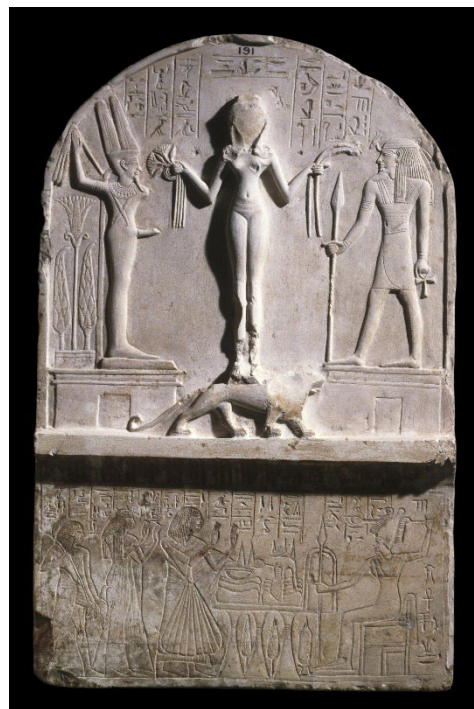


FIGURE 5-2. LIMESTONE STELA OF QEH DEPICTING QADESH FLANKED BY MIN AND RESHEP, 19TH DYNASTY, BM EA 191. THE IMAGE IS RELEASED UNDER A CREATIVE COMMONS ATTRIBUTION-NONCOMMERCIAL-SHAREALIKE 4.0 INTERNATIONAL (CC BY-NC-SA 4.0) LICENSE. © THE TRUSTEES OF THE BRITISH MUSEUM.

And so, just how important was scent? How accessible was it? Evidence suggests that it is a highly transferable staple good. It is part of a vocabulary that translates across contexts and

participates in social negotiations as a shared language. Consider the stela of the foreman Qeh found at Deir el Medina (BM EA 191; KRI III, p. 603). The lunette shows a striking dedication to the blending of Egyptian and Asiatic traditions. To the right of the image, Reshep, an Asiatic god, receives a Cypress bulb(?) to his nose from a Hathoric goddess (Qadesh-Astarte) standing atop a lion. To the left, the ithyphallic Egyptian god Min receives the scent of a bouquet of blue water lilies. Below the lunette, Anat, another Asiatic divinity, receives prostrations and offerings from Qeh and his wife, among which is included a large incense cone. Anat, herself, is dressed in a tight-fitting Egyptian sheath dress, though her posture is unusual by Egyptian standards for a female goddess; she raises a mace above her head and holds a spear before herself.

This Egyptian artifact incorporates foreign styles into its repertoire seamlessly, invoking the idea of BREATH-AS-LIFE for both the Egyptian and non-Egyptian deities. Perhaps because of its foundation in biology, the value of scent and its connection to life was a shared ideology among the peoples of the eastern Mediterranean. The nuances of this observation, however, are varied and deserve attention in future research. Suffice it to say here, relationships were built upon scent not only within Egypt's ancient borders, but across them. Its value was highly transferable.

Regionality, too, lent certain scents a level of desirability that required an exchange across borders, whether it was forced or willing, tribute or booty. The Canaanite Amphora Project directed by J. Bourriau and M. Serpico has been particularly interesting—demonstrating the relationship of ceramic fabric to geographic origin and, by extension, to the transport of raw, scented materials. For example, one fabric type of the amphora excavated at Amarna (group 1) demonstrates a close link with a specific area in the Jezreel Valley. Serpico and her team conducted GC/MS on several organic samples found within these amphora and they were

ultimately able to associate a particular organic material (Pistacia resin) with this trade route and ceramic fabric (Stern *et al.*, 2000; Stern *et al.*, 2003; Serpico *et al.*, 2003; Smith *et al.*, 2004). The implications of these studies are significant as they indicate from where the ancient Egyptians imported these products, as well as providing the basis for future studies on their quantities and values (Serpico, 2003). This study demonstrates that, in contrast to the generality of their scent terms, specific products from specific regions were considered desirable. These aromas were actively sought out, as this study and the expeditions to Punt demonstrate.

It is in the potentiality of scent that its power lies. As Michael Mann writes, “We require concepts and categories of *meaning* imposed upon sense perceptions.” He goes on to state that social life is organized around this information and that the shared social norms, based in these ideologies, is what results in “sustained social cooperation.” Therefore, “to monopolize norms is thus a route to power” (2012, p. 22). It is ideologies that provide meaning or *value* to our sensory experiences. Because of this, it is difficult to argue with these established norms as they require interrupting one’s beliefs. Scents cannot be reused; their effect is often fleeting or else needs to be resupplied and so emphasis must be placed on its quantity. Given the equivalence of scent with life in ancient Egyptian ideology, to control access to it provides great power. Beyond this suggestion, scent must be spent for it to function as social capital. Storing such rare scents in temples, keeping it out of circulation, limits the number of people at the top of the hierarchy; it restricts who is able to stockpile power. Scent thus becomes a social separator, establishing us and them not just the rich from the poor but the elite from one another.

Scent was used similarly during the American Civil War era in the US to define classes of people, a practice that continues to today if one keeps their nose to the news. Negative scents were not only applied to slave populations to dehumanize them but also to immigrants, to

Catholics, to anyone other than the dominant group (Le Gu erer, 2001; Smith, 2006, 2015, 2019). By establishing such groups as ‘other’ through their scent, these divisions became accepted as *natural* or *inevitable*.

In ancient Egypt, scent was used similarly to propagandize particular perspectives. The *sm3-t3wy* symbol is a clear example of this. The *sm3-t3wy*, “the unification of the two lands” is often used in royal images. It shows the god of the Nile, Hapy tying a water lily stem and papyrus stalk around the hieroglyphic symbol of a lung, *sm3*. This emblem of propaganda is layered with puns: the two lands (Upper and Lower Egypt) are physically tied together through their representative symbols (the southern lily, the northern papyrus) by the living manifestation of the river Nile (Hapy) around the hieroglyph that means “to unite.” It is also presumably through these plants that the lung is given breath, and so, life. Thus this “masterpiece of marketing” (Price, 2023) effectively praises the centralization of power as the way of making Egypt live.

As explored in another publication (Price, 2023), the symbolism of scent becomes a fluid representation of life, abundance, prosperity, and divine favor as time goes on. Even today, the blue water lily continues to be used in Egyptianizing architecture such as the Luxor Hotel in Las Vegas. While perhaps the fragrance has lost dominance and has been replaced instead by its visual form, it once was specifically the scent of these flowers that inspired life—physically, spiritually, and socially.

Scent is immediate and affective, it represents closeness of both your desires and your gods, it communicates stability and support from outside sources whether friendship or state supplies, its uses are multi-vocalic, multifunctional, and multivalent. It makes special moments

memorable, material goods viable and effective, lovers wistful, gods appeased, food delicious,
and light warm.

6 CONCLUSION

...beyond the limits of academic research is a whole range of lost experiences: the smokiness of house interiors in the winter, mingling with the smell of incense and at different times in the year, of lily blossoms, in turn competing with the pungent smells of human waste. The experience of night when the city was hardly ever fully dark, but lay faintly visible in shades of silver-grey from the light of the stars in a clear sky, but never silent, for night was the time of barking dogs, sometimes those on the city fringes developing an unearthly dialogue with the jackals and hyenas of the desert...Although archaeology can only deal with the material debris of life, we should not forget that the places we study were once lived in by real people (Kemp, 2012, p. 195).

The senses are located at a unique cross-roads between the biological and the cultural. They are neither fully determined by biological processes nor are they entirely constructed by culture. While the mechanisms that create sensory experience are stimulated by environmental phenomena, it is the judgments or values we place on those experiences which dictate our behaviors and beliefs. The values we ascribe to particular experiences are built from comparisons with our memories and cultural lessons and thus provide invaluable insights into societal-level, organizational processes.

This study has focused on the trans-corporeal experience of scent. I have not sought to identify specifically the discrete categories of how scent was valued, but rather their shared meanings observable across contexts. While I have listed scent's values as discrete categories (SCENT=LIFE; SCENT=IDENTITY; SCENT=PRESENCE), I have done this in order to facilitate summary understanding of my analyses. None of these valuations operate in isolation but rather are intertwined and overlapping. Because writing is linear, it has been necessary to approach these categories in sequence. I have, however, sought to explain their interconnectedness through examples and repetition throughout the previous chapters.

Descartes' theories on the power and truth of rationality and logic contributed to how the West tends toward more cognitive models, where the center of thought and emotion, that is, our

ego, is in our minds. But this was not so for the ancient Egyptians, who had a more tangible, physical understanding of the body's place in the world. The ancient Egyptian conception of the senses was different from more cognitive models. The mind was not at the center of the person, but rather it was the heart. The heart even had two aspects to it, the center of emotion, where desire and wishing was centered, and the actual organ itself (Nyord, 2009a). And both played an important role in understanding the sensory system by which the ancient Egyptians grew their civilization.

While it is important to examine all the senses in this way, I have focused on scent. Scents have the ability to reveal the invisible. While much of the world is defined by what we can see, scent provides access to that which is beyond our vision. The ancient Egyptians operated under the assumption that, as with scent, the invisibility of the gods could be experienced though not visibly observed. It was, in fact, their scent that revealed them and their nature, namely their social status, morality, and/or geographic home.

My approach to this investigation has studied scent as part of a continuum of processes, wherein scent is constantly renegotiated in connection with the processes of life. Just as the hammer functions as part of the ongoing work required to build, scent rarely exists as equipment, i.e., as something considered directly outside of its ongoing cultural context. By investigating scent in the readiness-to-hand mode, it is possible for the researcher to examine how sensory experience contributed to a society's organizational patterning. I was not seeking to study scent as an object, but as a process, not as a discrete category but as part of a spectrum of experience.

In Chapter 2, I provided an overview of the theoretical assumptions of this research. In it, I contextualized this study within the greater trends of sensory-based humanistic research and sought to bring into dialogue the many jargon terms that crop up in this research, like

“Phenomenology” and “New Materialism.” Chapters 3 through 5 are built out of these assumptions and each took one of my original research questions as a starting place.

Chapter 3 addressed how taking on the divine scent in death, whether through mummification or other rites, equipped the deceased with a divine identity. By adopting this form of divinity, the deceased was able to transition into the afterlife and be accepted among the gods, “as one belonging among them” (Book of the Dead Spell 125). In the same way that the smoke of incense transitions from being visible to invisible, so too must the person’s Ka—such that they “might rise on the smoke of a great censuring” (Allen, 2005b, p. 48, W174).

Thus, the ancient Egyptians related smelling something to the physical presence of another being. For this reason, the depiction of scented imagery in tomb scenes, such as unguent, incense, oils, and flowers, functioned as an artistic marker for divine presence. The absence of these markers in scenes of production likewise is significant—identifying moments in which the presence of the gods was unnecessary or not yet achieved.

Additionally, scenting spaces is often associated with purification. By filling up a space with divine scents, the space is made suitable for the gods, manifesting their presence by filling the space with their scent. For the ancient Egyptians, scent was a tangible experience that had physical consequences in the world beyond the simple excitation of our nasal passages. Rather than emphasizing solely the cognitive effects of scent on memory or emotion, to smell was also a physical assurance of life and a way of identifying presence and identity.

From mummification practices and burials assemblages to temple rituals and literary texts, scent figures prominently as not only a marker of moral identity, but as the invisible communicator of life and of physical presence. These ideological values applied to scent are referenced across social contexts: in rituals, medical treatises, love poetry, and literary and

didactic texts. Such a unifying expression of value applied to experience dissolves the boundaries between categories like “religious”/“mundane” or “economic”/“political.” SMELL=LIFE and SMELL=IDENTITY were cultural memes made desirable by their connection to the divine and powerful.

Scent, likewise, was valued for the way it communicated distance i.e., SMELL=PRESENCE. Whether it was leaning close to identify an illness, describing a longing to be near a lover, or describing love for your native city, to smell something was to describe its nearness to you. We can return to the example of Hatshepsut’s divine birth scene, where Ahmosi is awakened by the scent of Amun as he approached her. However, it is not just the nearness of the fragrance that is mentioned here, but the fact that Ahmosi recognizes Amun by his scent despite his disguise as her husband. Furthermore, the third element of scent’s value is also invoked in this scene wherein Hatshepsut is conceived in the moment that Amun’s scent floods the room. These three intertwined values of scent served as a cultural meme on which ancient Egyptian society was organized: distance, identity, life.

Chapter 4 substantiated the arguments made in Chapter 3 by examining how these social values of scent present in the ideologies of the ancient Egyptians manifested in the physical world. Here I studied scented materials and how their production and use defined and maintained relationships. Social and economic values were built up around these three cultural memes and so scent became a social currency. Increased demand required access and so ensured industry support. But there was a spectrum of quality and access—from native flowers to imported, royal perfumes—that contributed to the creation and maintenance of a strict social hierarchy.

Writing of his book *The Anatomy of Civilization* (1993), Kemp explains that “The nature of the ancient Egyptian state and its wealth of devices—myth, symbol, and institution—to

manipulate the minds and direct the lives of its people are at the centre of this book" (Kemp, 1993, p. 7). The narratives a society tells about itself and the institutions designed to maintain them, however, are not the only tools of power a state can wield. Consider for a moment the recent (6/24/2022) overturning of *Roe v. Wade* which effectively rescinded the federal right of women to control their own bodies' reproductive capabilities in the United States of America. While state propaganda and nationalist agendas certainly have the possibility of manipulating the minds and directing the lives of a society—consider, for example, the clashes between white supremacists and the Black Lives Matter movement during the COVID-19 pandemic—institutional processes can likewise influence the way people view and use their bodies.

It was in Chapter 5 that I took on investigating the large scale impacts of this scent industry and how the social values attributed to scent contributed to the organization of major economic and political processes. Early in ancient Egyptian history, sweet scents of foreign origin were valued by the highest of the elites. Restricting access and limiting distribution would have been a simpler undertaking of these specialized scents as such products were expensive and only accessible through long-distance trade. This norm continued on for thousands of years in which such products were highly valued in elite and religious contexts, for the scent of the divine came from God's land, and to ensure their presence you must fill a space with the gods' scents.

Material goods, however, can only retain their value as long as they are not completely unattainable. Thus, much of the population in ancient Egypt was permitted to participate in a social competition centered around scent as local products like papyrus and blue water lily were more easily attainable than Pistacia resin or myrrh. This is manifested in the emphasis on the general experience of pleasant scents in the written record rather than on specific recipes or ingredients. Additionally, fine scents and linens could be gifted by the state. The highest of the

elite maintained their power in this way, namely by inviting more people to participate in this social negotiation while restricting access to the highest qualities and largest quantities.

For the ancient Egyptians, the world was experienced through their bodies. To smell was not just something that communicated a particular experience to our minds that we could choose to ignore, but was a physical assault on the body by external forces. It was a physical engagement with the environment that alters the body in some form. Scent was, in essence, a tangible thing. It could be seen as well as experienced. It could manifest in human form, as a divine being, and as life itself. It could be given, offered, and taken away. Life was immediate and affective rather than the sole creation of the mind. Rather than seeing scent as distracting and something to subtract from the environment, it was actively sought out. Spaces were not desensitized to make them hygienic, but were rather purified with scent.

Despite personal differences and individual beliefs, societies are built upon shared conceptions through the creation, maintenance, and reification of the beliefs of the powerful. All societies are constructed around basic assumptions that establish and are established by social norms. These narratives get created and upheld through tradition and repetition. The material remains of these norms are what is left to the archaeologist for study, though we must do so by means of our own enculturated attitudes. Thus, to understand the foundational conception of the body and its means of integrating and interacting with the world is a necessity if we seek to interpret the legacy of any culture.

7 APPENDIX A: KYPHI RECIPE INGREDIENT LISTS

*Note, in the following tables, that the horizontal rows listing ingredients are ordered by whether they are also present in the other listed recipes. For example, raisins are present in all three recipes whereas juniper berries are present only in two, and bitumen of Judea in one.

TABLE 7-1. INGREDIENT LISTS OF ANCIENT GREEK AND ROMAN KYPHI RECIPES.

| Classical Author | Diocorides | Galen, quoting Damocrates | Plutarch |
|------------------|----------------------------------|---------------------------|-----------------------------------|
| Date | 1st c. CE | 1st c. CE | 3rd c. BCE |
| Source | <i>De materia medica, I, 24.</i> | <i>On Antidotes, 2.2</i> | <i>Is. and Osir., ch 80, 383e</i> |
| Ingredients: | raisins | raisins | raisin |
| | honey | honey | honey |
| | wine | wine | wine |
| | aspalathos | aspalathos | aspalathos |
| | sweet flag | sweet flag | sweet flag |
| | resin | resin | resin |
| | cyperus grass | cyperus grass | cyperus grass |
| | camel grass | camel grass | |
| | myrrh | | myrrh |
| | juniper berries | | juniper berries |
| | | cardamom | cardamom |
| | | | bitumen of Judaea |
| | | | seseli |
| | | | rush |
| | | | mastic |
| | | | sorrel |
| | | | lanathos |
| | | cassia | |
| | | spikenard | |
| | | saffron | |
| | | nails' of bdellium | |

TABLE 7-2. INGREDIENT LISTS OF ANCIENT EGYPTIAN KYPHI RECIPES

| Texts: | P. Ebers | P. Harris | CG25677 | CG 25678 | Edfu and Philae ("traditional") | Edfu ("alternative") | Bowl Dockets | Possible Translations |
|--------------------|------------------------------|--|-------------------------------------|--------------------------------------|---------------------------------|------------------------|--------------------------|--|
| Date | Dyn 18 | Dyn 20 | Dyn 19, late | Dyn 19, late | Ptolemaic | Ptolemaic | Early Ptolemaic | |
| Citation | P. Ebers 98, 12–14b (Eb 852) | P. Harris I, 15b, 16–16a,5; 53a, 3–9; 64c, 4–9 | Černý 1935 I.1, 57–58; I.2 pl. LXXV | Černý 1935 I.1, 78–79; I.2 pl. LXXVI | Chassinat (1990), 203f | Chassinat (1990), 211f | Raven and Demarée (2005) | Following Manniche (1999) and Lüchtrath (1999) |
| Ingredients | <i>gmn n nywbn</i> | | <i>knnj</i> | | <i>knn</i> | <i>sb.t ndm</i> | <i>gmn h3rw / nnjbr</i> | styrax |
| | <i>nbj.t n.t d3hy</i> | <i>šr.t h3rw</i> | <i>pr.t h3rw</i> | <i>prrt h3rw</i> | <i>šw.t Nmtj</i> | <i>km3 kš</i> | <i>šw.t Nmtj / km3</i> | sweet flag |
| | <i>šb.t</i> | | | | <i>šb</i> | <i>fd</i> | | an aromatic plant (<i>Wb</i> IV, 438.6–7) |
| | | <i>kd.t</i> | | <i>h.t n kd.t 3.t</i> | <i>dd3 n kdt</i> | <i>h.t n kd.t</i> | <i>ht n kdt</i> | pine resin |
| | <i>ht n tj-šps</i> | <i>tj-šps; knn.j tj-šps</i> | <i>h.t n tj-šps</i> | <i>knnj tj-šps</i> | <i>tj-šps</i> | <i>h.t ndm</i> | <i>ht n tj-šps</i> | cinnamon camphora |
| | | <i>jwfyt</i> | | <i>jwftj3t</i> | | | <i>jwft</i> | Pistacia lentiscus |
| | | <i>nkpt</i> | | | <i>3gzy</i> | <i>nkpt</i> | <i>nkpt</i> | mint or tragacanth resin |
| | | | | | <i>db3</i> | <i>d3rm</i> | <i>d3rm</i> | aspalathos or burgundy-pitch |
| | | | | | <i>prš</i> | <i>pr.t w3n</i> | | w3n-berries (juniper: <i>Wb</i> I, 285.16–286.5) |
| | <i>prrt šnj</i> | | | <i>pr.t šnj 3.t</i> | <i>mrht n3r</i> | <i>pr.t šnj</i> | <i>pr.t šnj</i> | juniper berries |
| | | | | | <i>pk3r</i> | | <i>pgyr</i> | galbanum |
| | <i>gjw</i> | | | | <i>šbn, gzyw n wh3t</i> | | <i>gzyw</i> | cyperus grass/sedge roots |
| | <i>ynktwnn</i> | | | | | | | an ingredient (resin?) in incense (<i>Wb</i> I, 101.15) |
| | <i>dmtn</i> | | | | | | | an ingredient in incense (<i>Wb</i> V, 574.14) |
| | <i>3ntyw</i> | | | | | | | myrrh (<i>Wb</i> I, 206.7–207.3) |
| | <i>sn3r</i> | | | | | | | incense (<i>Wb</i> IV, 180.18–181.17) |

APPENDIX B: SPREADSHEET OF SCENT-RELATED OSTRACA 8

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|--|----------------------------|--------------------------|---|-----------|-------|
| O. Ashmolean Museum 0005 | Letter instructing the guardian <i>Hꜣy</i> to buy an ox for the goddess <i>Mr=s-gr</i> , and not to indulge in using other people's fat. | fat | Dyn 20, RIV or RV | Černý-Gardiner, Hieratic Ostraca, 6 and pl. 18–18A no. 1. | limestone | |
| O. Ashmolean Museum 0174 | Journal recording illnesses of two workmen. Reverse mentions fat. | fat | Dyn 19, Amenmes se | Helck, Die datierten und datierbaren Ostraka, 115. Černý, Notebook, 45.77. | limestone | |
| O. Ashmolean Museum 0186 | Mention of several workmen and possibly a payment, incense, a hut and a woman sleeping there, and also of the prince and womanizer <i>Mḥ.y</i> , so possibly an event in the context of adultery or part of this text is literary (love poetry). | incense; love poetry | Dyn 20 | Unpublished; Černý Notebook 45.88 and 107.21. | pottery | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|--|--------------|---------------------|--|-----------|-------|
| O. Ashmolean Museum 0188 | Obverse: letter, i.a. mentioning the gang, grain rations, incense and the taking of vessels to the mountain by the scribe <i>Hr</i> , as well as a remark by the sender (?) that he has not been acting as a stupid person. The reverse, which may be connected, mentions the arrival of an army officer, the <i>sr.w</i> and the gang, a chapel (?) and <i>T3-šri</i> . | incense | Dyn 20, RIII or RIV | Unpublished; Černý Notebook 45.90. | limestone | |
| O. Ashmolean Museum 0264 + O. Cochrane | List of an anonymous woman's property, including a statement by the woman's father concerning work, <i>b3k.w</i> . A specified transfer by the father concludes the list. | fat | Dyn 20 | O. Cochrane: Gardiner, in: Griffith, JEA 3 (1916) 194–195; O. Ashmolean Museum 0264 unpublished + O. Cochrane: Černý Notebook 31.67. | | |
| O. Ashmolean Museum 0266 | Several persons mentioned in connection with hins of gum. | gum | unknown | Unpublished; Černý Notebook 31.69. | limestone | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|-------------------------------------|--------------------|---|----------------------|---|
| O. Berlin P 10610 | A delivery of incense and bread with noted deficits. | incense | Dyn 19, first half | Hieratische Papyrus Berlin III, Leipzig 1911, pls. XXXVIII, XXXVIIIa. | pottery | |
| O. Berlin P 10631 | A note of the event of the coming in <i>ḥsmn</i> (menstruation) of <i>Ḥnw.t-wꜥ.ti</i> and goods given in association with this. Some items are also given "to him." The text may be classified as a "gift-giving" text. ` | flowers; incense; <i>sntr</i> ; oil | Dyn 20 | <i>Hieratische Papyrus Berlin III</i> , pls. XXXVI, XXXVIa. | pottery | Gift giving on an occasion; <i>sntr</i> line 9. |
| O. Berlin P 10643 | Record of several items, listed with their values, given to <i>ʿImn-ms</i> by <i>ʿImn-m-ʿIp.t</i> , the father of the author of this document. Might suggest 1 <i>hin</i> of <i>nḥḥ</i> is given in exchange for a <i>dꜣjw</i> garment. | fat; oil; <i>nḥḥ</i> | Dyn 20, RIV | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment_e.php?id=154 | pottery (light grey) | <i>nḥḥ</i> is only referred to by 1 <i>hin</i> . |
| O Berlin P 10637 | Beginning of giving him a list of the food he took for the pillar of "doing good": bread, grain, vessels, veggies, meat, fish. Furthermore: given when | sgnn | Dyn 20, RIII | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/frag | limestone | Two sided: connection unclear but probably seems to just continue on backside. Beginning of giving him a list of the food he took for the |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|---|--------------|------------------|--|-----------|---|
| | he was sitting in his lobby: bread, meat, veggies. Furthermore: give him on the day of the festival when he was sitting in his resting place: bread, veggies, fish, vessel | | | ment_e.php?id=153 | | pillar of "doing good": bread, grain, vessels, veggies, meat, fish. Furthermore: given when he was sitting in his lobby: bread, meat, veggies. Furthermore: give him on the day of the festival when he was sitting in his resting place: bread, veggies, fish, vessel. |
| O. Berlin P 10664 | Letter by the scribe <i>R^c-ms</i> to the god's father <i>Imn-htp</i> of the Ramesseum, asking for certain commodities to be brought. | fat(?) | Dyn 19, RII | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment_e.php?id=194 | limestone | |
| O. Berlin P 12406 | Record of commodities given by <i>Wsh-nmt.t</i> to his father-in-law on the occasion of his 'wedding' with his daughter, and on other occasions (feasts). On reverse: followed by a record of commodities | fat | Dyn 20, RIV - RV | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment_e.php?id=300 | limestone | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|---|---|-----------------|--------------|---|-------------------------|---|
| | given 'to him' by <i>Nb-Imn</i> on the occasion of his promotion (? <i>ts</i>). | | | | | |
| O. Berlin P 12625 | Delivery and apportioning of commodities; duty roster. | flowers | Dyn 20, RIII | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment_e.php?id=303 | pottery (reddish brown) | |
| O. Berlin P 12628 + O. Berlin P 12641 | Deliveries of various commodities, including the work (<i>b3k. w</i>) of the potter); duty roster | flowers | Dyn 20, RIV | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment_e.php?id=306 | pottery (brown) | |
| O. Berlin P 12631 | Watchlist with notes on the delivery of food and wood, as well as the negotiation of rations and an extra allocation Day 12: Neferhotep brought from the city: Fat: <i>mn.t</i> -Jars: 2, makes 78 jars | <i>ḥd</i> ; fat | Dyn 20, RIV | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=309 | pottery (reddish brown) | A list of daily happenings: this one includes receiving various goods but random workers. Interesting that the fat comes from the city <i>m njw.t</i> . |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|--------------|------------------|---|------------------|---|
| O. Berlin P 12633 + O. DeM 00169 | Guard duties; deliveries of beer, vegetables, fish, dates, bread, pottery, wood, flowers. | flowers | Dyn 20, RIII | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=311 | pottery (yellow) | |
| O. Berlin P 12635 | List of food and beverages, which were issued on certain festive occasions by the author of the text to his daughter and other persons. | 𐤀; fat | Dyn 20, RIV | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=313 | limestone | "I gave 1 <i>hin</i> of fat and 1 <i>d3d3.w</i> " |
| O. Berlin P 12406 | Notification of the delivery of the bride allowance by a son to his father-in-law on the occasion of his marriage, as well as other groceries for special occasions, such as holidays and a request(?). | 𐤀; fat | Dyn 20, RIV - RV | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=300 | limestone | Fat included in bride price; goods all seem related to food. |
| O. Berlin P 01268 reverse | Billing / listing of the delivery of wood and various items, including a bull, with a total of 120 <i>deben</i> . Includes 1 jar of fat for 10 <i>deben</i> , a <i>dAiw</i> | 𐤀; fat | Dyn 20, RIII | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=177 | limestone | Both sides of ostracaon represent a settlement via two barter transactions in which the same people were probably involved. |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|--|-----------------------|-----------------|---|---------------------------|--|
| | garment for 25 <i>deben</i> , among firewood, and beds. | | | | | Record of the transfer of certain commodities by the workman <i>Qn</i> to the carpenter <i>Qd-ih.t=f</i> and workman <i>Tz</i> , as payment for some products. |
| O. Berlin P 10665 | Record of the transfer of certain commodities by the workman <i>Kn</i> to the carpenter <i>Kd-ih.t=f</i> and workman <i>Tz</i> , as payment for some products. | <i>nḥḥ</i> ; olive | Dyn 20, late | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=164 | limestone | |
| O. Berlin P 11259 | List of prices: fresh fat (<i>ḥd wzd</i>)=30 <i>deben</i> , <i>dḥj</i> garment=25 <i>deben</i> , <i>d3jw</i> garment=22 <i>deben</i> ; <i>sdj.t</i> garment=10 <i>deben</i> ; basket=4 <i>deben</i> . Other side: sandals, 2 pairs=4 <i>deben</i> ; skin=5 <i>deben</i> . Total 100 <i>deben</i> . | <i>ḥd</i> ; fat | Dyn 20 | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=170 | pottery (yellowish brown) | Most expensive item is fat, but all items are quite expensive (mostly garments being included). |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|--|-------------------------|-------------------|---|---------------------|--|
| O. Berlin P 12654 | Verso: Paser being acquitted and Nb- <i>nfr</i> being punished with stone breaking. Recto: Vizier cutting workforce to 60, registering them all, giving <i>mrht</i> oil to 62 men and women, then later is brought two silver chisels. Online description: Collective report on various events, including a court hearing, the registration of the team, and the delivery or possibly confiscation of oil. The most important point is an instruction issued by the vizier to reduce the team to 60 men. | <i>mrht</i> ; oil; fat; | Dyn 20, RV or RVI | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=326 | limestone | Unsure if oil is being confiscated or given in compensation for reduction of labor. See Janssen, <i>Gleaning</i> , DeM 140. Word is <i>jt3</i> "to take" |
| Qurna 655/3 | Fragment of a jar label for olive oil, <i>nḥḥ</i> | <i>nḥḥ</i> ; olive | Ramesside | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=88 | pottery (yellowish) | Amphora fragment, not listed if import or not. |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|---|---|-----------|---|---------------------------|--|
| Qurna 645/4 | Probably a jar label; reads $(n)h\dot{h} n p\dot{z}$, "olive oil." | $n\dot{h}\dot{h}$; olive | Ramesside | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=39 | pottery (yellowish red) | Pottery is imported. Canaanite transport vessel. |
| Qurna 619/5 | Jar label for $n\dot{h}\dot{h}$ -oil from \underline{dt} (olives). $n\dot{h}\dot{h}$ not actually legible, only \underline{dt} . Olive oil from the large olive tree plantation of the House of the Millions of Years of the King of Upper and Lower Egypt in the Temple of Amun, which lies on the banks of $K\dot{z}$. | \underline{dt} ; $n\dot{h}\dot{h}$; olive | Ramesside | Deir el Medine online, https://dem-online.gwi.uni-muenchen.de/fragment.php?id=94 | pottery (yellowish red) | Jar label. Importing olive oil from the king's $h\dot{w}.t$ of $h\dot{h}$ millions of years |
| Qurna 621/1 | Jar label of olive oil with pot determinative $n h\dot{w}.t r^c$ (in a cartouche) | \underline{dt} ; olive | Dyn 20 | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=21 | pottery (yellowish-brown) | "Olive trees of the residence" suggests the state is cultivating them. Seems to be a pattern of olive-related goods coming from the center. Evidence of restricted access. |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|---|-------------------|---------|---|-----------------|--|
| O. Berlin P 14130 | Note about incense (?) for someone | incense | unknown | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment_e.php?id=333 | pottery (brown) | |
| O. Berlin P 14365 | Account of payment to an anonymous man by <i>Wsr-ḥst</i> for making a bed for him. Commodities as payment include a basket, a goat, and 5 <i>deben</i> of something else. Seller(?) gives "him" <i>hin</i> of <i>mrḥt</i> -oil. | <i>mrḥt</i> ; oil | Dyn 20 | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment_e.php?id=389 | limestone | Third line reads "I gave him 1 <i>hin</i> of <i>mrḥt</i> ." <i>this line</i> looks different and is offset from first two lines. Perhaps buyer overpaid by 1 <i>hin</i> . Database notes read: "List of the items and food that the worker Weser-xA.t paid for the manufacture of a bed. See also Berlin 14262 and 14357 which belong in the same context. This text represents the situation from the point of view of the seller (<i>M^c-nḥt</i> , see the other texts)." |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|--|--------------------------|--------------|---|-------------------------|--|
| O. Berlin P 14679 | Jar label for <i>nḥḥ</i> -oil | <i>nḥḥ</i> ; olive | unknown | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=436 | pottery | <i>nḥḥ n</i> : probably like other labels that read "oil of the enclosure." Second line mentions a <i>jdḥw</i> ("deputy") <i>jmn m ḥst</i> . |
| O. Berlin P 14616 | Fragmentary account of deliveries(?); flowers(?) mentioned | flowers | unknown | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment_e.php?id=400 | pottery (reddish brown) | |
| O. Berlin P 12625 | Watchlist. Mentions 300 <i>ḥrr.t</i> (flowers) distributed to the <i>t3 js.t</i> (workmen) | flowers; <i>ḥrr.t</i> | Dyn 20, RIII | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=303 | pottery (reddish brown) | |
| O Berlin P 14232 | Cannot be deciphered, database suggests literary text. First line includes "lotus" | <i>sšn</i> ; lotus | unknown | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment_e.php?id=357 | limestone | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|---|--------------------|--------------|---|-----------|---|
| O Berlin P 23401 | Renumeration list for two different people. First (lines 1–4) includes goods mainly foodstuffs (herbs, fruit, barley, oil) and references 2 <i>hin</i> of <i>mrḥt</i> for an arrow shaft of christ's torn(?). Second seems to be a list of goods (simiar but including a wooden bed) as payment (to make up his money) (lines 5–8). | <i>mrḥt</i> ; oil | Dyn 20 | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=484 | limestone | |
| O Berlin P 10635 | Probably a letter or message. The sender feels cheated because of a corrupt delivery and requests that the exchange of goods be canceled. | <i>s3.t</i> ; oil | Dyn 19, late | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=191 | limestone | Mentions <i>s3.t</i> -oil of Upper Egypt as something that was <i>sfh</i> (spoiled) along with some barley that the sender was upset about. |
| O Berlin P 14677 | Vessel label 30 <i>hin mrḥt</i> | <i>mrḥt</i> ; oil; | Dyn 19 | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=435 | pottery | 5 pointed star on image of ostracon. <i>mrḥt</i> is restored (probably because "hin" is clear). |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|--|----------------------------|-------------|---|-------------------|--|
| O Berlin P 14254 | Bill for delivery of various goods, mostly bread and liquids, <i>sntr</i> mentioned, no prices. | incense; <i>sntr</i> | Dyn 19, RII | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=238 | limestone | Incense listed among other simple daily items. |
| O. Berlin P 14659 | A list of items, including incense, faience, and fish, followed by numbers. Next, some commodities like a basket which are destined for(?) <i>Nb-w^c</i> (?) and a pair of shoes, a mat, and another item for(?) <i>T3-gmy.t</i> . Possibly lower part of O. Berlin P 14632. | incense; <i>sntr</i> | unknown | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=424 | pottery (brown) | Incense listed among other simple daily items. |
| O Berlin P 14213 | Delivery of pig fat vessel label. | <i>mrht</i> ; oil; fat; | Dyn 19, S1 | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=228 | pottery | According to the notes in DeM online: This is the only reference to <i>mrht</i> in connection with pigs. |
| O DeM 115 | Wab-priest Kynebi asks Qenymin to send one <i>hin</i> of oil for a feast of <i>p3 ntr jmj in.tw w^c hnw n sfft n hb ...</i> | <i>sft</i> ; festival; oil | Dyn 20 | Černý, Ostraca Deir El Medineh II, 1, pls. 2 and 2A; Kitchen, Ramesside Inscriptions VI, 448. | pottery (greyish) | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|--|-----------------------|------------|--|-----------|---------------------|
| | <i>p3 ntr</i> (Jauhiainen, <i>Feasts</i> , p. 299) | | | | | |
| O. Berlin P 14841 | Letter by anonymous sender to <i>Hꜣy</i> asking for some goose fat to be brought because someone (the cat?) has eaten what he (the sender) had brought. | aD; fat (for cooking) | unknown | Deir el Medine online, URL: https://dem-online.gwi.uni-muenchen.de/fragment.php?id=456 | limestone | |
| O. BM EA 65931 | Obverse: division of cattle; Reverse: several unguents held by <i>Hr-m-wi3</i> in the right side of the gang. | unguent ; oil; fat | Dyn 19 | Černý-Gardiner, <i>Hieratic Ostraca</i> , 17 and pl. 57–57A no. 3; Demaree, <i>Ramesside Ostraca</i> , 41 and pl. 175–176. | limestone | HO 57; O Nash 15 |
| O. BM EA 65937 | Letter containing list of what has been delivered to the addressee (called 'you') by the chief policemen <i>Mntw-m-ḥb</i> in amounts of plants / vegetables and incense. | incense | Dyn 19, S1 | Černý-Gardiner, <i>Hieratic Ostraca</i> , 16 and pl. 55–55A no. 3; Kitchen, <i>Ramesside Inscriptions</i> I, 369; Kitchen, <i>Ramesside Inscriptions. Translations</i> I, 305; | limestone | HO 55, 3; O Nash 07 |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|---|--------------|--|-----------|--|
| | | | | Demaree, <i>Ramesside Ostraca</i> , 42 and pl. 185–186. | | |
| O. Brussels E 303 | List of items given to the carpenter <i>Qny-Mnw</i> as payment for a box(?), and for the making of a statue. | flowers | Dyn 20, RIII | Kitchen, <i>Ramesside Inscriptions</i> VII, 290; Helck, <i>Die datierten und datierbaren Ostraka</i> , 2 48. | limestone | |
| O. Cairo CG 25241 | An account of amounts of stone used for the construction of a colonnade temple court (?; <i>p3 wh3 n p3 wb3</i>) and a garden, as well as some deliveries of grain(?). | garden | Dyn 19, S1 | Kitchen, <i>Ramesside Inscriptions</i> VII, 7. | limestone | |
| O. Cairo CG 25246 | A list of deliveries of bread(?), fish, gum, and lapis lazuli. | gum | unknown | Daressy, <i>Ostraca Caire</i> , 64. Černý, Notebook 101.22. | limestone | |
| O. Cairo CG 25677 | List of items given to the lady <i>H3y-šb</i> by a number of persons. | burning oil; <i>b3k</i> ; <i>knj</i> ; <i>sntr</i> ; <i>d</i> ; fish fat; | Dyn 19 | Černý, <i>Ostraca Caire</i> , 57, 77* and 78*, pl. LXXV; Kitchen, <i>Ramesside</i> | limestone | line 30 for <i>sntr</i> , vs. 9 for <i>b3k</i> and <i>knj</i> . <i>b3k</i> written <i>bk</i> and is broken. <i>ht n tjšps knj pr.t h3r</i> . Fat written |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|---|--------|---|------------------------|---|
| | | oil; fat; cinnamon; <i>tjšpss</i> | | <i>Inscriptions IV</i> , 175 and 176. | | with a fish determinative (vs. 24); <i>sntrj dbn</i> 10 vs. rt. 30; <i>nḥh hn</i> 10 (rt. 6 <i>nḥh</i> written with bird and jar determinatives). |
| O. Cairo CG 25678 | List of items brought to a woman, possibly the lady <i>ḥzy-šb</i> mentioned in O Cairo CG 25677. Written by Qenhirkhopshef. | flowers; <i>ḥd; ndm; stz</i> ; fat; <i>tjšpss</i> , cinnamon; <i>ḳnnj</i> | Dyn 19 | Černý, <i>Ostraca Caire</i> , 58, 79* and 80*, pl. LXXVI; Kitchen, <i>Ramesside Inscriptions IV</i> , 168 and 169. | limestone | |
| O. Cairo CG 25679 | | flowers | Dyn 19 | Černý, <i>Ostraca Caire</i> , 58, 81*, pl. LXXVII; Kitchen, <i>Ramesside Inscriptions IV</i> , 170 (transcription). | limestone | |
| O. Cairo CG 25715 | About the preparation of cakes by a person for various purposes. Lines 5 and 6 mention oil and fat. | oil; fat (for cooking) | Dyn 20 | Černý, <i>Ostraca Caire</i> , 67, 87*. | pottery (yellow red) | |
| O. Cairo CG 25761 | Obscure, "pressing out the fat." | fat | Dyn 19 | Černý, <i>Ostraca Caire</i> , 80, 93*, pl. XCV | pottery (yellow green) | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|--|-------------------|--------------|--|----------------------|-------|
| O. Cairo CG 25819 | List of commodities: lamps, yarn, rags, gum, šššš ...(?), lapis lazuli (as pigment?), their amounts, and a date(?). | gum | Dyn 19 | Černý, <i>Ostraca Caire</i> , 97, 118*, pl. CXV; Kitchen, <i>Ramesside Inscriptions</i> IV, 173. | limestone | |
| O. Cairo CG 25742 | Report on deliveries of oil (<i>sgnn</i>) and other items(?). | <i>sgnn</i> ; oil | Dyn 20, RIX | Černý, <i>Ostraca Caire</i> , 75, 89*, pl. XC; Kitchen, <i>Ramesside Inscriptions</i> VI, 658. | limestone | |
| O. Cairo JE 72462 | Account of commodities | oil; fat | Dyn 19 or 20 | Abdel Samie, <i>Hieratic Documents</i> , 8, 9, 89 and 90, pl. II. | limestone | |
| O. DeM 00036 | Delivery of various commodities; duty roster; events: the scribe <i>Nḥw-m-Mw.t</i> has an argument with 'his people' (obv. 1–2); the gang passes the guard posts (obv. 9). | gum | Dyn 20, RIII | Černý, <i>Ostraca Deir El Medineh</i> [I], 9, pl. 16, 29; Kitchen, <i>Ramesside Inscriptions</i> V, 547–548. | pottery (yellow red) | |
| O. DeM 00037 | | flowers | Dyn 20, RIII | Černý, <i>Ostraca Deir El Medineh</i> [I], 9, pl. 17; Kitchen, <i>Ramesside Inscriptions</i> V, 548–549. | pottery (red) | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|--|-------------------|--------------|---|----------------|--------------------|
| O. DeM 00122 | Request to deliver fat, incense, and honey to the sender. | incense; fat | Dyn 19 or 20 | Černý, <i>Ostraca Deir El Medineh</i> II, 3, pls. 5 and 5A; Wentz, <i>Letters</i> , 164, no. 265. | pottery (grey) | <i>sntr</i> line 3 |
| O. DeM 00127 | About a delivery of cakes and incense to the addressee through the policeman <i>P3-sr</i> on the occasion of the Feast of the Valley festival: To the effect that: I have sent to you by the policeman <i>Pc-sr</i> : 2 cakes of 1/10 oipe of grain; 5 <i>deben</i> incense; again, 5 <i>deben</i> incense (on?) the day of your offering to Amen at the Festival of the Valley. They do not give me anything that you send to me. | incense; festival | Dyn 19 or 20 | Černý, <i>Ostraca Deir El Medineh</i> II, 4, pl. 8; Kitchen, <i>Ramesside Inscriptions</i> III, 557; McDowell, <i>Village Life in Ancient Egypt</i> , 97, no. 68.A. | pottery (grey) | |
| O. DeM 00204 reverse | List of men participating (<i>pš</i>) in the division of oil, honey, beer (?) and fat. | oil; fat | Dyn 20 | Černý, <i>Ostraca Deir el Medineh</i> III, 4, pl. 5–6; Kitchen, <i>Ramesside Inscriptions</i> VI, 137. | limestone | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|--------------|--------------|---|----------------------|-------|
| O. DeM 00222 | List of people and foodstuffs. | flowers | Dyn 20 | Černý, <i>Ostraca Deir el Medineh</i> III, 8 (description), pl. 12–14 (transcription); Kitchen, <i>Ramesside Inscriptions</i> V, 480–482. | pottery (red) | |
| O. DeM 00279 | List of loaves, <i>srm.t</i> , beer, and oil (<i>sgnn</i>). | <i>sgnn</i> | Dyn 20 | Černý, <i>Ostraca Deir El Medineh</i> IV, 10, pl. 10. | pottery (green-grey) | |
| O. DeM 00280 | Delivery of pigment (lapis lazuli: <i>hsbd</i>), oil, and gum to the right (obverse) and left sides (reverse) of the gang. | oil | Dyn 20 | Černý, <i>Ostraca Deir El Medineh</i> IV, 10, pl. 11. | limestone | |
| O. DeM 00287 | Statement about grain taken from someone and plants promised but not brought to him by a gardener. The grain is said to have been eaten by a sparrow. | garden | Dyn 20 | Černý, <i>Ostraca Deir El Medineh</i> IV, 12, pl. 13. | pottery (grey) | |
| O. DeM 00318 | List of items connected with several calendar dates. | flowers | Dyn 19 or 20 | Černý, <i>Ostraca Deir El Medineh</i> IV, 21, pls. 23 and 24. | limestone | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|--------------------------------|-----------------|---|-------------------------|--|
| O. DeM 00322 | Letter by <i>Mnw-ḥtp</i> to his father with the request to send one <i>hin</i> (of oil? daily?), as well as hides and bread. <i>Mnw-ḥtp</i> also intends to buy a <i>hin</i> of oil for his father. | oil; cooking (?) | Dyn 19 | Černý, <i>Ostraca Deir El Medineh</i> IV, 22, pl. 26. | pottery (yellow red) | |
| O. DeM 00359 | The writer asks for a cow to be brought, which is to be used as a payment for a jar of oil. | oil | Dyn 19 | Černý, <i>Ostraca Deir El Medineh</i> V, 6, pls. 5 and 5 A. | limestone | |
| O. DeM 00410 | The doorkeeper <i>Pn-p3-ḥw</i> pays 31 <i>deben</i> to the workman <i>H3y</i> for a pot of fat, in the presence of four other persons. | fat | Dyn 20, RIII | Černý, <i>Ostraca Deir El Medineh</i> V, 19, pl. 18; Kitchen, <i>Ramesside Inscriptions</i> V, 507. | pottery | |
| O. DeM 00551 | Obverse: list of items delivered to the addressee by the washerman <i>Q3</i> . Reverse: request to send leaves(?) and flowers to some people for the performance of an offering cult (<i>w3ḥ mw</i>) for the pouring of water on day 19 (festival reference?). | flowers; incense; ritual | Dyn 19 or 20 | Sauneron, <i>Ostraca Deir El Medineh</i> [VI], 1, pls. 1 and 1a; McDowell, <i>Village Life in Ancient Egypt</i> , 97, no. 68.B. | limestone | McDowell: B. (O DeM 551) What was brought to you via the washerman Ka: 1 large loaf. Send me a skin and some paint and some incense; and send us greenery and flowers on day 18, because they will pour a libation on day 19. #68. |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|--|---------------------------------|--------------|--|-------------------|-------|
| O. DeM 00579 | Obverse: list of items traded (<i>swn</i>) with their value in <i>deben</i> . Reverse: quantities of fat and oil given by one <i>Ns-ʿImn</i> , with total and remaining deficit. | oil; fat | Dyn 20, RIII | Sauneron, <i>Ostraca Deir El Medineh</i> [VI], 6, pls. 14 and 14a; Kitchen, <i>Ramesside Inscriptions</i> V, 581. | pottery (greyish) | |
| O. DeM 00607 | Request for the delivery of items (including oil), because (presumably) the gang is 'starving'. | oil | Dyn 20, RIX | Sauneron, <i>Ostraca Deir El Medineh</i> [VI], 11 and 12, pls. 27 and 27a; Kitchen, <i>Ramesside Inscriptions</i> VI, 677. | pottery (red) | |
| O. DeM 00704 | List of commodities: honey, sweet fat, <i>nbs</i> - bread, <i>srm.t</i> -drink, beans, and a beam(?) of cedar-wood. | sweet fat; <i>ndm</i> <i>ʿd</i> | unknown | Černý, <i>Ostraca Deir El Medineh</i> [VII], 18, pl. 28. | limestone | |
| O. DeM 00726 | An account of deliveries received by a number of workmen, containing various items such as pigments, bread, gum, fish, and wood, as well as rewards, <i>mk.w</i> , for the gang. | gum | Dyn 20, RIV | Grandet, <i>Ostraca Deir el-Medineh</i> VIII, 5, 27–28, 128–129. | pottery (orange) | |
| O. DeM 00730 | Only the word incense is written on the pottery sherd. | incense | unknown | Grandet, <i>Ostraca Deir el-Medineh</i> VIII, 5, 29, 131. | pottery (orange) | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|--|------------------|----------------|--|------------------------------|-------|
| O. DeM 00788 | A letter from an anonymous author to an anonymous sender concerning fat and oil for the doctor <i>Knr</i> . | fat; oil; doctor | Dyn 20, RIII | Grandet, <i>Ostraca Deir el-Medineh</i> VIII, 7, 60–61, 189. | pottery (red; yellow slip) | |
| O. DeM 00862 | An account of flowers, also mentioning bread to be delivered. | flowers | unknown | Grandet, <i>Ostraca Deir el-Medineh</i> IX, 2, 41, 247. | pottery (orange; brown slip) | |
| O. DeM 00863 | An account of delivered plants and flowers. | flowers | Dyn 20, RIII | Grandet, <i>Ostraca Deir el-Medineh</i> IX, 2, 41–41, 248–251. | limestone | |
| O. DeM 00914 | Obverse: a list of workmen with each personal name preceded by a dot possibly indicating presence at work. Reverse: a note(?) on some matter which includes "words" or an argument and, subsequently, the taking of an oath. | gum | Dyn 19, Siptah | Grandet, <i>Ostraca Deir el-Medineh</i> IX, 4, 91, 345. | limestone | |
| O. DeM 00931 | An account of textiles and oil, which is said to be the payment for a goat. | oil | unknown | Grandet, <i>Ostraca Deir el-Medineh</i> IX, 4, 105–106, 368. | limestone | |
| O. DeM 00946 | Obverse: an account of textiles given. Reverse: deliveries of grain and | incense | Dyn 19 or 20 | Grandet, <i>Ostraca Deir el-Medineh</i> IX, 4, 119–120, 387. | pottery (yellow; white slip) | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|--------------|-------------|--|------------------------------------|-------|
| | incense, and notes on work and division(?). | | | | | |
| O. DeM 00978 | A letter by an unnamed author to an unnamed recipient asking for a bouquet (of flowers) and a bed(?), with the reassurement of payment. | flowers | unknown | Grandet, <i>Ostraca Deir el-Medineh IX</i> , 9, 145, 432. | limestone | |
| O. DeM 10103 | Letter by an anonymous writer to an anonymous addressee mentioning the delivery by policeman <i>Grš</i> of a basket of flowers and vegetables, with a list thereof. | flowers | Dyn 19 | Grandet, <i>Ostraca Deir el-Médinéh X</i> , 106, 302. | pottery (orange; yellow-grey slip) | |
| O. Glasgow D.1925.71 | Record of various items given by a workman to his father. | fat | Dyn 20, RVI | McDowell, <i>Hieratic Ostraca in the Hunterian Museum Glasgow</i> , 9–11; Kitchen, <i>Ramesside Inscriptions VII</i> , 361–362; McDowell, <i>Village Life in Ancient Egypt</i> , 37, no. 13. | limestone | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|--|---|-----------------|--|----------------------|---|
| O. IFAO 00252 | A series of dates followed by deliveries, notes on inactivity, and a possible visit by some scribes. | flowers | Dyn 200 | Unpublished; Černý, Notebook 103.114. | pottery | |
| O. Leipzig inv. No. 1900 | Letter of instruction concerning the son of the addressee and the placating of the gods. Instruction to bring some incense and another commodity (in lacuna). Letter not finished? | incense; divine manifest ation | Dyn 19 or 20 | Černý-Gardiner, <i>Hieratic Ostraca</i> , 5, pl. 16–16A and 114, 1. | pottery (reddish) | |
| O. Louvre E 11178a | A letter from the Vizier <i>Dḥwty-ms</i> and the Overseer of the Treasury <i>Imn-ḥtp</i> about supplies of oil and clothing to the gang of workmen. | oil | Dyn 20, RIX | Koenig, <i>RdE</i> 42 (1991), 114–115; Kitchen, <i>Ramesside Inscriptions</i> VII, 377 | limestone | Ostrakon # is wrongly given as E 1178a by Koenig. |
| O. Michaelides 060 | Letter from the scribe <i>Hy</i> to his father <i>B3k</i> asking for some commodities. | fat | Dyn 19 | Goedicke-Wente, <i>Ostraka Michaelides</i> , 16, pl. XLIV. | limestone | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|--------------|---------------------|---|-----------|-------|
| O. OIM 12073 | Protracted legal case between the workman <i>Mnnz</i> and the chief policeman <i>Mntw-ms</i> about a pot of fat, which the latter has failed to repay for 18 years. <i>Mntw-ms</i> swears an oath to repay the fat, which happens some time later through several parties, although the repayment is double the amount of his debt, because he has failed to make the deadline for payment. | fat | Dyn 20, RIII and IV | Černý-Gardiner, <i>Hieratic Ostraca</i> , 22 and pl. 77–77A. | limestone | |
| O. Petrie [unnumbered] | Account of quantities of bread delivered by two persons, mentioning gardeners and the temple of Thutmosis III. | garden | unknown | W.M. Flinders Petrie, <i>Six Temples at Thebes. 1896</i> , London 1897, 29 and 30, pl. XX, no. 6. | pottery | |
| O. Prague H 31 | An account of various plants and vegetables which are with <i>Pz-sr</i> . | flowers | unknown | unpublished. Černý, Notebook, 26. | unknown | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|--------------|--------------|--|-----------|-------|
| O. Turin N. 57068 | The gardener <i>Tzrw</i> y arrives in connection with a 'day of a servant' of the workman <i>Ks</i> , which has been appropriated by the woman <i>Mh3.ti</i> . The reverse mentions items of basketry which were used to pay for this 'day of a servant'. | garden | Dyn 20, RIII | Lopez, <i>Ostraca ieratici</i> 1, 38, pl. 42–42a; Kitchen, <i>Ramesside Inscriptions</i> V, 448. | limestone | |
| O. Turin N. 57109 | Only legible word is <i>sntr</i> , incense. | incense | Dyn 19 or 20 | Lopez, <i>Ostraca ieratici</i> 2, 13, pl. 55–55a. | limestone | |
| O. Turin N. 57133 | Unclear, but mention is made of flowers in connection with 'his evening'. | flowers | Dyn 20 | Lopez, <i>Ostraca ieratici</i> 2, 20, pl. 59–59a. | limestone | |
| O. Turin N. 57368 | Payment of the scribe of the Necropolis <i>hr</i> for an outer and an inner coffin and their painting and varnishing; items paid include two pieces of cattle and clothing | varnish | Dyn 20, RIII | Lopez, <i>Ostraca ieratici</i> 3, 23 (description), pl. 114–114a (facsimile, transcription); Kitchen, <i>Ramesside Inscriptions</i> VII, 322 (transcription) | limestone | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|---|--|-------------------|--------------|---|-------------------|-------|
| O. Turin N. 57401 | Unclear, l.10 may mention <i>mrḥt</i> | <i>mrḥt</i> ; oil | Dyn 19 or 20 | Lopez, <i>Ostraca ieratici</i> 3, 33 (description), pl. 129 (facsimile) | limestone | |
| O. Turin N. 57472 reverse | Very fragmentary letter, mentioning the absence of burning oil and an unknown commodity which belongs to the sender. | burning oil | Dyn 19 or 20 | Lopez, <i>Ostraca ieratici</i> 4, 16, pl. 160–160a. | pottery (red) | |
| O. Turin N. 57508 | Account of an unknown commodity, flax and flowers. | flowers | Dyn 19 or 20 | Lopez, <i>Ostraca ieratici</i> 4, 27, pl. 168–168a. | pottery (pinkish) | |
| O. Turin N. 57513 | Obverse: oil account. | oil | Dyn 19 or 20 | Lopez, <i>Ostraca ieratici</i> 4, 28–29, pl. 169–169a. | pottery (pinkish) | |
| O. Valley of Queens 01 | Journal note concerning the delivery of lamps, beer, and fat to the work and the workmen at the construction site. | fat | Dyn 19, RII | Koenig, <i>BIFAO</i> 88 (1988), 114, Document I. | limestone | |
| O. Varille 24 | Account of various commodities of <i>sš-ḳd Mn</i> which are said to be with the lady <i>ḥi-m-w3.w</i> , some of which are given in months. Reverse: mentions | flowers | Dyn 20, RIV | Kitchen, <i>Ramesside Inscriptions</i> VII 341. | limestone | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|--------------|-------------|--|-----------|-------|
| | the Place of Pharaoh and someone swearing an oath. | | | | | |
| O. Vienna H. 03 | A letter by scribe <i>Hr</i> to scribe <i>M33.n-i-nht-f</i> concerning gum. | gum | Dyn 20, RIV | Kitchen, <i>Ramesside Inscriptions</i> VI, 255. | limestone | |
| P. Ashmolean Museum 1958.111 | Recto: letter to an agent (<i>rwd.w</i> , recto 8) by his scribe, on amounts of honey(?) and grain(?) in connection with bee-keepers). Verso: account of various expensive commodities (including objects of wood and stone, textile, oil, and vegetables), buildings and their measures, and value in silver <i>deben</i> and <i>sni.w</i> . Total in verso 19 associated with the chief policeman <i>Nht-Sbk</i> . | oil | Dyn 19, RII | Kitchen, <i>Ramesside Inscriptions</i> VII, 9 9 and 10 0. | papyrus | |
| P. BM EA 10696 verso | Accounts concerning deliveries by the gardeners of the right side of the gang. | garden | Dyn 20 | Gardiner, <i>Hieratic Papyri in the British Museum</i> III, vol I, | papyrus | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|--------------|--------------|---|----------|-------|
| | | | | 127–129, vol. II, pl. 71 <i>bottom</i> . | | |
| P. BM EA 75023 | Brief letter from the troop commander <i>ʿIqnr</i> to the prophet <i>Pꜣy-ndm</i> of the temple of Horus of Edfu, ordering him to deliver 20 pomegranates quickly. | garden | Dyn 20, late | R.J. Demarée, <i>The Bankes Late Ramesside Papyri</i> (London 2006), 25–26, 58–59, pl. 25–26. | papyrus | |
| P. DeM 02 | List of items given to a woman by different men. Items include wheat, barley, bread, oil, fat, vegetables, cakes, woodwork. Part of the transfers are associated with religious events. | fat | Dyn 20, RV | Černý, <i>Papyrus Deir El Medineh</i> I, 12, pls. 17 and 17a; Kitchen, <i>Ramesside Inscriptions</i> VI, 259 and 260. | papyrus | |
| P. DeM 07 recto | Costs of animals killed (donkey, goat), and items taken away (wheat, plants, oil, gum, barley, <i>ibw</i> (?)) by a man. Their value totals 68 <i>deben</i> ; 10 of which have apparently been compensated. | gum; oil | unknown | Černý, <i>Papyrus Deir El Medineh</i> I, 19, pls. 23 and 23a. | papyrus | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|--|---------------------------|--------------|--|----------|-------|
| P. DeM 09 | Chief carpenter <i>M^{cc}.n=i-nh.t=f</i> writes to scribe <i>Imn-ms</i> of the Vizier about the decoration of a coffin and its lid, with the request to supply incense, ruddle, and wax for the preparation of varnish. | varnish; incense | Dyn 20, RIX | Černý, <i>Papyrus Deir El Medineh</i> I, 21 and 22, pls. 25 and 25a; Kitchen, <i>Ramesside Inscriptions</i> VI, 672. | papyrus | |
| P. DeM 13 verso | Account recording, among other items, a donkey, plants, a goat, wheat, oil, <i>ibw</i> , gum, and the value of these items in <i>deben</i> . | gum; oil | Dyn 20, RIX | Černý, <i>Papyrus Deir El Medineh</i> I, 25 and 26, pls. 29 and 29a; Kitchen, <i>Ramesside Inscriptions</i> VI, 524. | papyrus | |
| P. DeM 26 | Various legal cases, including one involving more than one woman, a coffin, a shield, and a garden (B recto 1–9) and another about <i>sgnn</i> -oil and an identifying brand, foremen, and gang gathered in the temple of Ptah (owner of the oil?), two men being found guilty and punished, oracle of Amenhotep (B verso 2–12). | <i>sgnn</i> ; garden; oil | Dyn 19 or 20 | Černý, <i>Papyrus Deir El Medineh</i> II, 4, pls. 12-15a; Kitchen, <i>Ramesside Inscriptions</i> V, 461–466. | papyrus | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|--------------|-------------|---|----------|-------|
| P. Milan E 0.9.40127 + P. Turin Cat. 2074 verso | Verso I: list of officials (headed by an $\epsilon_3-n-št$) with numbers. Verso II: account of daily requirements of fish and firewood. Verso III-IV: list of workforce of the Necropolis(?) (cf. verso III 2) in connection with a document given to the chief workman <i>Nhw-m-Mw.t</i> (verso III 1). Included are producers of fruit(?) and vegetables(?), transporters of stone, keepers of donkeys, and female servants belonging to gardens(?). | garden | Dyn 20, RIX | Tiradritti, in: SESH, 133; Unpublished, Černý, Notebook, 17.21–24. | papyrus | |
| P. Turin Cat. 1881 + P. Turin Cat. 2080 + P. Turin Cat. 2092 | Recto I-VII: deliveries to the gang on a number of dates in regnal years 6–8 by a scribe of the mat, scribes of the Vizier, a royal butler, temple scribes, and deputies. The supplies (regular rations as well as rewards) come from royal storerooms and various | flowers | Dyn 20, RIX | Kitchen, <i>Ramesside Inscriptions</i> VI, 609-619; Gardiner, <i>Late-Egyptian Miscellanies</i> , xx, 125–128, no. XIII (description; transcription of verso I-IV); Helck, <i>Die datierten und</i> | papyrus | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|---|--|--------------|------|---|----------|-------|
| | temples, and they include different kinds of food, clothing, copper, silver, gold, oil and papyrus. Verso I: deliveries of clothing, oil, wax, lead and copper. Verso V–VII: deliveries of pottery, fruit, plants, firewood, fish, vegetables and flowers. | | | datierbaren Ostraka , 483–490, 492 (translation recto I, II a, 1–12, III 1–13, IV 1–13, V 1–12, VI 1–10, VII 1–3, VIII 1–12, IX 1–10, verso I 1–8, II a, III a, b, V 1–14, VI 1–2, 5–14, VII 1–14); Helck, Materialien III, 500 and 501 (translation of recto VIII and IX, commentary). | | |
| P. Turin Cat. 1883 + P. Turin Cat. 2095 | Recto: commissioning of coppersmiths by the administrators of the Necropolis and the treasury scribe of the temple (of Ramesses III); distribution of tools to the gang. Verso: note about the vizier(?), followed by an account of textile, woodwork, oil, gum and bronze objects, with some workmen's names. | gum; oil | | | papyrus | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|---|-----------------|---------------------|---|----------|-------|
| P. Turin Cat. 1894 | Delivery of oil to the gang and its distribution by the captains in the Valley of Kings. | oil | | | papyrus | |
| P. Turin Cat. 1900 + P. Turin Cat. 2048 + P. Turin Cat. 2088 + P. Turin Cat. 2093 + P. Turin Cat. 2097 + P. Turin Cat. 2 | Recto I, II 1–3 and III: deliveries of myrrh and jasper (including parts of statues) from various temples, priests and officials, as well as from the land of Kush and the House of Pharaoh. The quantities of jasper are entered into the "northern treasury" of the House of Amun. Recto IV 1–11: fragmentary Necropolis accounts and notes(?), e.g., about oil and rags for lamps. | myrrh | | | papyrus | |
| P. Turin Cat. 1907 + P. Turin Cat. 1908 | Verso: deliveries made to a man (name lost; perhaps <i>ḥ3-nḥt.w</i>) by several individuals including the scribe of the treasury <i>P3-Bs</i> , the scribe of the treasury <i>P3-ds</i> , one <i>zny</i> , the vizier, and one <i>P3-ndm</i> | incense; oil | Dyn 20, RVI-RVII | Janssen, <i>JEA</i> 52 (1966), 81–94, pls. XVI–XIX A; Kitchen, <i>Ramesside Inscriptions</i> VI, 403–409. | papyrus | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|--|--------------|-------------|---|----------|-------|
| | (necropolis guardian?). The deliveries of i.a. oil, incense, barley, emmer, loaves, fish, vegetables, sandals, garments, wine, flax, flour, wood, bronze, honey, natron, salt, reed, beans(?) and meat were made from year 5 of Ramesses VI to year 7 of Ramesses VII. | | | | | |
| P. Turin Cat. 1945 + P. Turin Cat. 2073 + P. Turin Cat. 2076 + P. Turin Cat. 2082 + P. Turin Cat. 2083 recto | Necropolis journal recording inactivity of the gang for all days, deliveries of fish and pottery, and including some more specific information. | garden | Dyn 20, RIX | Helck, <i>Die datierten und datierbaren Ostraka</i> , 523–529; Kitchen, <i>Ramesside Inscriptions VI</i> , 570–581; McDowell, <i>Village Life in Ancient Egypt</i> , 198, no 151 A. | papyrus | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|--|--------------|--------|---|----------|-------|
| P. Turin Cat. 1966 | Recto I and II 1–15: literary ("love songs"). Recto II 15 and 16: transfer of copper, regnal year 5. Verso I 1: part of a grain account? Verso I 2–19: deposition by <i>Snr</i> son of <i>Hnsw</i> about thefts (i.a. from a tomb?) of oil, copper, and other commodities, which were given to various persons. Verso II 1–7: deposition of <i>Hr</i> son of <i>Hcy</i> about thefts from the cellar of <i>Bw-qn.tw=f</i> and the chapel of <i>Pn-T3-wr.t</i> son of <i>Nb-nfr</i> , the goods stolen include loaves, cakes, vessels, and a wooden box. Verso II 8–16: interrogation of <i>Hr</i> son of <i>Hcy</i> by a committee of scribes and a policeman. <i>Hr</i> confesses thefts from various persons of loaves, cakes, fruit, <i>srn.t</i> . <i>Hr</i> is brought up by the guardian <i>Hcy</i> but the latter has not | oil | Dyn 20 | J. L <i>RdE</i> 43 (1992), 133–143; Maspero, <i>Études égyptiennes</i> I, Paris 1886, 217–230 with plate; E. Scamuzzi, <i>Egyptian Art in the Egyptian Museum of Turin</i> , New York 1965, pl. LXXXIX. | papyrus | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|--|--------------|--------|---|----------|-------|
| | informed the Necropolis administrators. Verso II 17–20: thefts from the house of <i>Qnnz</i> confessed by <i>Imn-nht</i> son of <i>Tz</i> . Verso III: oath taken by <i>Wsr-ḥzt</i> son of <i>ʿz-nht.w</i> with respect to <i>Mn^c.t-nht.ti</i> daughter of <i>Niw.t-nht.ti</i> . Column between verso I and II: account of liquid(s)? | | | | | |
| P. Turin Cat. 2014 | Recto 1 - verso 3: letter (names of sender and addressee lost) about some people the sender is accused of hiding, and the delivery of fish, firewood and vegetables. Verso 3–29: list (end lost) of names of gardeners, washermen, water-carriers, fishermen, woodcutters, one carpenter and a potter | garden | Dyn 20 | unpublished; Černý, Notebook, 15.41–46; 17.25–29. | papyrus | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|---|--------------|------------|--|-----------|-------|
| | belonging to the left side of the gang. | | | | | |
| P. Turin Cat. 2044 | Journal recording the transport of stones (recto I), tomb-equipment (recto II), deliveries of oil, fat and woodwork (recto III), the gang rejoicing and the production of pottery and plaster (verso I), inactivity of the gang because of the "enemy" and activity of the same enemy in a place called <i>Pr-nby.t</i> ; the gang is urged by the two policemen, not to go to work, but to wait until further notice (verso II-III). | fat | Dyn 20, RV | Kitchen, Ramesside Inscriptions VI, 340–343; Helck, Die datierten und datierbaren Ostraka, 417, 418, 420 and 421; McDowell, Village Life in Ancient Egypt, 221, 227 and 228, nos. 170 and 178. | papyrus | |
| W. DeM 5161 | Weight of gum of <i>Ks</i> . | gum | unknown | Valbelle, Catalogue des poids a inscriptions hieratiques de Deir | limestone | |

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|--|--|----------------------------------|---------------|---|-------------------------|---------------------------------------|
| | | | | el-Medineh, 71, pl. 21–21a. | | |
| O. Cairo CG 25678 | List of items brought to a woman (rev. 11: <i>ḥr ḫtꜣy n-s</i>), possibly the lady <i>Ḥꜣy-šb</i> mentioned in O. Cairo CG 25677. | fat; flowers; <i>kmy.t</i> | Dyn 19 | Černý, Ostraca Caire , 58, 79* and 80*, pl. LXXVI; Kitchen, Ramesside Inscriptions IV, 168 and 169. | limestone | |
| O. DeM 00183 | List of commodities given by the workman <i>ʿmn-m-ʿIp.t</i> to a draughtsman (name lost); the value of the goods is given in grain measures. | gum; <i>kmy.t</i> | Dyn 20 | Černý, Ostraca Deir El Medineh II, 21, pl. 51; Kitchen, Ramesside Inscriptions VI, 166. | pottery (yellow red) | |
| O. DeM 00280 | Delivery of pigment (lapis lazuli: <i>ḥsbd</i>), oil and gum to the right (obverse) and left sides (reverse) of the gang. | gum; <i>kmy.t</i> ; oil | Dyn 20 | Černý, Ostraca Deir El Medineh IV, 10, pl. 11; Helck, Materialien VI, 993. | limestone | 3, vs. 3 mentions <i>gum/kmy.t</i> |
| P. DeM 14 | Beginning of a letter from an unknown sender to the deputy <i>ꜣny-nḥt</i> ; only the epistolary formulae are preserved. | gum; <i>kmy.t</i> | Dyn 20, RV | Černý, <i>Papyrus Deir El Medineh</i> I, 26, pls. 29 and 29a; Kitchen, <i>Ramesside Inscriptions</i> VI, 264. | papyrus | line 4, start of a letter |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|---|---------------------------------------|--------------|---|----------------|---|
| O. Michaelides 028 | A long list of objects and foodstuffs, each with value given. | snTr ; incense; oil | Dyn 20 | Goedicke-Wente, <i>Ostraka Michaelides</i> , 21, pl. LXXV. | pottery (red) | Prices included, vs 4–5 but unclear for incense. |
| O. DeM 00127 | About a delivery of cakes and incense to the addressee through the policeman <i>P3-sr</i> , on the occasion of the Feast of the Valley. | <i>sntr</i> ; incense; festival | Dyn 20 | Černý, <i>Ostraca Deir El Medineh</i> II, 4, pl. 8; Kitchen, <i>Ramesside Inscriptions</i> III, 557; McDowell, <i>Village Life in Ancient Egypt</i> , 97, no. 68.A. | pottery (grey) | Prices in <i>deben</i> |
| O. DeM 00289 | List of items taken from(?) the house of <i>ʾpwy</i> . | snTr ; incense | Dyn 19 or 20 | Černý, <i>Ostraca Deir El Medineh</i> IV, 13, pl. 13; Kitchen, <i>Ramesside Inscriptions</i> IV, 416. | limestone | line 4 <i>sntr</i> |
| P. DeM 04 | Letter complaining receiver hadn't sent the ointment he asked for. Also says if you don't have it, he could've sold some clothes to get it. | ointment; unguent | | Sweeney, <i>JEA</i> 84 (1998) | papyrus | Linen/clothing equivalent to oil purchase. |
| P. DeM 05 | Friend writes to ask after another friend who hadn't sent him the ointment he had asked for. | ointment; unguent | | Sweeney, <i>JEA</i> 84 (1998) | papyrus | Sender is surprised that the ointment wasn't sent. He says to forget about the ointment and |

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| | | | | | | tell him how the recipient is. |
| O. DeM 00246 | Asking someone to send something very quickly to kiss/smell the earth <i>sn t3</i> before the figure on Monthu, also uses "look to it." | look; kiss; <i>sn</i> <i>t3</i> | | McDowell, Village Life in Ancient Egypt, 98, no. 70. Kitchen, Ramesside Inscriptions V, 566. | | <i>sn t3</i> with nose-sign determinative |
| O. Cairo CG 25820 | Obverse: list of names followed by amounts in <i>deben</i> . Reverse: amounts of lamps and quantities of oil collected from the storehouse and rags brought by a scribe; all or some of these items being divided (<i>šb.t</i>) among the workmen. | <i>sgnn</i> ; grease; oil | Dyn 20 | Kitchen, Ramesside Inscriptions VI, 661; McDowell, Village Life in Ancient Egypt, no 157. | limestone | Greasing wicks and grease taken from storehouse. All use <i>sgnn</i> . |
| O. Cairo CG 25545 + O. Cairo JE 72454 | 3 fragments. Lamp/wick account of the months II and IV <i>Aḥ.t</i> and 1 <i>pr.t</i> of year 6 of Seti II. Jar of <i>nḥḥ</i> oil for greasing (<i>sgnn</i>) 400 wicks also "day of giving oil for lighting to the gang when they came to work" | <i>sgnn</i> ; oil; <i>nḥḥ</i> ; lamps; light | Dyn 19 | McDowell, Village Life in Ancient Egypt, no 157; Helck, Die Datierten und Dateirbaren Ostraka, 146, 147, 175, 176; Černý, | limestone | |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
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| | then tracks consumption of wicks. | | | Ostraca Caire, 19, 41. | | |
| O. Strasbourg H. 41 | Pigments issued to a painter/draughtsman Rahotep, <i>zš kḏ</i> : including gum <i>ḳmy</i> and <i>sty</i> written with bow and determined by little circle sign for raw materials, not listed in <i>deben</i> rather 5 hin. | <i>sty</i> ; oil; gum; <i>ḳmy</i> | | Kitchen, Ramesside Inscriptions VII, 195: 1–6. McDowell, Village Life in Ancient Egypt, no. 163. | | Compare to McDowell, no. 165 where <i>sty</i> is written with the nose-sign and has the same determinative O Toronto A. II. |
| O Toronto A.11 | Pigments are exhausted. Asking for more including gum, fat for burning, old clothes for wicks, and <i>sty</i> written with the nose and determined by the circle (raw material). Also <i>wḥ</i> "annoint." | <i>sty</i> ; oil; gum; <i>ḳmy</i> ; <i>wḥ</i> | n.d. | Kitchen, Ramesside Inscriptions III, 43–44. | not listed | |
| O. Turin N. 57366 | Over two days, funerary equipment is taken to the royal tombs in the Valley of the Queens by the workmen. This equipment includes woodwork, ropes, | oil; varnish; <i>hr.y-nḥḥ</i> | Dyn 20 | Helck, <i>Die datierten und datierbaren Ostraka</i> , 455 (translation); Janssen, <i>RdE</i> 43 (1992), 107–122 | limestone | McDowell mentions 5 coffins treated with varnish and another 2 that are varnished with sesame oil (probably <i>nḥḥ</i>). Shabtis also |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|--|---|--------------|---|-----------|---|
| | vessels, and lamps, and wicks. Already in the tombs are five coffins and a shabti box. | | | and pl. 2; McDowell, <i>Village Life in Ancient Egypt</i> , 221–222 no. 171. | | treated with varnish, <i>hry nhh</i> . |
| O. DeM 00550 | Incomplete letter in which sender asks for something and promises to send palm leaves. Wente's translation of fat (obv. 4) is uncertain because usual determinative of <i>ḥ</i> in DeM ostraca is the jar (W22) not Aa2 the pustule, which happens to also be the determinative for <i>sty</i> "odor." | <i>ḥ</i> ; fat; <i>mryt</i> ; river-bank | Dyn 19 | Sauneron, Ostraca Deir El Medineh [VI] , 1, pls. 1 and 1a. | pottery | Determinative for fat is the pustule-sign. Probably indicates a scented unguent rather than plain fat. Found in grand puits |
| O. Cairo CG 25572 | Conflict between <i>hy</i> and <i>h^c-m-sb3</i> before the <i>knb.t</i> , involving a false statement/accusation about a loan or debt, a punishment of a 100 blows and a divine manifestation. | oi; fat; <i>mrht</i> ; <i>ḥ</i> ; <i>nhh</i> ; <i>w3ḥ</i> | Dyn 20 | Černý, Ostraca Caire, 26, 48*, pl. XXV-XXXVI; Kitchen, Ramesside Inscriptions V, 572–573. | limestone | <i>mrht</i> ; <i>nhh</i> ; and <i>ḥ</i> all attested in hins with jar determinatives; also, <i>ḥ</i> <i>w3ḥ</i> (vs. 4) |
| O DeM 00293 | Various items and their numbers, includes <i>b3k</i> oil. | oil; fat; <i>b3k</i> ; <i>ndm</i> ; <i>ḥ</i> | Dyn 19 or 20 | Černý, Ostraca Deir El Medineh IV, 14, pl. 15. | limestone | Includes reference to <i>b3k</i> -oil and also "sweet fat" <i>ndm ḥ</i> (vs 10) |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
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| O. DeM 00187 | Obv 1–3: list of metal objects given to the coppersmith <i>pth pꜥ hꜥpy</i> . Obv. 4-rev 3: list of items in the treasury of Amenhotep LPH (including <i>bꜥk</i> -oil of Amun). | <i>bꜥk</i> | Dyn 20 | Černý, Ostraca Deir El Medineh II, 22, pl. 52; Kitchen, Ramesside Inscriptions V, 503. | pottery (red) | <i>bꜥk n jmn</i> though a bit broken, interesting reference to a special oil. |
| O Ashmolean Museum Nos 1945.37 + 1945.33 | HO 74, 11 mentions <i>mrht</i> oil (jar det.) and <i>bꜥk ndm</i> oil (jar det.) Part of a letter is addressed to a man whose wife appears to have made large thefts from property belonging to the Pharaoh for which she was prosecuted before the court. The verso appears to mention still larger of which thefts that perhaps the man addressed was accused. | <i>mrht</i> ; <i>bꜥk</i> ; oil; <i>ndm</i> | n.d. | HO 74, 11. Janssen, 1975, p. 330–333. | limestone | References stealing oils, particularly <i>bꜥk ndm</i> oil from the Pharaoh's estate, and being prosecuted for it. |
| O. Petrie 31 | Foodstuffs supplied to a number of different persons, the things given to each person being contained in a separate compartment bordered by | <i>mrht</i> ; oil; <i>wrḥ</i> | n.d. | HO 35, 1 <i>recto</i> . | limestone | <i>mrht wrḥ</i> listed with <i>wꜥ-ꜥd</i> , <i>Nhk.t</i> , determinatives all just jar sign. Only publication is HO. |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
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| | red lines of demarcation. Includes <i>mrḥt wrḥ</i> | | | | | |
| O. Cairo CG 25365 + 25624 | Commodities listed with several men and women. Document belongs to a group of ostraca listing food taken by person to a feast(?) according to Janssen, <i>Village Vari</i> , pp. 55–86. | <i>mrḥt</i> ; <i>wrḥ</i> ; <i>nḥḥ</i> ; ḥd ; fat | Dyn 20 | Černý, Ostraca Caire , 41-42, 63*-64*, pl. LVIII-LIX; Kitchen, Ramesside Inscriptions V, 516–517. | pottery | Anointing oils, both <i>mrḥt</i> and <i>nḥḥ</i> , in addition to <i>wp-ḥd</i> (?), all words including <i>wp</i> marked with jar-sign determinative. |
| O. Cairo CG 25543 | Obverse: various payments for a servant, total, remainder. Reverse: lamp/wick account. | <i>ḳnnj</i> ; ḥš ; <i>sgnn</i> ; oil; | Dyn 19 | reverse: Černý, Ostraca Caire , 18, 40*; Kitchen, Ramesside Inscriptions IV, 310–311. obverse: Černý, Ostraca Caire, 18, 39*, pl. XXV; Kitchen, Ramesside Inscriptions IV, 309–310. | limestone | <i>sgnn</i> mentioned in the context of a wicks account; <i>ḳnnj</i> mentioned in the context of payments. |
| O. Nash 7 | Delivery of vegetables from the chief of the Medjay | <i>snṯr</i> ; incense | n.d. | HO 55, 3. | limestone | Interesting that Černý and Gardiner identify this as a delivery of |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|---|--|---------|--|-----------------------|--|
| | Mentemhab, but includes <i>sntrj</i> . | | | | | vegetables with word <i>sntr</i> . |
| O. DeM 00601 | Obverse: list of commodities; Reverse: note on the transfer of some commodities (including those mentioned on the obverse?) to the gang. | fat; <i>ꜥd</i> ; <i>sntr</i> ; incense | unknown | Sauneron, <i>Ostraca Deir El Medineh</i> [VI], 10, pls. 24 and 24a. | limestone | Cow-sign determinative for fat. |
| O. DeM 46 | Delivery of various commodities; duty roster; event: the gang receives extra rations of meat/cattle (<i>mk.w</i>) out of the offerings for the Opet festival (obv. 10); nine head of cattle are received and divided (obv. 15); arrival of the butler <i>ꜥhꜥ</i> on account of a letter written by <i>jmn-nht</i> about the division of a group of people (obv 21-rev 5); the gang the the three <i>hwtj.w</i> divide up the 5 heads of cattle. | fat; <i>ꜥd</i> | Dyn 20 | Černý, <i>Ostraca Deir El Medineh</i> [I], 12–13, pl. 36–36 A and 37–38; Kitchen, <i>Ramesside Inscriptions</i> VI, 121–124. | pottery (grey-yellow) | Word for fat is said to be duck fat according to Janssen, <i>Prices</i> : two fats listed next to each other <i>ꜥd hꜥ</i> (duck fat) and <i>ꜥd pꜣ tꜣr/ptr?</i> |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|-------------------------------------|--|--|--------|---|-------------------|---|
| O Cario 25602 | Various commodities and their value totaling 25 <i>deben</i> . | 𐎠𐎢 ; fat; oil | Dyn 20 | Černý, <i>Ostraca Caire</i> , 35, 58*, pl. Ll. | pottery (reddish) | 𐎠𐎢 𐎠𐎢 duck fat |
| O. DeM 230 | <i>sgnn wrḥ</i> ; mentioning of various foodstuffs and drink in connection with special occasions, like the feast for <i>t^c-wr.t</i> . | festival; <i>sgnn</i> ; oil; <i>wrḥ</i> | Dyn 19 | Černý, <i>Ostraca Deir el Medineh</i> III, 10, pl. 18; Kitchen, <i>Ramesside Inscriptions</i> III, 559. | limestone | Listing a few goods per feast, probably a text of someone recording what they've brought. One time it was <i>sgnn wrḥ hn</i> 2. Some parts crossed out. |
| O. Gardiner 204 | HO 50, 1, ll,3 <i>ḥnw n dj.t sgnn jr n dbn</i> 1: a <i>sgnn</i> made from <i>ḥnw</i> ? Followed by <i>mrḥ ḥnw</i> 1. Start of same column begins with something about for the people of the crew of this city of Upper Egypt, which is for Amun King of the Gods, <i>jnḥ</i> 1 <i>deben</i> , then the <i>sgnn</i> and <i>mrḥ</i> bits, then copper. Likely a list for a festival/feast worship; also " <i>nḥh hn.w</i> 5 which makes <i>deben</i> [broken] 5" | <i>sgnn</i> ; <i>mrḥ</i> ; oil; festival | n.d. | HO 50, 1 | limestone | Janssen, <i>Prices</i> , translates "the <i>ḥnw</i> which gives <i>sgnn</i> " as a "cosmetic stick" but might also be a type of <i>sgnn</i> . |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|---|--|---|------------------------|--|-----------|--|
| O. Nims. | Payments for painting some coffins and statues early. Lists <i>nḥḥ hnw 2 jrn.n 3, mrḥt hn.w 6 jr dbn 1?</i> Right after another in line 8, then <i>nḥḥ mrḥ</i> again in line 12. | <i>mrḥt</i> ; <i>nḥḥ</i> ; oil | Dyn 19 | HO 62, 1 | limestone | Lists <i>nḥḥ</i> and <i>mrḥt</i> together on the same document twice both in the same line. This suggests specific materials would've been familiar to the reader for these terms. |
| O. Cairo CG 25590 | Items paid to <i>P^c-jdḥ.w</i> for a jar/ <i>ḳb</i> vessel (cf. O Cairo CG 25609); deficit remaining. | oil | Dyn 20 | Černý, <i>Ostraca Caire</i> , 32, 55*, pl. XLVII; Kitchen, <i>Ramesside Inscriptions</i> VI, 165 (transcription) . | limestone | <i>nḥḥ</i> and <i>mrḥt</i> both listed with jar-sign determinatives as part of the payment for the vessel. <i>nḥḥ</i> seems to be worth double <i>mrḥt</i> . |
| O. Oriental Institute of University of Chicago 12073 | HO 77. Two lines below sketch of 2 Nile gods on verso, inscribed fully on recto. Litigation concerning the sale of a jar of fresh fat. | <i>ḥd</i> ; <i>wḥd</i> ; fat; fresh | Dyn 20, RIII and IV | HO 77 | limestone | <i>ḥd</i> with jar-sign determinative. Followed by <i>wḥd</i> sign with abstract determinative, is this duck fat or fresh fat? |
| O. DeM 621 + O DeM 829 reverse | List of items associated with various workmen. | incense; fat | Dyn 19 | Grandet, <i>Ostraca Deir el-Médinéh</i> VIII, 76, 77 and 214; Kitchen, <i>Ramesside Inscriptions</i> IV, 152; Sauneron, <i>Ostraca Deir El Medineh</i> | pottery | <i>ḥd ḥd/w(ḥ)ḥd</i> ? Then <i>ḥd nḥm</i> to the same guy <i>Nb-nfr-b^c-wḥd</i> . Then <i>pḥ snḥr w(ḥ)ḥd</i> (same word) of <i>Nfr-ḥtp-pw</i> . Could this be a gift list? As in, these are the things each person brought? |

| Ostraca numbers (Links to Database) | Database description (https://dmd.wepwawet.nl) | Search Terms | Date | Citations | Material | Notes |
|--|--|---------------------|--------|---|-------------------------|---|
| | | | | [VI], 14 and 15, pls. 32 and 32a. | | |
| O DeM 00828 + O Vienna H. 01 | Inventory of items from a ruined tomb. After the survey, the tomb is said to be sealed in the presence of witnesses. | medicine; oil; sgnn | Dyn 20 | Grandet, <i>Ostraca Deir el-Medineh</i> VIII, 11, 76, 212 (O. DeM 0 0 828); Kitchen, <i>Ramesside Inscriptions</i> V, 504–505; McDowell, <i>Village Life in Ancient Egypt</i> , 69–72 no. 41. | pottery (reddish-brown) | Unguent pot; scenting material (<i>ḥtf</i> : <i>Wb</i> I, p. 144; <i>Wb</i> I, p. 23:7, general word for incense). More commonly attested in Ptolemaic period. |

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