

1 Ceramics as Dataset

Egyptian history is typically defined by an arc of pharaonic power. The terms we use for Egyptian history are inherently political terms following the rise and fall of the royal house and assigned by modern scholars. The omnipresence of royal power is dictated by the textual record and appears to accord nicely with the tombs and temples that have, until recently, dominated Egyptian archaeology (Manning, 2013: 61–62). Yet as Egyptian archaeology increasingly addresses ancient Egypt settlements (see Moeller, 2016) and our understanding of the material record becomes more careful and nuanced, it is evident that a history of the royal house is not synonymous with Egyptian social history.

The discipline of history leans on textual data, but for much of the ancient Egyptian past that dataset is extraordinarily limited. Expanding our understanding of Egyptian society and the players within it thus requires that we look, too, at the archaeological record. The Egyptian archaeological record is diverse and arguably dominated by ceramics.¹ There are more potsherds than mummies or stelae or statues; more even than lithics, or beads, or animal bones. To ground this statement in figures: during three weeks of excavation in three 5 m × 5 m units at the Old-Middle Kingdom settlement site of Kom el-Hisn in 2018, we netted 86,964 sherds weighing a total of 1,616 kg (1.78 US tons). To quantify it in another way: when we packed up the artifacts at the end of the season, we packed over 120 sacks of ceramics and only 4 sacks of nonceramic finds. While necropolis excavations yield fewer pots, pottery can still be prolific: for example, the Abusir tomb of Werkaure yielded at least 2,144 individual vessels (Arias Kytarová, 2014: 71). Of course, ceramics are better preserved in the archaeological record than other containers, such as basketry, and many artifacts are lost to us through decay, reuse, or accident. Regardless, the abundance of the ceramic corpus at all sites, at all periods, is a direct indicator of two things: the fundamental nature of ceramics in ancient Egyptian lifeways and the critical need to incorporate ceramic data into social archaeological inquiry to further understanding of daily life, economy, and trade – among other activities.

However, the amount of ceramic material is not proportionate to its study; rather, its abundance is one of the greatest deterrents to proper recording, publication, and research. Study of the material requires a team of people led by qualified experts, presence of storage facilities, and access to labs. Ceramic study thus requires both short- and long-term visions for recording and analysis. This Element will illustrate the importance of ceramic analysis to forward a full

¹ Though there are nuanced differences between the terms *ceramic* and *pottery*, practical use in Egyptian archaeology uses both interchangeably, as shall I. (For example, *ceramicists* are also *pot people*.)

reconstruction of ancient Egyptian society, presenting research questions applicable to pots and sherds and methods that are being used to provide some answers. It is not a research text but rather a guide for how to think about ceramics and, indeed, about mundane artifacts in general. Common and repetitious artifacts allow one to deduce and analyze social norms. In pottery-producing societies, pots are used to perform fundamental tasks (cooking, trade and exchange, ritual). A society's production and use of pottery is motivated by choices made at the individual, local, regional, and state level, allowing archaeologists to apply ceramic data to a host of differently scaled social questions. This Element approaches ceramics not as individual objects of utility or beauty (indeed, most of them are quite unattractive), but rather as a composite dataset that provides interesting answers to social questions. Ceramic analysis, then, is not a niche avenue of analysis. Rather, it is fundamental to social archaeological work.

I come to write this Element because, after near twenty years of working with ceramics in the field, I have seen how differently ceramics are prized and handled by different projects. The range is great, with some projects doing but the barest recording of ceramics or assigning the task to untrained student labor, to other projects where a professional ceramicist oversees a team of individuals to sort, record, and analyze the material. Yet in all cases ceramics are fundamental to archaeology and key to so much social interpretation. By highlighting the value of ceramics as objects comprehensive and key to Egyptian history, more than simple chronological indicators, I hope to also forward an argument for ceramic research to be integral to and supported within all archaeological field projects.

1.1 Ceramic Research and Egyptian Archaeology

Ceramic analysis in Egypt was formalized relatively recently, marked in part by the publication of *An Introduction to Ancient Egyptian Pottery* (Arnold and Bourriau, 1993). Important work certainly predates this text – such as *Studien zur altägyptischen Keramik* (Arnold, 1981) and Petrie's far earlier (1901) pioneering work on ceramic seriation – but *An Introduction to Ancient Egyptian Pottery* offered standardized terminology for ceramic manufacture and materials, providing a language that could be applied broadly to Egyptian material. By highlighting the importance of manufacture and fabric, the text elevated these traits in the discourse. Thus, the field of Egyptian ceramics was born, mostly as a categorical, descriptive endeavor.

Study of archaeological ceramics was, in general, a late bloomer in archaeology across the globe. It was more delayed in Egyptian archaeology, most

likely due to the high levels of preservation in the Egyptian material record. The drive to study potsherds is certainly dampened when one has statues, monuments, texts, and even minutia such as desiccated bread to analyze. Elsewhere in the world, where the historic and material records were not so robust, theoretical approaches to archaeology were key to moving from recording artifacts to understanding culture. For prehistorians, ceramic study was innovative at an earlier date. Material properties, identification and typology of ceramic wares and types, and scientific analyses were introduced to the archaeologist in Anna O. Shepard's *Ceramics for the Archaeologist* (1956), over thirty-five years before such topics would be distilled for an Egyptological audience. Prudence Rice's *Pottery Analysis* (1987) continued technical discussions of material and characterization while expanding into anthropological discussion of style, economics, distribution, and ethnography. *Pottery in Archaeology* by Clive Orton and colleagues (originally 1993, reprinted as Orton and Hughes, 2013) provided a practical handbook with the latest technologies used in ceramic study as well as a guide to establishing methods and workflows for field processing of sherds. For the budding ceramicist, these texts provide fundamental groundwork for *how* to think about pottery.

In Egyptian archaeology, ceramic analysis ca. 2021 AD is quite active. Excavation monographs commonly dedicate chapters to the pottery (e.g., Raue, 2018b; Arias Kytarová, 2014; Köhler, 2014a; Arnold, 1988a, 1988b). Alternately, some sites offer monographs dedicated to ceramic finds that are forward understandings of a site's chronology and can include theoretical interpretation (e.g., Bourriau and Gallorini, 2016; Rzeuska, 2006). Egyptian ceramicists gather at conferences to discuss their material and publish the proceedings (e.g., Bader et al., 2016; Bader and Ownby, 2013; Rzeuska and Wodzińska, 2009). Handbooks present guides to the ceramic corpora of specific periods (e.g., Schiestl and Seiler, 2012a; Wodzińska, 2009). Two stand-alone journals are dedicated to Egyptian ceramic research, both published by the Institut français d'archéologie orientale du Caire: *Cahiers de la céramique égyptienne* and *Bulletin de liaison de la céramique égyptienne* (also called *Bulletin de la céramique égyptienne*). Egyptian ceramic research is also published in broader archaeology journals and edited books.

Egyptian ceramic studies to-date yield excellent and broadly published research. But we can go further. Egyptian history specifically is made richer and more multidimensional by applying ceramic material to social questions – in other words, by viewing ceramics as data and working with them within a theoretical framework, building upon the work that has come before. Integrating ceramic research into social historical and social archaeological research, however, means ceramic data need to be put in conversation with all

other types of information and specialists. This presents two additional challenges. The first is integrating ceramics firmly into all fieldwork. As will become apparent through this Element, many of the social analyses require quantification and careful recording of the sherds. Others require lab analyses. Both necessitate time and labor during a field season and afterward. Fundamental to this is more ceramicists! Ceramicists can work with excavation directors (and vice versa) early in a project's creation in order to create appropriate social research questions, plan for ceramic teams, and build them into research programs from the very beginning. These conversations, of course, require that all parties understand the values and outcomes of ceramic research to social archaeology. This brings us to the second challenge: ceramic work must be presented to a broader audience than just ceramicists to best impact reconstructions of Egyptian society. We can address a broader audience as well by turning ceramics on their head, placing the material second to the social questions we choose to address. This Element addresses those goals by highlighting ceramic case studies that forward social analyses, with the aim of addressing archaeologists, students, and the general public to showcase the value of these humble materials.

1.2 Studying Ceramics: Practical Concerns

Ceramic research can be assembled from primary data collected in publications, but the quantity and range of material varies widely between texts. Museums are another locus for ceramic data, though they rarely hold pottery fully representative of archaeological contexts. Active archaeological work provides the best opportunity to build a statistically relevant dataset that can provide a foundation of testable hypotheses. Ceramic research thus needs to be integrated into field programs. The director and ceramicist(s) must have clear understanding of the project's research questions and aims in order to build the necessary team and plan a suitable methodology, while respecting the project's budget.

The first step to identifying methodology is to determine the type of project. Ceramic preservation varies by project and site, meaning that no one methodology suits every project and not all questions can be answered by every corpus. Material will be dependent on archaeological project type (excavation or survey) and the type of site (settlement or cemetery). All things being equal, pottery from stratified excavation contexts can answer more detailed questions than pottery collected during archaeological surveys as it comes from more secure contexts allowing for diachronic analysis. Excavation will also tend to yield more ceramics. Surveys, though, are far from unimportant. Archaeological surveys allow for the discussion of broad landscape use,

variation, and change over time; survey ceramics provide important indicators of chronology and function. Surveys tend to yield fewer ceramics, potentially eroded, as all finds come from the surface.

It is also important to recognize the type of site at which you are working and the resultant variation in ceramic preservation. The ceramic record at settlements and cemeteries is the result of different activities and depositional processes; the ceramics will differ by type of site and will allow for different questions to be answered (Bourriau, 1986–87). Pottery from tombs is more likely to be intact as they were part of an intentional deposition. The settlement record is full of sherds, rather than complete vessels, as most settlement deposits are dumps or fills. The vessels must either be reconstructed or the sherds recorded and analyzed in manners that account for their fragmentary state (Bader, 2016, 2010; Orton and Hughes, 2013). Sherds offer an additional challenge as one cannot always be certain of the type or size of the original vessel; accordingly, many of our published ceramic corpora focus on documenting complete vessels found in tomb contexts (e.g., Rzeuska, 2006; Reisner and Smith, 1955).

Before going into the field, one must establish research questions; these inform both methodology and sampling method. For example: at Elephantine, I am interested in cooking patterns and the relationship between wares in an assemblage; data on blackening patterns and body sherds will aid understanding both of those issues. Research questions should be established by the ceramicist in conversation with the director. Both people bring important perspectives to the table. The director understands the overall vision of the project; they will inevitably have research questions that they hope the ceramicist will help answer. The ceramicist as a specialist knows their material thoroughly; by understanding pottery they will understand what it might be able to say. Both will also have an understanding of the practical realities of processing and storage and what one might do within those limitations. Good questions come from director and ceramicist working together. Strong questions also arise from collaboration across all the team members of the excavation, feeding multivariate datasets into complex reconstructions of ancient activities.

When it comes to research questions, the first and most fundamental question that a ceramicist will be asked is to date the deposits and, by extension, the site. It is common to assign a date to finds, from architecture to human remains, according to the ceramics with which they were found. Pottery is the cheapest means of archaeological dating. As pottery deposition can occur over long stretches of time, the date of the pottery found within a building might ultimately not accord with the original date of the building. Thus, ceramic dating

should always be used as pottery dates can indicate long periods of primary or secondary use

Pottery may be dated by the change in style in a vessel type over time, something that the reader can likely intuit from their personal ceramics. My own American kitchen yields its best example from my mug collection, including a late 1980's mug (small, decorated with a cartoon Garfield) and a late 2000's mug (huge, decorated with pumpkins, with a Starbucks label on the bottom that I try to ignore). These vessels have styles that reflect their production in different periods. Both size and decoration have changed over time, indicating change in consumption patterns and consumer relationships. Of course, dating is made more complex in that two stylistically different vessels continue in actual use in 2020, reminding us that ceramics actually bear two dates: the vessel's date of manufacture and the date of its final use and deposition.

Dating pottery requires identifying specific ceramic types, understand the types' change over time, and placing the change within your broader corpus. Not all sherds yield dates and so chronological study does not work with the bulk of the material, though of course one must sort all the material in order to identify chronologically indicative sherds. W. M. Flinders Petrie first documented the utility of stylistic change in archaeological dating and the seriation method by which depositional dates might be determined in his study of predynastic vessels (Petrie, 1901). While exact methods have changed in the intervening 100 years, the theory behind seriation remains essentially the same. In cases where the context of the vessel is not clear, such as with archaeological surveys, vessel types are sometimes dated through equation to a like type from another site, preferably nearby, based on morphological attributes. Such dating by parallel can cause conflation in dating, creating a uniform chronology between multiple sites and eradicating any time lag or differentiation in the use of a type. Accordingly, paralleling is best taken as providing only *potential* dates; certain dates only arise through site-specific dating techniques such as stratigraphy, seriation, or assemblage dating.

The bulk of Egyptian ceramic studies have focused on chronology. But chronology is the beginning, not the end, of ceramic analysis, and chronology will be minimized in this Element. Instead, we will concentrate on functional and social analyses, which must be conducted at entirely different scales from chronological analysis. Functional analyses can be small-scale, limited to a single type (for example, Hendrickx et al., 2002) or even an individual pot; they require detailed knowledge of form, material, contents (when possible), and archaeological context. We can determine the life history of an individual vessel from manufacture to final deposition. Functional analyses thus provide

a window into specific use, whether individual to a single vessel or a single type, allowing us to determine cultural practice at the level of small-scale, repeated action (see also Bader and Ownby, 2013).

“Social analyses,” on the other hand, is a phrase I use here to reflect analyses aimed at reconstructing activities that reflect larger social and institutional relationships within a site and across the country. Such studies can be focused on a carefully limited dataset, sometimes as small as one vessel, particularly when the question at hand is reconstruction of elite trade networks (e.g., Hartung, 2001; Bourriau, 1996). Alternately, ceramic social analyses might strive to reconstruct statewide networks and social practices. Such analyses require a large dataset spanning some space – whether multiple locations within a site or several sites. The required scale means that the ceramics employed best come from multiple excavations or, in some cases, a single large excavation. The data will have been processed by many different ceramicists using many different methodologies, presenting a patchwork of data inevitably including some inconsistencies in terminology and recording.

1.3 The Structure of This Element

This Element is structured around questions about ancient Egyptian society. I will generally limit discussion to ceramics from the Old-Middle Kingdoms (ca. 2700–1650 BC, following Shaw, 2000; Table 1). This choice is one made based on my specialization and familiarity, *not* because interesting and important ceramic work cannot be found from other periods of Egyptian history. I shall front the social questions and make those questions central to our discussions so they may provide food for thought for other points in Egyptian history.

This Element begins by using the Pharaonic state as a reference and seeking to identify diversity under that umbrella. Section 2 approaches the relationship of state and province, treating ceramics as economic indicators for who held economic oversight and power. Different analyses of vessel morphology and volume show how one might approach the question of unification and standardization, highlighting regional difference and local or even individual agency. Section 3 investigates regionalism and identity through the lens of ceramic production, which was regional or even local, taking this to suggest that local identities and economic activities were also locally grounded. Section 4 highlights the challenges in applying the ceramic record to questions of dating, exploring the ties between political and social change. When we study ceramics as indicators of social change, rather than as a time marker in a political/historical chronology, the continuity of the Egyptian lived experience and the agency of Egyptian cities and localities to make bottom-up change becomes

Table 1 Chronology of Egypt to the end of the Middle Kingdom (after Shaw, 2000: 479–81)

Predynastic Period	ca. 5300–3000 BC
Maadi Cultural Complex (Lower Egypt)	ca. 4000–3200 BC
Badarian Period (Upper Egypt)	ca. 4400–4000 BC
Naqada I Period (Upper Egypt)	ca. 4000–3500 BC
Naqada II Period (Upper Egypt)	ca. 3500–3200 BC
Naqada III/Dynasty 0 (all Egypt)	ca. 3200–3000 BC
Early Dynastic Period	ca. 3000–2686 BC
Dynasty 1	ca. 3000–2890 BC
Dynasty 2	2890–2686 BC
Old Kingdom	2686–2125 BC
Dynasty 3	2686–2613 BC
Dynasty 4	2613–2494 BC
Dynasty 5	2494–2345 BC
Dynasty 6	2345–2181 BC
Dynasty 7/8	2181–2160 BC
First Intermediate Period	2160–2055 BC
Dynasties 9 & 10	2160–2025 BC
Dynasty 11	2125–2055 BC
Middle Kingdom	2055–1650 BC
Dynasty 11	2055–1985 BC
Dynasty 12	1985–1773 BC
Dynasty 13	1773–1650 BC

apparent. Section 5 problemizes the population's lived experiences, investigating ethnic identity and household practice. The resultant picture of Egyptian society shows an Egypt composed of local individuals and diverse power networks, where identity was more locally crafted than monolithic. Case studies will come from throughout Egypt (Figure 1). For those readers less familiar with ceramic or archaeological terminology, a short Glossary is included at the end.

Sections are arranged from the public (economy, regionalism and state control, chronology and cultural change) to the private (ethnicity and domestic life). To an extent, the questions are also arranged by scale. Thus, the data required for addressing regionalism and state control, as well as economy, must

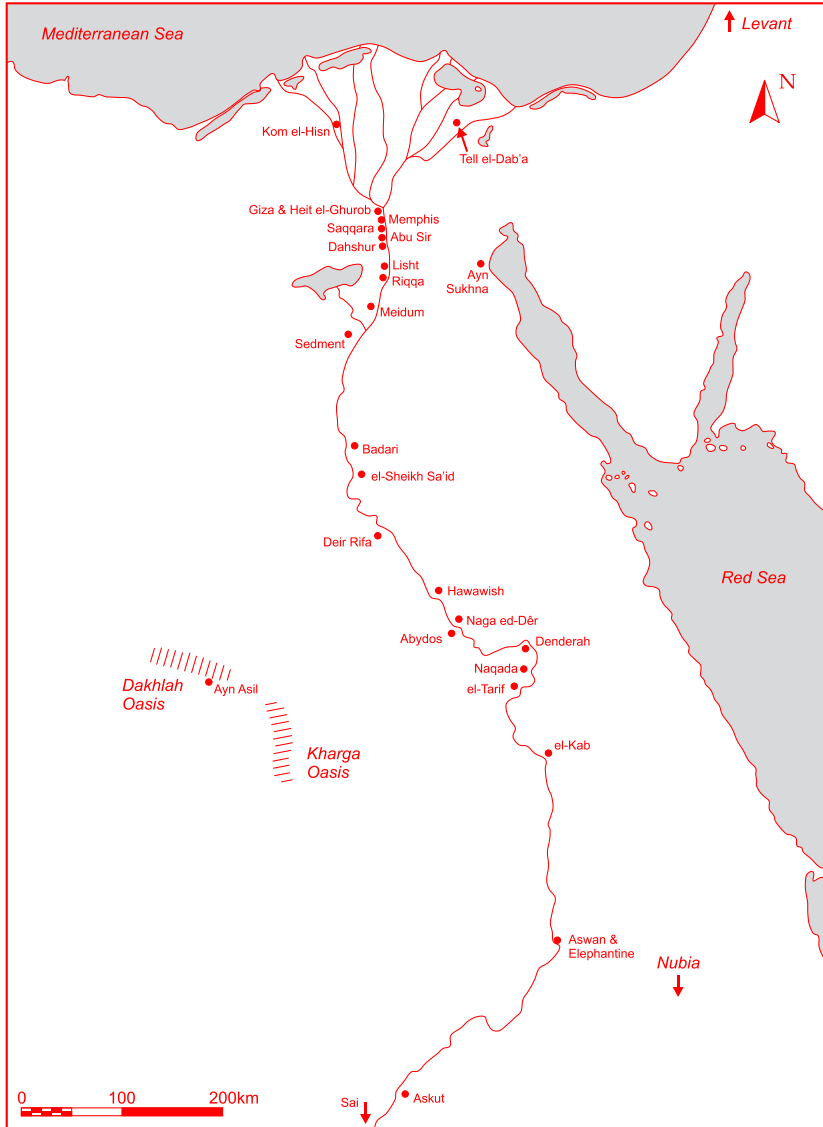


Figure 1 Map of Egypt and Lower Nubia with sites discussed in text.
 (drawn by David S. Anderson)

come from multiple sites across the country. Comparison allows investigation into how sites and regions might have been networked together. Alternately, questions of ethnicity and private life might be answered with the material from one site, perhaps even just from one house. Of course, even then comparative data is useful and helps create a context in which to understand one's finds. It is

hard to talk about Nubian ethnicity, for example, without having some greater idea and comparative for what “Nubian” material culture looks like. But still the division remains. The scale of one’s data, combined with the methods employed, will in part determine how one can think about the data and the questions that might be asked.

Functional and social analyses of ceramics present possibilities for reconstructing ancient Egyptian society from its bottom up, rather than viewing the Egyptian masses through the necessarily limited lens of elite text and art. Many questions about Egyptian social organization, identity, and domestic life – to list but a few – await ceramicists for study and answer. I hope this Element challenges how you think about ceramics in specific and, by extension, all things utilitarian and mundane. The lived human experience can be encapsulated by the fundamental, ugly things we use and those basic things we throw away.

2 Integration of State and Province

Egypt as a political entity was a unified state imagined, in the *sema-tawy*, as parts physically united tied around the person of the king (Robins, 2000: 18). The existence of the king defined the existence of the state (Trigger, 1993: 10–13), with the royal house providing conceptual, ideological unity. Under the king served a number of central bureaucrats forming an administrative hierarchy. Their titles are often poorly linked with the actual responsibilities entailed, with much flux in the titles occurring over the millennia-and-a-half under consideration here. These individuals had wealth, allowing them to build the well-decorated stone tombs that survive today that form substantial part of our information about Egyptian society. Elite members of the royal administration served as intermediary individuals, owning land that was worked by members from lower classes and collecting goods from those same individuals (Baines, 2009–10: 117–44; Moreno García, 2001). Patronage relationships tied the elite to lower classes (Campagno, 2014; Warden, 2014; Moreno García, 2013), of whom we have very little direct knowledge.

It is the elite classes that scholars most often treat as the standard bearers of Egyptian culture. The artistic evidence from elite Memphite tombs routinely shows estates farmed by often unnamed individuals who would certainly seem to be reliant upon the work their elite patron provides. These elite individuals owned land throughout the country that was farmed and otherwise maintained by provincial, lower-class individuals. The elite would have collected goods from those same individuals (Baines, 2009–10: 117–44; Moreno García, 2001). As for the base of the hierarchy – small-scale and/or non-landholding farmers, bakers, brewers, potters, butchers, weavers, and the like – these individuals are