CHAPTER 1: INTRODUCTION

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I. KOM EL-HISN: GENERAL RESEARCH CONTEXT

The Kom el-Hisn Archaeological Project began in 1981, when Karla Kroeper, Michal Kobusiewicz, the late Lech Krzyzaniak, and I (RJW)] retraced Junker’s (1928) survey of archaeological sites in the western Egyptian Delta. We hoped to find a site there that offered archaeologically accessible remains of a community occupied for all or most of the Old Kingdom Period (c. 2700-2160 BC). We were also looking for the archaeological remains of a community that we anticipated would provide a useful comparison with evidence from Memphis, the presumed administrative capital of Old Kingdom Egypt (Map 1.1, 1.2, Photo. 1.1).

Insert Map 1.1. illustrates the distribution of some other notable Old Kingdom settlements in the Delta. Most of these sites, like Kom el-Hisn, were occupied in several periods, not just the Old Kingdom.

Our interest in such a comparative study stemmed from the imbalance between the significant textual evidence concerning the Old Kingdom Delta, compared to the paucity of archaeological evidence. Junker’s survey in combination with research by Helck (1978), Zibelius (1974), and others had used ancient texts to set Kom el-Hisn in its Old Kingdom historical context, but no systematic excavation of Old Kingdom Delta residential had been done—or at least had not been fully published. We were particularly interested in trying to understand how the Old Kingdom administration—presumably centered at Memphis—interacted economically and administratively with important provincial Delta communities.

 Centuries of research indicate that ancient states and civilizations throughout the world all converged on a simple solution to the innumerable difficulties of controlling territorially large and socioeconomically complex polities: they all established some communities, or urban sectors, that specialized in some economic, political, or religious functions, and then integrated these and other communities and areas in a network controlled to some extent by a multi-level and hierarchically-arranged bureaucracy.

In the case of Egypt, textual sources and some archaeological data indicated, for example, that the Old Kingdom state developed efficient methods to confiscate and funnel agricultural wealth from the Delta to the state institutions at Memphis. Yet little was known about these methods, or about what principal commodities were transported between these communities, or how they were physically moved. Even less was known about the internal social and functional composition of these provincial communities. We hoped that a thorough analysis of floral and faunal remains, lithic, ceramic, and other forms of artifacts excavated at Kom el-Hisn would help us understand some aspects of the central Old Kingdom state’s relationship to the many small settlements it apparently controlled militarily and administratively. Our research at Kom el-Hisn and more recent work at Giza and Memphis have allowed us to contribute to the analyses of this and similar socioeconomic and political arrangements.

We regret the delayed publication of this report. Any report of archaeological fieldwork published more more than 25 years after fieldwork ceases must include an apology. Our primary findings were published piecemeal in various academic journals, but it is only with this volume that we summarize the full range of the data we collected and our analyses of them. We blame this long delay on the usual suspects. Combining the research results of many scholars into a unified report proved to be a difficult and lengthy process. Also, all of the authors of this volume have had many competing writing projects and fieldwork seasons since our final fieldwork at Kom el-Hisn. As the most laggard of them all, I (RJW) must personally apologize for this situation.

**A. Kom el-Hisn**

We chose Kom el-Hisn as the center of our research focus for many reasons.

*First*, archaeological and ancient Egyptian textual evidence suggested that Kom el-Hisn might have been a prototypical example of many Old Kingdom rural communities in the Delta. It was, we assumed, one of the many Delta communities that sent agricultural products to Memphis/Saqqara to sustain the workers who were building the pyramid complexes between Abu Sir and Meidum (Map 2.1). As Moen and Wetterstrom noted (1988, Chapter 10 in this volume), several ancient documents directly linked Kom el-Hisn to cattle-raising to supply the state’s needs in this regard. In ancient Egypt, as in all other known ancient states, socioeconomic and political activities were closely linked to religious ideologies. Middle Kingdom inscriptions found at Kom el-Hisn, for example, suggest that the cow goddess Hathor was the principal deity of the locality at that time (Allam 1963:90). Remains of her temple, dating from the Nineteenth and Twenty-Second Dynasties, have been found at Kom el-Hisn. Moens and Wetterstrom note that evidence for the Hathor cult at Kom el-Hisn can be traced back to the Fifth Dynasty (Zibelius 1978). Hathor was also worshiped at Kom el-Hisn in the form of the sacred milk cow Sekhat-Hor, a protectress of cattle, whose cult here may go back even earlier (Perdu 1982:255-66). Other documentary evidence, including inscriptions and, seal impressions underscore Kom el-Hisn’s links to cattle-rearing and religious significance (Helck 1974:154; Zibelius 1978:149-51; Petrie 1900:20; Montet 1946:196; Kaplony 1963:134).

 In spite of all this persuasive evidence, before we began excavating Kom el-Hisn Kroeperwe also considered an alternate possibility, that Kom el-Hisn developed largely independently of Memphis’ influences as a regional center, and that its socioeconomic and political functions were only modestly influenced by the needs and functions of the central state at Memphis.

A *second* reason for choosing Kom el-Hisn was that in the Old Kingdom Period, Kom el-Hisn apparently became—or was established—as a *nome* capital. The term “nome” is from a Greek word *Νομός* (“nomos”), which is understood to mean a “district,” a “province,” or some other sub-national, regional, administrative unit. When the Greeks occupied Egypt, the Egyptian word for such divisions seems to have been “*sepat*.” Nomes were areas of land whose borders were defined largely on the basis of geographical features, such as specific flood basins in the Valley, and by Nile distributaries in the Delta. Names for nomes in Upper Egypt have been traced back into the early Predynastic Period. Moens and Wetterstrom note (1988, citing Corteggiani 1979:26-29). ) that a 1st Dynasty palette in the Cairo Museum shows cattle, donkeys, sheep, and trees from *T3-£hnwt*—an ancient Egyptian name for Libya—which may well have been a reference to Kom el-Hisn.

In the Old Kingdom, Kom el-Hisn appears to have been the capital of the IIIrd nome of Lower Egypt (Map 1.2). Each of ancient Egypt’s nomes contained a religious and administrative center as well as smaller towns and villages. Egypt’s nome structure changed markedly at various times, and thus the nome divisions illustrated in Figure 1.2 may be only a rough approximation to the Old Kingdom nomes.

Throughout the Old Kingdom Period, nome capitals appear to have been the primary element in the state’s administrative structure. Martin-Pardey (1999:573) argued that in the Middle Kingdom, however, the nome structure was replaced by administrative units that typically involved a town and its immediate district.

The research significance of Kom el-Hisn as a nome capital, in the context of our analyses of this site, lay in part in clay sealings and other administrative documents (Kroeper, Chapter X in this volume) relating directly to communications between the central Old Kingdom State and its presumed representatives at Kom el-Hisn.

A *third* aspect of Kom el-Hisn that interested us was its potential to produce evidence regarding dynastic methods of exploiting agricultural lands. Most of the texts describing land use in ancient Egypt come from the New Kingdom and Late Periods, but it is far from clear how land was owned, farmed, exploited, and taxed during the Old Kingdom. In selecting Kom el-Hisn for intensive excavations, we considered the possibility that the Delta’s agricultural resources had been collected at provincial centers during the Old Kingdom, for trans-shipment to Memphis. Kom el-Hisn, Mendes, and Bubastis (Map 1.1) all were, apparently, nome capitals during all or most of the Old Kingdom Period. From these centers, agricultural resources could have been sent directly up-river or over-land to Memphis. An alternative possibility, of course, is that each of the scores, or perhaps hundreds, of Old Kingdom Delta communities sent their agricultural products individually and directly to Memphis.

*A fourth* reason we focused on Kom el-Hisn is that archaeological and epigraphic information indicates that it had been an important community during several crucial transformational period in Egypt’s ancient history (Table 1.1.). The establishment and maturation of the Old Kingdom State in the 1st through the 4th Dynasties, during which the central Egyptian State located at Memphis, appears to have developed institutions and control mechanisms that gave it a near-monopoly on “wealth” and administrative power throughout Egypt. This highly centralized and powerful Old Kingdom State, however, apparently began a slow decline in the 5th and 6th dynasties. Traditionally this decline has been assumed to be evident in the reduced scale and costs of the pyramids built in these dynasties, as well as the rise of politically and economically powerful families in the provinces. It is not necessarily true that drastic reductions in spending on monumental architecture are a sure and certain reflection of the state’s wealth, control, and efficiency, but investments in monumental architecture did, in fact, seem to decline after the 4th Dynasty. In any event, this devolution, at least as described in traditional histories of Egypt, culminated in the near-disintegration of the central state amidst decades of civil wars in this “1st Intermediate Period.” In this era, Theban and Middle Egyptian forces contended for dominance for decades before the “restoration” of the state, in the sense at least of the state’s renewed control of the entire territory of Egypt. This was accomplished in the 11th Dynasty of the Middle Kingdom Period, by King Nebhepnetra Mentuhotep II (2055-2004 BC). During the 11th and 12th Dynasties the administrative capital of the Egypt State was moved from Thebes to the region near al-Lisht (Map 1.1) (e.g., Seidlmayer 1987).

Evidence we recovered from Kom el-Hisn strongly suggests that Kom el-Hisn was occupied throughout the national political fluctuations of the First Intermediate Period and Middle Kingdom (Table 1.1).

Finally, Kom el-Hisn drew our t attention because its also possible that Kom el-Hisn was established not just as an exporter of agricultural goods but also as a defensive fort on the Libyan frontier. Kom el-Hisn, like many other ancient Egyptian communities, must be assumed to have served several different functions. As Figure 1.3 suggests, in later periods Kom el-Hisn likely was one of a series of fortified towns along the Libyan border.

**B. Memphis**

Although much of our project design involved Kom el-Hisn’s presumed relationships with Memphis, when we began excavations at Kom el-Hisn in 1982 comparatively little was known about about Old Kingdom Memphis or Saqqara, aside from thee pyramid complexes. Much of ancient Memphis is still buried deeply under later occupations; also, its main residential areas during the Early Dynastic and Old Kingdom Periods are, in many places, under the area’s present water table. The Nile’s course near Memphis has shifted many times, and thus its archaeological record is highly complex (Jeffreys and Smith 1988). Some additional work has been done at Memphis by the Egypt Exploration Foundation (e.g. Jeffreys, D.G. 2006), but the composition of the Old Kingdom community there remains poorly known. We assumed, nonetheless, that Old Kingdom Memphis was a “preindustrial city,” in Sjoberg’s sense (1965). Such a city is defined more by the variety and range of activities performed within in it, than by the sheer number of its inhabitants. Various ancient texts about Memphis indicate that it was “functionally complex,” with a large and highly specialized contingent of crafsmen and other workers.

In a serendipitous development for us, at the same time that we were excavating Kom el-Hisn, Mark Lehner and other members of the Giza Plateau Mapping Project (see also *Ancient Egypt Research Associates* [“AERA”] were also surveying and excavating large areas of Old Kingdom occupations at Giza. From the perspective of our research design and goals, our research would have been much less important and relevant had it not been for the past twenty years of research that Lehner’s group conducted at *Heit el-Ghurab*, an area of the 4th Dynasty “Workers’ Village” at Giza (Lehner 1983a; 1983b; 1985; 1997; 2012). Lehner and members of his research group have gradually revealed the impressive size and architectural complexity of this settlement, which is just southeast of Menkaure’s pyramid at Giza. This village was apparently constructed by and for the workers who built the Menkaure’s pyramid and temples (Lehner 1983a; 1983b; 1985; 1997; 2012) Hawass, Lehner, and Wetterstrom, eds. 2006).

Our analyses of Kom el-Hisn have benefited from the several contributors to this volume who have analyzed materials from both Kom el-Hisn and Heit el-Ghurab (Wenke, Redding, Wetterstrom, Sterling, and Wodzinska.

The evidence from Heit el-Ghurab, when combined with the results of other research at Giza (e.g., Reisner 1942, 1955; Lehner 1997; der Maneulian 1999; Roth 1993; Roth et al. 2001; Schmitz, ed. 1985), offers a massive amount of information, including descriptions of numerous types of artifacts, floral and faunal remains and their relative frequencies in specific strata.Yet comparing Memphis and Kom el-Hisn on the basis of such data involves several difficulties. Such a comparison would be most informative if the materials being compared are of contemporaneous age. It is likely that the occupations at Kom el-Hisn and Heit el-Ghurab overlapped in time for perhaps a century or more, but we cannot be certain that this was the case. Some ceramicists believe that the dynasties of the Old Kingdom can be differentiated on the basis of pottery styles. No exact, step-by-step series of measurements, unfortunately, has yet been demonstrated to be an exact predictor of the dynasty in which a given sherd was made and used. Nonetheless, it certainly is possible that ceramicists who have vast experience with Old Kingdom pottery can identify with some precision changes in stylistic elements that seem to indicate the dynasty in which some ceramics were made (see Chapters 9-12, this volume).

Assessing the degree of contemporaneity of these two settlements is just one of the problems we faced in our analyses. Both Kom el-Hisn and Heit el-Ghurab were “special-purpose” sites that may have functioned for different purposes at different times. Kom el-Hisn’s populace, we conclude, was probably specialized in raising cattle; but Heit el-Ghurab appears to have been a residential area built to house and feed the people building Menkaure’s pyramid. But Kom el-Hisn, we assumed for purposes of analysis, was built and maintained primarily for the purpose of housing the workers who were exporting cattle and other agricultural resources to Memphis, or to the 5th and 6th Dynasty pyramid construction projects at Saqqara.

One significant similarity between Kom el-Hisn and Heit el-Ghurab is that they, and many other Kingdom settlements that included religious structures, apparently underwent a process of “villagization” in which ordinary settlements were built in, or on, or around sacred architecture (e.g. Kemp 1989: Figure 51, Menkaure’s Valley Temple). Both Kom el-Hisn and Heit el-Ghurab appear to have undergone this process.

In general, nonetheless, we compared Kom el-Hisn and Memphis on the basis primarily of their floral and faunal remains, ceramics, lithics, inscribed mud sealings, architecture, and other kinds of artifacts. In this volume we summarize our interpretations of data from three seasons of archaeological research at Kom el-Hisn (in 1984, 1986, 1988).

A. Kom el-Hisn in Regional Geographic Context

“Kom el-Hisn” is Arabic for “hill” or “mound of the fortress.” This name may refer to the large mud brick enclosure wall around the site, likely built in the New Kingdom Period (Table 1.1). Parts of this wall persisted into the early AD 1900’s, but almost all traces of them have since disappeared.

 Kom el-Hisn’s ancient Egyptian names may shed some light on its age and functions. These include such variants as *Yamu, im3w.[trees]* (Helck 1972-75: Vol. 1: pp. xii-xxxiv), *Imu*, and *imA*. As noted previously, Some of these names are derived from the principal deities worshipped at the site, Hathor and Sekhmet. The names *Imu*, or *imAw* in ancient Kemetic languages may refer to the plural of a species of trees, but other scholars are dubious about such inferences. Spencer (2008), citing Gardiner (1947:166), suggests that the “…ancient Egyptians evidently associated Kom el-Hisn with the Nile, describing it as that ‘which comes forth from the Great River’ (*itrw ‛x [x=backwards 3*]). And as noted previously, Kom el-Hisn was referred to as in the “Libyan” nome, perhaps as early as late Predynastic times.

 Kom el-Hisn is located near the western edge of the Nile delta, about midway between Cairo and Alexandria (Map 1.1). It is now about 10 km west of the Rosetta branch of the Nile, but in ancient times it was located on or close to the bank of a now extinct Nile distributary or lake. Today this site is surrounded by many hectares of cultivated land, and several inhabited villages extend over the different lobes of the large “gezira” (Arabic for “island” or “peninsula”) on which Kom el-Hisn’s ancient settlements were built (see Photo. 1.1). “Gezira” is a term applied to the mounds of mixed sands and gravel created by massive Pleistocene floods, when the Nile was a much more energetic river than it has been for the past c. 10,000 years. These floods deposited large loads of sand and gravel in the Delta and even far into the Mediterranean Sea. Said suggests (1993:70) that the geziras that we see today were carved out of this Pleistocene flood plain. The relief created by these mounds resulted in them becoming stabilized sand dunes during the more arid Holocene.

These mounds are widely distributed across the Delta, especially in its southern half. Most ancient dynastic occupations in the Delta were built on geziras, no doubt to avoid the annual floodwaters on lower adjacent land. These geziras, or “koms” also were repeatedly built upon, perhaps, to increase the area of habitable land above the level of the annual floodwaters. Rebuilding on the same area also reduced the amount of land taken out of cultivation for occupation. Even today large areas of the Kom el-Hisn Gezira are uncultivable sand and gravel and, perhaps, were never farmed or inhabited. Kom el-Hisn’s *known* ancient occupational history is described in Table 2.1.

[Insert Photo 1.1]

* 1. Overlaid on this photo in black are the areas excavated by Hamada and Farid in the 1950’s. The green rectangle represents where the New Kingdom temple once stood (it is now a shallow pond covered with marsh vegetation. In Chapter 2 Anthony Cagle reviews and interprets the evidence provided by Hamada, Amir and Farid concerning the contents of the graves they excavated.

# B. Kom El-Hisn: Ecological and Geological Context

 In Chapter Two of the volume, Paul Buck reviews the geology and cultural ecology of ancient Kom el-Hisn. To introduce this subject, consider the following observations:

 *First*, evidence suggests that it was either on or near an extinct major branch of the Nile, or perhaps a lake or lagoon (Redding *in press*), created by the Nile’s northward flow. Extensive geological evidence during the Old Kingdom era indicates that at times between about 4000 and 1500 BC as many as nine major Nile branches, or distributaries, flowed through the Delta (Map 2.; see Cagle 2001:38; Tousson 1922; Butzer 1976; Adamson et al. 1980). Tousson suggested (1922) that a distributary smaller than the Canopic, which he called the “Alexandria branch,” flowed along the western boundary of Kom el-Hisn and emptied into Lake Maryut, which formed just south of Alexandria.

 *Second*, the Kom el-Hisn’ gezira (photo 1.1) is irregular in shape, and centuries of looting and agricultural encroachment make it difficult to estimate the size of its settlement area in *any* period of antiquity. But for nearly 4500 years people have built their residences on parts of the Kom el-Hisn gezira, buried their dead on it, and extended their farm fields on land adjacent to it. They often removed earlier occupational remains from the site to expand and fertilize their cropping areas—a fact demonstrated by the relative height of the adjacent farmed fields and the many ceramics of different periods one finds in these fields.

The area illustrated in Photo 1.1 is just one area of the gezira there, with other gezira deposits extending under several nearby contemporary villages. Today the part of the gezira that apparently has never been farmed is about 700 meters long by 400 meters wide and rises to an elevation of just over seven meters above sea level (Buck 1990:55, Said 1993:70). The area of our excavations is shown in Photo 2.1. These occupational deposits are up to 3 meters thick and rest upon a topographic saddle composed of Pleistocene sand and gravel.

[Insert Photo 2.1]

Photo 2.1. Google Earth aerial photo of Kom el-Hisn. The lighter areas are remnants of the original gezira. Near the center of the gezira is the “rest house,” built by the Egyptian antiquities service. Note the small villages on the periphery of the gezira. These probably were built on top of the remnants of dynastic communities built on part of Kom el-Hisn’s *gezira*. The darker areas on the gezira are locations that have been excavated or looted. Excavations leave these locations closer to the water table; thus reeds, “camel thorn,” and other plants grow well there.

 *Third*, Kom el-Hisn’s occupational record for the period of c. 2500-1800 is, to a considerable extent, archaeologically *accessible*. Buck suggests that because of the topographical relief represented by the gezira, the alluvial deposits that typically overlie Old Kingdom occupations elsewhere in the delta are not present. From consolidated gezira deposits on the eastern side of Kom el-Hisn, he infers (1990:68) that these deposits represent ancient levees of the ancestral Canopic branch of the Nile that may have flowed to the east and northeast (see Map 2.1 for the hypothesized location of the Canopic branch). Kom el-Hisn’s Old Kingdom deposits are at or near the present site’s surface, which indicates that they are possibly the terminal occupation in a large area on the southwestern gezira. An alternative possibility is that the *sebakhiin* (Arabic name for the people who transfer rob archaeological sites of occupational deposits to fertilize and expand their farm fields) and other looters have cleanly cut off later occupations and have left the site with Old Kingdom wall stubs and other features revealed on the present site’s surface.

 Our augerings revealed that there is at least a meter or more of occupational material beneath the site’s water table in the area we excavated. But below the water table we reached clean, sandy, gezira deposits with no evidence of cultural remains in them (Photo 4.1). Sherds recovered from these auger samples suggest that the meter or more of occupational deposits that lie below the water-table are from the Old Kingdom Period—although we did not recover enough artifacts to be certain of the age of these deposits.

 Kom el-Hisn cannot be fully understood in terms of just its own archaeological record. We must consider its role in the socioeconomic and political landscape of the entire Delta. It was a tiny settlement, for example, compared to some other Old Kingdom sites in the Delta. *Tell er-Rub’a* (Greek “Mendes”) and *Tell Basta* (Greek “Bubastis”), for instance, may have been regional centers to which Kom el-Hisn was also linked. But both are far to the east of Kom el-Hisn (Map 1.1), and the exchange of goods and administrative information among these Old Kingdom settlements would probably have been much greater *along* Nile distributaries, rather than *across* east-to-west land routes. An east-west route would have had to cross up to nine different distributaries. Thus, over-land connections among important Old Kingdom Delta communities might have existed, but probably were of minor importance because of the comparative ease of moving large cargoes and many people along Delta water-ways.

 Old Kingdom Kom el-Hisn shared some internal settlement patterns with these larger sites. The remains of human occupation at Kom el-Hisn, like those at most dynastic Delta communities, were distributed across the higher portions of its gezira, above the highest levels of the annual floods. Dynastic cemeteries are often found on the highest parts of the gezira (e.g., Kroeper and Wildung. 1985), while the remains of residential areas typically are located lower, on the sides of the mounds. Kom el-Hisn may roughly fit this pattern, but there is something of a mystery about this: no definitively Old Kingdom graves have been found at the site, despite the incontrovertible evidence of a large and long-term settlement during this period. Our excavations, however, showed that an Old Kingdom mud-brick wall was built around the highest areas of the site, the summit of which is occupied (in 2009) by a small contemporary hamlet of fewer than 75 people (in the southwest corner of (Photo 2.1). At about 8 m in height, the mound underlying this village is the highest point in the entire area covered by the Google photograph. The existing buildings of this current hamlet extend over about 3 hectares. Perhaps the cemetery for the earliest inhabitants of Kom el-Hisn is located beneath this present-day hamlet, along with remains of temples, and other constructions of the Old Kingdom and Early Dynastic age. We would expect that occupations of later periods could also be preserved in this area, as well. This hamlet may also cover some of the mud-brick fortifications of the community in periods after the Old Kingdom era. If the Old Kingdom burials are not under this contemporary village, perhaps they lie under today’s farm fields.

 Another aspect of Kom el-Hisn’s geographic location and site composition concerns Egypt’s cultural contacts with its Western neighbors. We know little about the relationship of the western Delta with the “Libyans,” but it was probably an ancient and abiding one. In texts Kom el-Hisn was sometimes referred to as the “*the Fortress of the West*.” The Siwa Oasis (Map 1.1), now part of modern Egypt, was at times considered part of Libya, and the Berber *Siwi* language is said to be still spoken there by some. Libya itself, however, was virtually *terra incognita* to the Egyptians. They did distinguish various tribes as Libyans, however, including the *Tjehnu, Tamahu, Libu* (o*r Ribu*)*,* and the *Meshwesh.* In our excavations, however, we found no trace of ceramics or other artifacts that might be of Libyan origin. Perhaps we simply did not recognize them, but most of the sherds from our excavations of Kom el-Hisn fit well into the categories of pottery found elsewhere in late Old Kingdom Egypt. The sherds we recovered from First Intermediate Period are harder to classify, but those of Middle Kingdom age also fit well within the national style canons of those periods.

Among the oldest known Egyptians documents that refer to what is now western Libya date to [Ramesses](file:///C%3A%5Cwiki%5CRamesses_II) II and his successor [Merneptah](file:///C%3A%5Cwiki%5CMerneptah), rulers of the 19th Dynasty (c. 1295-1069 BC). Later the name appeared frequently in dynastic texts.

**C. Kom El-Hisn and the Delta: Relevant Previous Research**

 Space limitations here do not permit a detailed review of Egypt’s political and socioeconomic history during Kom el-Hisn’s periods of occupation. Grimal (1991), Shaw ed. (2000), Shaw (2001), T. Wilkinson (2010), and others have published accurate and detailed historical summaries of dynastic Egypt (see also Malek 2003, 2000; Malek and Foreman 1986; Wenke 2009:257-325; Strudwick 1985, 2005; Kemp 1983, 1989; Petrie 1920, 1939).

At the time (1981) of our initial journey through the western Delta, archaeological surveys and excavations there began to increase and expand. Some of these initial research endeavors in the Delta were devoted to documenting the emergence of the so-called *Buto-Ma’adi* culture (Table 1.1, Map 2.1). This culture differed significantly from that of Upper Egypt in artifact and architectural styles, and in other important aspects. Ancient Egypt’s cultural relationships with Mediterranean and Mesopotamian cultures, especially in the context of debates about Mesopotamian cultures’ putative influences on Egyptian cultures, remains an important issue (reviewed in Wilkinson 2010; Wenke 2009; Frankfort 1956). The distinguishing features of this culture were documented, for example, by excavations at the Neolithic-Predynastic site of Merimde Beni Salama, on the western edge of the Delta (e.g., Eiwanger 1982-92; Map 2.1). And research in the northern central Delta at Buto (Tell al-Fara’in) (e.g., von der Way 1988, 1989; Faltings 1996, 1998a, 1998b), and at Ma’adi, in the southeast Delta, near the dividing line between the Valley and the Delta (e.g., Hartung, et al. 2003; Rizkana and Seeher 1984) (Map 1.1), has clarified the processes of development of the Delta’s first complexly organized societies. Also, excavations at Tell el-Farkha resumed in 2009 (Chlodnicki 2011) and provided important new information about Lower Egypt’s culture in the Predynastic (particularly the Naqada IIB/C interval in Upper Egypt). This site also includes occupational remains for the later, Early Dynastic and early Old Kingdom Periods.

Concurrent with these research projects were other investigations that attempted to identify the mechanisms by which the Buto-Ma’adi culture was replaced by Upper Egyptian cultural elements between about 4000 and 2800 BC (reviewed by Hendrickx and Vermeersch 2000; Midant-Reynes 2000; Köhler 1992a, 1992b; Kohler and Faltings 1996; Teeter 2011; Bard 1992, 2000, Bard and Carneiro 1989; Kaiser 1990; Seeher 1991).

Some of these researchers also sought to determine the cultural chronology and characteristics of Lower Egyptian occupations during the late Predynastic and Early Dynastic Periods (e.g., van den Brink ed. 1988, 1989, 1992; van den Brink and Levy eds. 2002; Levy 1993; Goedicke 1988; Wildung 1984; Kroeper and Wildung 1985; Wenke and Brewer 1992; see also Stanley et al. 2003; Coutellier and Stanley 1976; Morenz and Kuhn 2011; Chlodniki 2011; reviewed and summarized in Shaw ed. 2001; Midant-Reynes 2000; T. Wilkinson 2010; Hassan 1988).

During the 1980s and 1990s, the archaeology of *post-*Old Kingdom settlements in Lower Egypt and the Delta also intensified (e.g., Spencer 2008; Bietak 1979, 1982, 1996; Brodie, Coulson, Leonard, and Silverman 1981; Snape 1986).

One might expect that this expansion of research intensity and scope would include the *transition* between the Early Dynastic and the Old Kingdom Period, and then to the features and functioning of the Old Kingdom State itself. Old Kingdom occupations were encountered at many sites (e.g., Buto, Tell Ibrahim Awad), but the research focus at these sites was on earlier occupations. Much of what we know about the Old Kingdom Delta is based on comparatively old research. Previous scholars, for example, excavated large Old Kingdom communities at Mendes (*Tell er-Rub’a*) (reviewed in Redford 2010; Hansen 1967; also see Wenke and Brewer 1992), for example, revealing a great wealth of Old Kingdom tombs, residential areas, and other evidence. And Mendes still has much to offer: as M. J. Adams notes (2009), some unexcavated areas of Mendes appear to have been continuously occupied from Predynastic Period through the Middle Kingdom Period (i.e., c. 4000-1700 BC). In a similar manner, research at Bubastis (*Tell Basta*) by Naville (1891), in the eastern Delta, also revealed extensive Old Kingdom deposits, but these have not been systematically studied and published. Bubastis is known to include *Ka* temples of Teti and Pepy I (Baines and Malek 1980:175), who were Old Kingdom kings in the 6th Dynasty. Thus, excavations of its Old Kingdom levels would provide useful comparative data for our work at Kom el-Hisn. The site is now within the area being studied by the Egyptian Exploration Society, and perhaps future research will illuminate further its Old Kingdom community. Similarly, current and recent research at Quesna, in the central Delta (Map 1.1), has revealed an Old Kingdom mastaba tomb that dates to either the 3rd or 4th Dynasty (Rowland 2011, 2012), and earlier research (Gomaà and Hegazy 2001) uncovered part of an Old Kingdom cemetery there. Current research at Quesna is focused on Late Period occupations, but Quesna’s close proximity to Old Kingdom Memphis suggests that the site’s Old Kingdom occupations could tell us much about the Delta’s socioeconomic and political landscape in relation to Old Kingdom Memphis. Excavations of Old Kingdom occupations at Tell el-Farkha (Chlodnicki 2011), which was apparently continuously occupation from the Predynastic through the early Old Kingdom dynasties, probably would also add greatly to our knowledge of the Old Kingdom Delta. This site, located on trade routes to and from Syro-Palestine, including Canaan, has already revealed much about trade and other cultural exchanges between Egypt and eastern Mediterranean cultures in other periods.

The Kom el-Hisn Archaeological Project was intended, in part, to help fill this partial “gap” in Delta archaeology, by excavating this site in such a way that it could be compared with community at the center of the state, Memphis, and with its Old Kingdom neighbors elsewhere in the Delta.

1. Kom el-Hisn: Previous Research

Before our research project, the Old Kingdom archaeological record of Kom el-Hisn had attracted almost no attention. In fact it is doubtful that any of the earliest scholars even recognized that the site contained an Old Kingdom component. Many scholars, however, have reviewed its history during the later periods of human habitations and constructions at the site (e.g., Petrie 1886; Edgar 1909-1915; Helck 1980; Rössler-Köhler 1884; Breasted 1906: 956; Helck 1972-75: Vol. 1: pp. xii-xxxiv; Allam 1963; Coulson and Leonard 1979: 163-167, 1982a: 213; Brodie et al 1981: 81-85). Baines and Malek 1987: Kirby, Orel, and Smith 1998; 168; R. Wilkinson 2000).

The earliest investigators of this site seem to have assumed that Kom el-Hisn’s greatest significance lay in the inscriptions in a Middle Kingdom tomb on the site, several engraved stone monuments, and the apparent remains of a temple from the New Kingdom era. It is unlikely that Kom el-Hisn itself was the Early Dynastic delta community named “The Estate of the Cattle,” or “Hwt-iHwt.” T. Wilkinson (1999:124) refers to a sealing, dated to the reign of Meryneith, which mentions Hwt-iHwt, citing Petrie (1900 Vol I: plate XX.15), where this sealing is reproduced. Parsons (personal communication) notes that “Amka,” who was a district administrator of the Hwt iHw, and also served under Kings Djer, Djet and Den. He gave only vague references to the geographic location of Hwt iHw.

No inscribed mud sealings or other documents relating to the location of this estate have been found at Kom el-Hisn. Note also that words for cattle are prominent in the names of at least four Delta nomes (Moens and Wetterstrom 1989). Moreover, large areas of Early Dynastic occupations (the period in which the term “Estate of the Cattle” was apparently first used) have been found at several Delta sites, such as Tell Ibrahim Awad (van den Brink 1988, 1989, 1992) and Mendes (Wenke and Brewer 1998; M. J. Adams 2007), but no Early Dynastic occupations have been found at Kom el-Hisn.

Only a small fraction of the site has been sampled, however, so we cannot conclude that the site was not occupied before the Old Kingdom.

 Most of the early fieldwork at Kom el-Hisn was focused on monuments and constructions that were thought to be of religious significance, especially concerning the worship of the gods *Hathor* and *Sekhmet*. “Hathor” is thought to be a Greek corruption of the Egyptian words *Het-Hert* (“the House Above”) and *Het-Heru* (“the House of Horus”). She was a principal deity, worshipped throughout dynastic Egypt. She was associated with the concept of the cow, both as a virtuous maternal figure and as embodied with the ferocity that the Egyptians witnessed in a cow’s protection of its offspring. Hathor was also associated with joy, music, dance, sexual love, pregnancy and birth.

Amenemhet II built a temple to Sekhmet-Hathor at Kom el-Hisn in which Sekhmet and Hathor are referred to as the "Mistress of Imau.” Kom el-Hisn, as noted earlier, was on or near the departure point from Egypt to Libya and this temple was build to enlist the goddesses’ help in defending the Libyan frontier. As Keys notes (2006), Sekhmet was called the “eye of Ra,” among other names, and was represented as a lion-headed goddess, sometimes crowned by the solar disk. She was associated with power, especially with power used for the protection of the virtuous and punishment of the evil.

The earliest excavators of Kom el-Hisn’s New Kingdom occupations were primarily interested in the remains of the large enclosure wall, pylons, and inscribed stone blocks found at the site and in a nearby village. Petrie visited the area in 1884 and noted an offering tablet, part of which read *Htp di nsw nbt imA-sxt* or “the king gives an offering (to) the mistress of Imu, Sekhmet” (see Petrie 1886, pl. XXXVI, #2). F. L. Griffith worked at the site in December of 1885 and published his observations as an appendix in Part II of the Naukratis monographs (Griffith 1888). At that time, the remains of the enclosure walls were still visible as well as the foundation of one pylon at the southern end of the enclosure and four inscribed statues (labeled I-IV in the 1888 volume). All of these statues are of the Ramesside era. Two of these statues were still at Kom el-Hisn in the mid-1980’s, near the rest house (Coulson and Leonard 1981:81-83). They make references to Sekhmet or Sekhmet-Hathor in relation to Imu. The whereabouts of statue number III are unknown, but Edgar (1909-1915) states that the best preserved of Griffith's four statues, number IV, was removed to the Egyptian Museum.

Another monument at Kom el-Hisn is the tomb of Khesu-wer (*¢su-wr*). It was built in the southwest portion of the site near a modern village (Photo 1.4). It is constructed of limestone blocks, and when Edgar visited the site in 1909, traces of mud brick walls surrounding the structure were still evident. Texts inside the tomb (Silverman 1988) indicate that Khesu-wer was a Middle Kingdom priest of Het-Hert and Supervisor of the Priests and of the temple precinct. His designation as Chief of the Harem and Chief of the Maidens probably denotes a position as supervisor of the women who were in the service of Het-Hert.

Edgar dated the tomb to the reign of Amenemmes (Amenemhat) III based on the character of the religious texts (Edgar 1909-1915:61). He argued that these are typical of those found during the Middle Kingdom reigns of Amenemhat III or Senwosret III (both of the 12th Dynasty) (1988). During the 19th Dynasty, Ramesses II renovated the temple of Het-Hert, and in the 22nd Dynasty, Sheshonq III expanded it. The goddess Sekhat-Heru, the sacred cow associated with Het-Hert, who provided milk and offerings, was worshipped in this region, and Kom el-Hisn was named “Hut-Sekhat-Heru” in her honor (Kitchen 1996:291-292). The inscription refers to Ramesses II as “beloved of Het-Hert, Mistress of Imau.” Both Het-Hert and Sekhmet were denoted as “Mistress of Imau.”

Recent research at Kom el-Hisn (F. Sakr 2004, 2005) includes excavations near Khesu-wer’s tomb, where Egyptian researchers found what may be the lower courses of mud brick walls around the tomb, as well as some foundation deposits in the form of exotic artifacts.

 It is possible that some of the mud brick remnants thought to be associated with the temple of *Het-Hert*, were instead the remains of fortresses. Egyptian temples were typically made of stone, but it is at least possible that thick mud brick walls were used in temple constructions. Kirby, Orel, and Smith (1998:37), however, suggest that it would be very unusual for a significant temple in a nome capital to be made of mud-brick. Whatever the function of these constructions, much of them had been destroyed or were obscured when Griffith visited it, so his mapping of the site may have been inaccurate and incomplete. It is interesting that the mud-brick walls that seem to be associated with the temple were apparently comparable in size to those found at other Delta sites (Snape 1986).

Few traces of the site that Petrie, Griffith, and other early visitors described have survived, but Kirby, Orel, and Smith’s work (1998:41-42) at the site relocated what may have been the back wall of the temple of Sekhmet-Hathor dating to the New Kingdom or later. In addition, They also excavated six test pits to the south of our own excavations (Photo 1.3). These excavations and augering revealed evidence indicted that was occupied in the Middle Kingdom and Third Intermediate Periods.

In sum, at various times Kom el-Hisn likely included both a large temple complex and large mud brick fortifications. Kom el-Hisn appears to have been well positioned to become a significant “node,” in the socioeconomic and political landscape of Lower Egypt in various periods. Its location gave it access to a major distributary of the Nile, which in turn made it an effective point from which to administer regional and national exchanges of goods and services. Also, if reconstructions of Old Kingdom Nile distributaries are accurate, Kom el-Hisn had river access to the Mediterranean world. Moreover, the desert on Kom el-Hisn’s western border offered flint, limestone, and other materials—although this location perhaps made Kom el-Hisn the closest substantial town that raiders from the area of present-day Libya could loot and pillage.

We began our research with the speculation that the Kom el-Hisn’s contribution to the national economy may have been mainly in the form of cattle, but also grapes, other orchard crops, and perhaps wheat and barley. Its proximity to the Mediterranean Coast and a large Nile distributary resulted, perhaps, in some export of dried fish. Suggestive evidence (see Chapter Four of this volume) from burials found at different areas near our primary excavations (Photo 2.1) revealed an uncertain number of graves. Hamada, el-Amir and Farid excavated many of them and concluded that they were from the Middle and New Kingdom periods (Hamada and el-Amir 1947; Hamada and Farid 1947, 1948, 1950; cf. Brunton 1947). Because these graves frequently contained multiple interments and incomplete bodies, and were accompanied by axes and daggers, Hamada and others concluded that these were “warriors” who fought against Libyan invaders at some unknown time. Hamada and el-Amir (1947:103-105, 107, 110-111) dated a large group of these graves to the New Kingdom. They published so little of the documentation of these graves and their contents, however, that their dating of these bodies is suspect.

We consider these burials to be key elements in our reconstruction of Kom el-Hisn’s cultural history, and they are reviewed in Detail in Chapter 3 of this volume.

 In later Periods, as Map 4.1 illustrates, Kom el-Hisn was one of at least six forts along the Libyan frontier. An inscription on a statue dating to the reign of Amenhotep I (1525-1504 BC) links its owner to involvement in a military campaign against the Libyans "*north of Amu*" (Kirby, Orel, and Smith 1998:42; see also Kitchen 1990:15; Muller 1888:287). Spalinger (2005:250) concluded that in the New Kingdom the most western branch of the Nile in the Delta branched at or near Kom el-Hisn and formed “an effective boundary,” that defined Egyptian territory.

One of the last known dynastic textual references to Kom el-Hisn is a document dating to the 26th Dynasty, when the local temple paid its taxes, as recorded on the [Adoption Stela](file:///C%3A%5Cw%5Cindex.php%3Ftitle%3DAdoption_Stela%26action%3Dedit%26redlink%3D1) of the Divine Adoratrice [Nitocris](file:///C%3A%5Cwiki%5CNitocris_I_%28Divine_Adoratrice%29) (Breasted 1906:956). She was entitled “God’s wife of Amun” between 655 and 585 BC.

Thus, through much of its occupational history, Kom el-Hisn probably served as both a fortress and a productive agricultural supplier to the central state.

**II. THE KOM EL-HISN PROJECT IN GENERAL THEORETICAL CONTEXT**

Our general research design, at its largest scope, addressed some ancient and abiding questions in the historical and social sciences. Many scholars have attempted to *compare* and *contrast* the earliest state societies around the world, often in hopes of achieving a deeper understanding of the factors that produced the similarities and differences among them. This is particularly true for the period between about AD 1900 to the present. Robert Mc. Adams’ *The evolution of urban society* (1966) was especially influential in stimulating archaeological interest in comparative analyses of ancient states. Many others, of course, have contributed to these analyses: (e.g., Steward 1949; Childe 1934; Wittfogel 1957; Sanders and Price 1968; Carneiro 1970; Wright and Johnson 1975; Frankfort 1956; Eisenstadt ed. 1986; Janssen 1978; Trigger 2003; Tainter 1990; Yoffee and Cowgill eds.1991; Yoffee 2005; McAnany and Yoffee, eds. 2009; Diamond 2011; Wenke 2006, 2009; Marcus 1998; Maisels 2001; Richards and Van Buren, eds. 2000; Feinman and Marcus eds. 1998). Perhaps the most detailed and recent example of such analyses, in terms of *traditional* conceptualizations, methods, terms, and objectives, is the late Bruce Trigger’s *Understanding Ancient* *Civilizations* (2002).

Yet such comparative analyses have lost some of their popularity in contemporary archaeology. Indeed, various archaeologists consider them to be antiquated remnants of 19th Century scientific and evolutionary notions about “progress” and the utility of deterministic models. They see Archaeology’s and History’s attempts to find powerful explanations for human history as naïve, or at least overly optimistic about how much of culture can be explained in general and in “scientific” fashion. For these and other reasons, many modern archaeologists concentrate, instead, on the differences—not the similarities—in these ancient polities. Today, few aspire to the grand over-arching *explanations* of the past that were so much at issue in anthropological archaeology before about AD 2000.

Our own research at Kom el-Hisn, in contrast, was conducted in traditional *processualist* (as opposed to “post-processual”) terms and concepts. We were generally concerned with the processes by which early states in diverse areas of the ancient world developed specific forms of hierarchically arranged socioeconomic and political systems. Our interest in the somewhat parallel developments of all early states in the ancient world addressed such questions as, what can hope to learn from similarities and difference in *evolutionary tempo and mode* of these different early states? All the world’s earliest civilizations, for example, appear to have experienced intervals of rapid expansion and retraction in geographical size of the areas they effectively controlled, and in the power and scale of their central governments; why?

In asking this question we considered the variations over time and space in the administrative and socioeconomic structures and relationships that appeared in Egypt during the interval in which the Egyptian state first appeared, matured, then contracted, only to appear again in somewhat similar form in the Middle Kingdom (c. 2900 –1900 BC).

Egypt is often identified as the ancient state that, compared to others, was the most stable politically and exhibited the highest degree of cultural continuity and conservatism. Nonetheless, ancient Egypt, too, experienced long periods of political socioeconomic and political stability that were interrupted by shorter intervals of state “collapse.” In fact, most specialists in these issues identify three “Intermediate” periods, which seem to occur after one polity has declined and the next has yet to appear.

This “bubble and burst” sequence, of course, is just one way of looking at ancient Egypt’s long dynastic history. One could just as well consider it an *evolutionary* sequence. Indeed, Miroslav Barta has suggested (2012) that the history of the Old Kingdom Period resembles the “punctuated equilibrium” model that some scholars have applied to hominid evolution (Gould and Eldredge 1977; Eldredge and Gould 1972; Smith and Lewontin 1993; Gould 2007;Dennett 1995:282-299). This model stipulates that there were long periods in which hominids remained more or less the same biologically and culturally. At various times, some suggest, this equilibrium, however, was punctuated by short periods of rapid, radical, and cumulative change in our hominid ancestors’ physical and “cultural” characteristics. A key related concept in biological evolutionary processes is *cladogenesis*, which refers to the process by which a species splits into two distinct species, as contrasted with the concept of one species gradually transforming into another. These concepts and terminology can also be found in Marxian historical analyses: Marx’s perspective regarding the concepts of gradual cultural changes versus “revolutionary” change is still relevant to this discussion (Marx and Engels 1998 [viz. introduction by M. Malia]).

Thus, for example, we could consider whether the whole span of dynastic Egypt is best conceptualized as repeated returns to equilibrium after short “intermediate” periods, or as an evolutionary process of accumulated cultural changes over time and space. From this latter perspective the Old Kingdom and New Kingdom states might not necessarily be considered to be members of the same analytical class. Instead, in some aspects, they were fundamentally different as socioeconomic and political entities—just as the Neanderthals and modern *Homo* were members ofdifferent species, or perhaps sub-species, and have very different genetic representation in modern humans.

At present (2013), however, little agreement exists concerning the theories, concepts, and methods that archaeologists should and could accept and employ. Moreover these disputes about theoretical issues appear to be ever less relevant to the way archaeologists actually do analyze and interpret Egypt’s—and other regions’—archaeological record. A recent book of essays (Bintliff and Pearce, eds. 2011), for example, is titled *The Death 0f Archaeological Theory?* This title may be prematurely pessimistic, but it reflects what certainly seems to be the decline in interest among the archaeological community in debating traditional theoretical issues.

In any case, most of these larger theoretical issues have little relevance to our research at Kom el-Hisn and are not discussed in detail here. This volume is primarily a *site report*, not yet another meditation on the history and merits of diverse theoretical and methodological debates. Some additional consideration of them, however, can be found in Chapter 13 of this book. There, the recent development of a multiplicity of nearly non-theoretical forms of “pragmatic archaeology” is considered.

**B. Kom el-Hisn in Processual Perspective**

In excavating and analyzing Kom el-Hisn, our research design, objectives, and methodology reflected in many respects the anthropological archaeology that dominated the discipline in the 1980’s, during the period when our field research was conducted. Indeed, the Kom el-Hisn project was conducted entirely within the paradigm of what is generally known as “processual archaeology” (as defined, e.g., by Binford 1968. 1983, 1987; D. Clarke 1968, 1972; Watson, Redman, and Le Blanc 1971, 1984; Salmon 1982; Salmon and Salmon 1979). The version of processual archaeology as we applied it to Kom el-Hisn is evident in the assumptions, concepts, and analyses that we used.

*First*, we accepted the traditional proposition that by comparing and contrasting early states around the ancient world, we could better explain their similarities and differences. Inherent in this notion was the subsidiary assumption that these comparisons and contrasts enhanced our ability *to explain* why these early states formed when and where they did, and how they functioned, as well as how they changed over time, in, for example, the sense of evolutionary *tempo* and *mode*. However vaguely imagined and expressed, we had as our greatest aspiration some fundamentally scientific explanation of, at least, a small segment of the human past. We were painfully aware, of course, that a small sampling of a single site was unlikely to contribute much of significance to these ancient and complex problems concerning the nature of human history.

A second reflection of our processualist perspective is that we *formulated hypotheses* about Kom el-Hisn’s composition and functioning, and we used *statistical analyses* to evaluate the basic “accuracy” of our hypotheses. We analyzed such numerical data as the relative frequencies of plant and animal taxa in our excavated samples, as well as counts of forms and styles of ceramic, lithic, and other kinds of artifacts, and their associated architecture.

*Third*, we used *ecological* reconstructions and principles throughout our studies, as well as the functionalist arguments that ecological analyses often employs.

*Fourth*, we viewed our research as part of a regional analysis, in which archaeological surveys initially established the basic *regional settlement patterns.* No recent complete surveys using aerial photographs have been done of the area around Kom el-Hisn, but many nearby sites have been located and studied, some for a century or more. A regional survey (Brodie, P, Coulson, W, Leonard, A and Silverman, D. 1981) has reconstructed Kom el-Hisn’s place of regional settlements in different periods. We did our research at Kom el-Hisn when various geographic models such as *Central Place Theory* (e.g., Christaller 1972; Berry 1967; Parsons 1972, 1971; Wright and Johnson 1975; Butzer 1976; R. Mc. Adams 1975; Butzer 1976; R. Wright 2011) were widely applied to the archaeological records of many ancient cultures around the world. We sought to reconstruct, for example, Old Kingdom Kom el-Hisn location in Old Kingdom Egypt’s settlement patterns, on a local, regional, and national scale. Wilson’s (1951) description of ancient Egypt as a “civilization without cities,” for example, has stimulated debates about the essential nature of the Egyptian state and how its components were located with regard to the nation as a whole.

In our research at Kom el-Hisn, we also considered the concept of “core-periphery” relationships. As the term “core-periphery” implies, such studies focus on the socioeconomic and political interactions of human communities of different estimated populations across a given landscape. The literature on its archaeological applications is substantial (e.g., Blanton and Feinman 1984; Blanton et al. 1992; Kohl 1987a; 1987b, 1992; Rowlands et al. 1987; Kristiansen and Rowlands 1998; Lightfoot and Martinez 1995; also see Price and G. Feinman, eds. 1995). The fundamental ideas concerning “core-periphery” analyses are a subset of a much larger theoretical edifice, which is generally know as “world systems theory” (e.g., Wallerstein 2004; Alexander 1996; also see *Open Access Journal: Journal of World-Systems Research*)*.* This “theory” was developed and used most frequently in the context of the effects some highly industrialized and capitalistic countries have on neighboring countries. Various archaeologists (e.g., Lightfoot and Martinez 1995; also see Braudel 1984) have noted the colonialist and Capitalistic assumptions that underlie some core-periphery studies as they have been applied to current and recent societies. Nonetheless, in this volume we use some simplified ideas from world systems theory and the concept of *core-periphery* communities to analyze the relationship between Old Kingdom Memphis and Kom el-Hisn.

**C. Research Hypotheses**

Our theoretical approach and methods if analyses at Kom el-Hisn were not radically different from traditional archaeology in Egypt as it has been practiced for well over a century. That is, it consists mainly of attempts at reconstructions of cultural histories and framing plausible inferences about cultural elements and their functions, extending to almost every aspect of this extinct society, from its theological foundations to the firing processes used to manufacture its pottery. Analyses of the Egyptian archaeological record seem quite narrow and particularistic in scope and modest in research objectives. Our research design for Kom el-Hisn reflects these characteristics. We created two different “models” which we proposed to “test” by quantitative analyses of their floral and faunal composition, architectural analyses of their buildings, and variations in the quantities and character of all other artifacts.

**Model I.**  Kom el-Hisn was established by the state or a wealthy individual as a *pious donation* or *estate*. These were lands set aside or made tax-free by the central government or an individual, to supply commodities to temples or to pay other expenses of maintaining religious and political institutions. It was established particularly to provide cattle and perhaps orchard products and other food to the central government. As a regional center it imported some products directly from central government workshops, but it was largely self-sufficient. Its populace consisted mainly of farmers and cattle raisers, whose activities were directed by resident agents of the provincial and national government. Except for these agents, and, perhaps, a few elite families, most people lived in simple mud brick houses that differed little in construction or contents. Because of the heavy centralization of economic and political power at Memphis, Kom el-Hisn was a small cog in a large machine that funneled commodities to local religious cults and to the great mortuary cults at Memphis and Saqqara. It supplied nearby communities with only a few goods and services. This degree of interaction with the central government could be tested, we supposed, by quantitatively comparing Kom el-Hisn’s pottery, lithics, and other artifacts to those at both Memphis and other regional Old Kingdom centers, spanning the country from Buhen to outposts in Syro-Palestine.

**Model II**. Kom el-Hisn's initial settlement was in response to both local and national socioeconomic factors, and the community served a large regional area with goods and services. Although participating in the national economy, it was itself functionally quite complex, producing a wide range of agricultural and crafts products for internal consumption and regional and national trade. Its inhabitants were mainly farmers and stock raisers, but included specialists and administrators, so that there was significant social stratification and preferential access to the community's wealth, power, and prestige. Interactions between the people of Kom el-Hisn and the rest of Egypt were sufficiently frequent that its artifact styles and commodities reflected regional and national influences, but it had unique characteristics as well.

Even as we formulated these two models, we recognized that many plausible alternatives could be constructed, that few of these hypothesized characteristics are mutually exclusive, and that some of these characteristics and functions were unlikely to have unique reflections in the archaeological record. Moreover, we knew that the accuracy of any such models could never be conclusively “proven.” We recognized, too, that even if we could empirically and strongly support one of these models, our hypotheses were not drawn from powerful theories. Instead, we appealed to the simple principles of cultural ecology and well-established ideas about relationships between provincial settlements and the center of the dynastic Egyptian State.

Yet another consideration is *change* in Kom el-Hisn’s structure and functions over time. Indeed it is possible, that Kom el-Hisn fit both of these models at different times during its occupational history.

In sum, we sought to reconstruct Kom el-Hisn’s past and set this community into Egypt’s general Old Kingdom settlement patterns. We are acutely aware of the fact that even an apparently precise reconstruction of Kom el-Hisn’s features and functions in no way represented an *explanation* of its past.

One virtue of our posited models, however, is that they *directed* our attention to artifacts and faunal and floral remains, and their relative frequencies and ratios, that might clarify the kinds of interactions between this settlement and the political and socioeconomic “core” at Memphis.

Thus, after our survey of Kom el-Hisn in 1981, we surmised that Kom el-Hisn’s archaeological record offered data for *two* specific and important directions of analyses. *First*, we hoped to expose the structure and contents of Kom el-Hisn as the entire community existed and functioned within thin slices of time during the Old Kingdom. Thus we excavated a broad area of presumably contemporaneous houses, streets, and other features. S*econd*, archaeological and epigraphic information indicates that Kom el-Hisn had been an important community during a crucial transformational period in Egypt’s ancient history (Table 1.1.). This transformation began with the establishment and maturation of the Old Kingdom State in the 1st through the 4th Dynasties, during which the central Egyptian State located at Memphis, appears to have developed institutions and control mechanisms that gave it a near-monopoly on “wealth” and administrative power throughout Egypt. This highly centralized and powerful Old Kingdom State, however, apparently began a slow decline in the 5th and 6th dynasties. Traditionally this decline has been assumed to be evident in the reduced scale and costs of the pyramids built in these dynasties, as well as the rise of politically and economically powerful families in the provinces. It is not necessarily true that drastic reductions in spending on monumental architecture are a sure and certain reflection of the state’s wealth, control, and efficiency, but investments in monumental architecture did, in fact, seem to decline after the 4th Dynasty. In any event, this devolution, at least as described in traditional histories of Egypt, culminated in the near-disintegration of the power of the central state amidst decades of civil wars in this “1st Intermediate Period.” In this era, Theban and Middle Egyptian forces contended for dominance for decades before the “restoration” of the state, in the sense at least of the state’s renewed control of the entire territory of Egypt. This was accomplished in the 11th Dynasty of the Middle Kingdom Period, by King Nebhepnetra Mentuhotep II (2055-2004 BC). During the 11th and 12th Dynasties the administrative capital of the Egypt State was moved from Thebes to the region near al-Lisht (Map 1.1) (e.g., Seidlmayer 1987).

**III. OVERVIEW OF THIS VOLUME’S CONTENTS**

This report includes the results of our continuing analyses of the Kom el-Hisn data since our excavations. It contains data and interpretations from three doctoral dissertations, which were based in part on our research (Cagle 2001, Buck 1990, Sterling 1999, 2004). Additional publications of Kom el-Hisn materials are listed in individual chapter bibliographies. We also review here more recent research at the site (Kirby, Oren, and Smith 1998; Kirby 1998; Sakr 2005).

Dr. Richard Redding and I designed the research plan for our work at Kom el-Hisn. As the number and range of chapters in this volume illustrate, however, all of the Kom el-Hisn staff members contributed to the design and execution of our project.

As noted previously, our research was essentially a *test of a set of null hypotheses.* That is, we tested the hypothesis that Kom el-Hisn did not differ statistically from Heit el-Ghurab in the relative frequencies of stylistic and functional characteristics of various categories of artifacts, or in the frequencies, range, and ratios of their floral and faunal assemblages. The various chapters in this volume document the extent to which we were able to reject these null hypotheses, and to explain the possible historical and socioeconomic significance of these statistical tests.

We also designed our research to integrate both Egyptological and archaeological evidence. For some decades now, various scholars have tried to construct a discipline that incorporates Egyptological and anthropological concepts and evidence (e.g., O’Connor and Trigger 1994). In a “scientific” sense these approaches are incommensurable. Ancient documents are what dynastic Egyptians *thought* and *said* about their world and their activities in it. Even the simple inscribed clay sealing that were apparently used to identify the contents of shipments and their presumed ownership are texts, and in today’s postmodern world even such texts are often viewed as narratives, not “facts.” In contrast, ancient non-textual artifacts are measurable material manifestations of ancient Egyptians’ activities. A mud brick wall exists, at least in the realm of human perceptions, in a sense that a narrative does not. Nonetheless, if one’s major goal in research is to make ever more precise reconstructions of what ancient Egypt was like and how it functioned texts and pot sherds are of equal value.

In *Chapter Two*, Dr. Paul Buck has reviewed Kom el-Hisn’s geomorphology and its regional geological and ecological context. He also summarizes the extensive literature on the history and character of the Nile Delta’s hydrological history, particularly with regard to the Nile distributaries (or “branches”) during the earlier parts of the site’s occupation and Kom el-Hisn’s proximity to them.

In *Chapter Three*, Anthony Cagle has reconstructed and analyzed Kom el-Hisn’s *stratigraphy*. Although Kom el-Hisn’s occupational deposits have been greatly damaged by various factors, Dr. Cagle’s analysis has allowed us to construct a relative chronology for the areas we excavated, and has revealed many of the cultural and natural factors that produced this archaeological record.

Dr. Cagle presents in *Chapter Four* his analyses of the human burials found at Kom el-Hisn, including those excavated by Egyptian scholars between about AD 1948 and 1955. This evidence raises important questions about Kom el-Hisn’s chronology of occupations and its function at specific periods of its history.

*Chapter Five*, by Dr. Kroeper, illustrates and interprets the only epigraphic materials we found, all of which are in the form of mud sealings or seals. These documents have been shown (Nolan 2011) to be important indicators of the directions of flow of goods and the nature of the goods being exchanged.

Dr. Richard Redding’s analyses, in *Chapter Six*, of Kom el-Hisn’s faunal remains and those from Heit el-Ghurab, strongly support the interpretation that Kom el-Hisn was in fact a cattle-rearing center that supplied Heit el-Ghurab and similar workers’ villages at Saqqara with meat and, perhaps, milk products.

In *Chapter Seven*, Robert Wenke, using data retrieved by Drs. Wilma Wetterstrom and Catherine D’Andrea, interprets the floral remains found in our excavations, as they relate to the Kom el-Hisn Archaeological Project’s research objectives.

In *Chapter Eight*, Dr. Karla Kroeper summarizes our collection of ceramic artifacts from Kom el-Hisn, including comparisons of our samples to those from other sites and dynasties. Many of her drawings of Kom el-Hisn ceramics are presented in Appendix I.

In *Chapter Nine* Dr. Anna Wodzinska, who has studied the ceramics from both Kom el-Hisn and Giza, as well as other sites, proposes the association of some Kom el-Hisn ceramics with specific dynasties, and interpret’s Kom el-Hisn’s ceramics in the context of other sites.

Dr. Sarah Sterling’s analysis in *Chapter Ten* of variations over time and space of the metrical characteristics of “Meidum Bowls” tests various hypotheses about patterns or trends in stylistic and functional variations in these ceramics. A key issue here is extent to which, if any, that the Old Kingdom Egyptian State *standardized* pottery attributes. This issue bears on the scale of Old Kingdom Egypt State’s *control* over various processes of artifact production and supply. The data from her study are presented in Appendix II.

In *Chapter Eleven* our samples of lithics collected from Kom el-Hisn are described by Dr. Michal Kobusiewicz, who compares them to various other sites. Statistical evidence suggests that the stone tools used at Kom el-Hisn may have been imported rather than made locally.

In *Chapter Twelve*, “Summary and Conclusions,” I (RJW) address the validity and relevance of the conclusions and the inferences we have made about Kom el-Hisn, as well as a consideration of our data and their significance with regard to more general ideas about contemporary archaeological theory and methods of analysis.

**A Cautionary Note**

It must be stressed that, to the extent that our analyses and conclusions are based on principles of statistical inference, our data do not in most cases fully meet the requirements assumed by the *Central Limit Theorem*. This theorem is usually stated in these terms: As, the number of samples gets larger, the distribution of the difference between the sample average Sn and its limit µ, when multiplied by the factor √n (that is, √n(Sn − µ)), approximates the normal distribution with mean 0 and variance σ2.

Most archaeologists recognize that stark truth, and nevertheless use statistical methods in the hope that their rough “fit” to theoretical models can still be used, if only in an exploratory mode, to see what statistical patterns might lurk in our massive and complex data sets. We have followed this hallowed archaeological compromise, yet we do not want to mislead the reader about the validity of our statistical tests. The key assumptions in statistical sampling for the purpose of estimating the parameters of an intended population requires that every sample unit has an *equal* and *independent* opportunity to appear in samples. Archaeological samples taken from most ancient settlements, by their very *nature*, violate these assumptions of equal and independent probabilities. They are examples, in fact, of humanity’s ability to impose order on natural, not human, (but not necessarily random) depositional processes.

For this and other reasons our statistical analyses here are simple and hedged in with enough qualifications to avoid being given undue importance.

Nonetheless, our frequency tables of ceramics, lithics, floral and faunal remains, and other data have the potential for much more intensive statistical analysis. Modern computers and statistical methods, including correspondence analysis, logistic regression modelling, new exploratory data techniques, etc., probably be usefully applied to the Kom el-Hisn data.

Moreover, violations of assumption involved in standard statistical inference are more likely to *underestimate* the strength of association coefficients in correlation and regression coefficients, significance of F-values in analyses of variance, and so forth, than they are to inflate them spuriously.