

## Some Recent Trends in the Archaeology of Predynastic Egypt

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*The traditional explanation of the origin of Egypt credits the legendary Menes with founding the state through the conquest of the Delta region, but this is more of a political legend than explanation. Anthropological archaeologists and Egyptologists are bringing new methods and questions to their search for an adequate explanation for the development of one of the world's first territorial states. Early investigations of cemetery sites in Upper Egypt and settlements in the Delta have been supplemented by the excavation of more Upper Egyptian settlement sites, while cemeteries and other important settlements are now being uncovered in the Delta. Three trends are particularly important for the development of social complexity in ancient Egypt: (1) a growing appreciation of regional differences in Predynastic culture; (2) chronological refinements; and (3) an emphasis on group social and political developments, and trade. A consensus appears to be developing that stresses the gradual development of complex society in Egypt, in which a number of small polities coalesced into three or four larger entities during the late Predynastic, followed by the assimilation of the northwestern Delta by the Thinite rulers. The effort to control trade with the southern Levant and Mesopotamia seems to have encouraged expansion of Upper Egyptian cultural and political influence northward.*

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### INTRODUCTION

In the Ptolemaic period, a priest named Manetho wrote a history of ancient Egypt for his Greek overlords; he described 30 ruling families, or dynasties, and credited the founding of Egypt to the first king of the 1st Dynasty, whom he called Menes. Over the past 125–150 years, archaeologists have learned a great deal

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about the prehistory of ancient Egypt (Fig. 1) and the development of one of the world's first states. Some archaeological discoveries have supported the traditional account; others have forced revisions (while still keeping the general outline). In the late 1800s and early 1900s, many cemeteries in Upper Egypt were cleared, and settlement sites in Middle and Lower Egypt were investigated, especially those thought to have a biblical connection (Trigger, 1989, p. 103). Significant advances in chronology were made early on; Petrie's (Petrie, 1901) invention of ceramic seriation provided the first framework for Egyptian prehistory and spurred an entire generation of fieldwork. Petrie's chronological work placed the Predynastic period (identified earlier by Morgan [1897]) on solid ground; he defined three subperiods, the Amratian, Gerzean and Semainean (or "Protodynastic"), and "Sequence Dates," based on his division of 900 Nagada graves into 50 groups of 18 graves each.

Petrie's contribution spurred several decades of digging in Egypt. Many cemeteries were excavated, or "cleared," in Upper Egypt, including Nagada and Ballas (Petrie and Quibell, 1896), Armant (Mond and Meyers, 1937), Badari (Brunton and Caton Thompson, 1928), Harageh (Engelbach and Gunn, 1923), Mahasna (Ayrton and Loat, 1911), Matmar (Brunton, 1948), Mostagedda (Brunton, 1937), and Naga-ed-Dêr (Lythgoe, 1905; Lythgoe and Dunham, 1965). Little attention was paid to settlement sites in Upper Egypt in these early decades, though Quibell and Green's work at Hierakonpolis (Quibell, 1900; Quibell and Green, 1901), Gertrude Caton Thompson's careful excavations at Hemamieh (Brunton and Caton Thompson, 1928), and Petrie's early investigation at Nagada South Town (Petrie and Quibell, 1896) were notable exceptions.

In contrast to a largely cemetery-based archaeology of the Upper Egyptian Predynastic, early efforts in Lower Egypt concentrated more on settlement sites such as Merimde (Junker, 1929, 1930), el Omari (Bovier-Lapierre, 1926a, 1926b), Maadi (Menghin, 1931, 1932, 1934; Menghin and Amer, 1932, 1936), and the Fayum (Caton Thompson, 1927, 1934). These projects revealed a Lower Egyptian Predynastic culture different from the valley tradition further south. Ceramics, lithics, burial practices (when cemeteries were found), and house forms (where they could be compared) all differed from those discovered by Petrie and his colleagues (see Hoffman, 1984).

By the middle of the twentieth century, though, other concerns had preempted Predynastic archaeology, World War II, Egyptian independence, and the Arab-Israeli wars interrupted fieldwork, while the rising tide of nationalism in the Middle East encouraged an emphasis on Islamic archaeology more than the earlier periods (Trigger, 1989, p. 183). In spite of these distractions, several important contributions occurred during this period. Baumgartel (1955) discussed her research with Petrie's collections and stressed a Mesopotamian or Elamite origin of the "Dynastic Race." Saad conducted extensive excavations in the environs of Helwan (Saad, 1947, 1951, 1957, 1969). Walter Emery's excavations in the

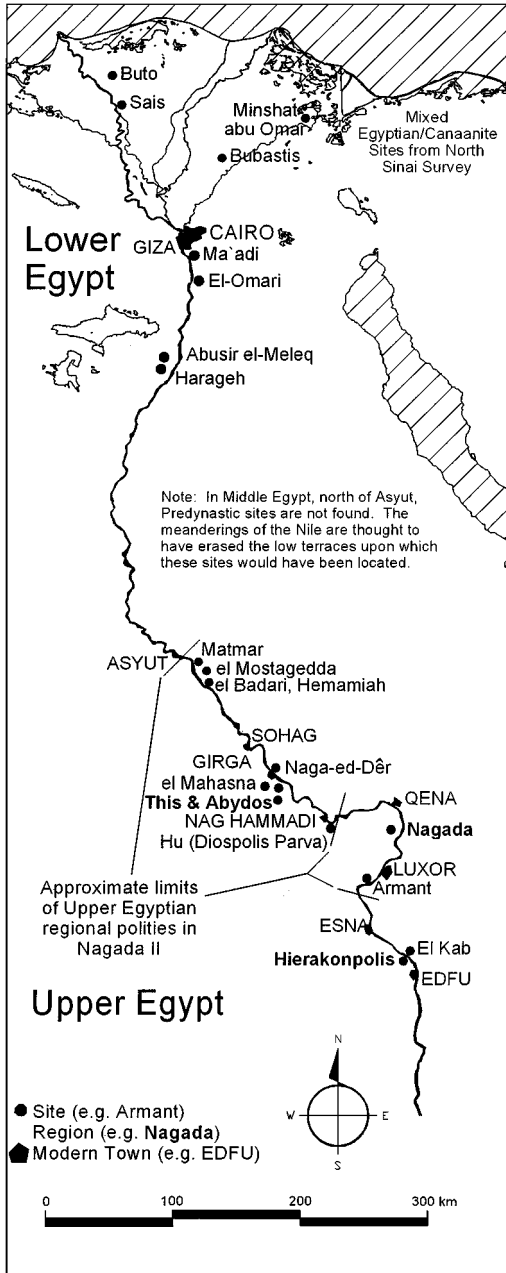


Fig. 1. Location of major Predynastic sites and regional subtraditions in relation to modern towns in Egypt.

Saqqara region were put on hold during World War II and again following the 1948 war with Israel, but he was able to complete the excavation of a sequence of large, 1st Dynasty cenotaphs or tombs (Emery, 1949, 1954, 1958).

The construction of the Aswan Dam shifted the center of investigations to Upper Egypt and Lower Nubia for several years and helped revive prehistoric archaeology (see Adams, 1992); Wendorf and his colleagues (1968) illuminated earlier periods in Egyptian prehistory that help set the stage for later developments. Arkel and Ucko's (Arkel and Ucko, 1965) review of the Predynastic collated much of the previous work but was handicapped by the current state of research. Trigger (1968, p. 61) noted that "... for various reasons there have been few systematic excavations on prehistoric sites in Egypt in recent years and most studies have consisted of the reworking of old and rather badly published evidence."

In spite of these efforts, by the 1950s and 1960s advances in anthropological archaeology elsewhere seemed to have marginalized Egypt. Near Eastern archaeology and Egyptology were often seen by outsiders as essentially atheoretical and still committed to the cultural historical, biblical, or classical paradigms that had played such important roles in their early development (Trigger, 1968, p. 61, 1989). If Egyptologists were conscious of theoretical advances taking place in anthropology, they seemed to view them as having little relevance to ancient Egypt. The need for theoretical abstractions was obviated by detailed evidence from hieroglyphics, art, and political history, but anthropologists rarely possessed the skills needed to master these subjects. So by midcentury, many anthropological archaeologists and Egyptologists had come to view each other's contributions as largely irrelevant to their own fields of inquiry. Although Egyptologists and prehistorians recognized that Egypt was one of the earliest examples of a "pristine," "territorial" state, it was thought that she had little to contribute to a growing anthropological interest in the development of state-type societies elsewhere because of her perceived uniqueness. Egypt was viewed as a peculiar place, whose cultural history was perhaps so unique that it shed little new light on large theoretical issues (Trigger, 1993, p. 2).

By the last decades of the twentieth century, these attitudes had begun to change. Renewed fieldwork in Egypt, led frequently by anthropologically trained archaeologists such as the late Michael Hoffman, showed that the archaeology of Predynastic Egypt was far more complicated than had been assumed earlier. Regional differences began to be appreciated, and these caused some researchers to reevaluate the chronological methods employed by earlier generations of Egyptologists. The complexity now revealed called for more sophisticated models than those provided by traditional Egyptology. Within anthropology, postprocessualism sought to reemphasize the links between archaeology and history and encouraged positivist archaeologists to pay less attention to general analogies and more to reading the past from specific cultural contexts. And while few researchers working in Egypt applied this paradigm explicitly (for exceptions, see Bard, 1992a; Rice, 1990), it has affected a partial rapprochement between Egyptologists and

anthropologists (see the papers in Lustig, 1997; especially those by O'Connor, Adams, Wenke, and Trigger). As a result, anthropologists are taking renewed interest in early Egypt. Although unique in some ways, Egypt now resembles early civilizations in other regions. Trigger's study (Trigger, 1993, p. 110) of seven early states showed that

... a wide variety of economic behavior was associated with early civilizations, the one constant being the production of surpluses that the upper classes appropriated through a tributary relationship. Yet I have been able to discover only one basic form of class hierarchy, two general forms of political organization, and a single basic religious paradigm that constituted the supernatural counterpart to the tributary relationship. I have documented significant variation from one early civilization to another only in terms of art styles and cultural values.

Trigger's cross-cultural comparison helps explain the older conflicts between anthropological archaeology and Egyptology, while showing that an anthropological approach can contribute to a study of ancient Egypt. The "significant variation in art styles and cultural values" that Trigger noted has formed the cleavage plane between anthropology and Egyptology in the past, since Egyptology has focused on the differences while anthropology has been more concerned with the class hierarchy, economic and political organization that share similarities with other early states. Thus the uniqueness of Egypt's artistic expression and cultural system led Egyptologists to consider the civilization of the Nile Valley to be something apart. However, the fact that Trigger finds only a few cross-cultural differences in many aspects of ancient states means that the study of any early civilization can inform research on the others. So the study of the emergence of the Egyptian state may shed new light on the development of others elsewhere.

The early excavations continue to influence our understanding of the Predynastic. We still know more about mortuary practices in Upper Egypt than we know about settlement sites, and we know more about settlements in the north than we know about cemeteries. But recent work has begun to redress these imbalances. Hierakonpolis (Harlan, 1985; Hoffman, 1982, 1987), Nagada (Hassan, 1992), the Hu-Semaineh region (Bard, 1989, 1992b), the Badari region (Holmes, 1993; Holmes and Friedman, 1994), and the Abydos-Thinis region (Patch, 1991) have all been the targets of regional archaeological survey and excavation. In the Delta, renewed work at Maadi and el Omari (Caneva *et al.*, 1987; Debono and Mortenson, 1990; Rizkana, 1989), Heliopolis (Debono and Mortenson, 1988), and Merimde (Eiwanger, 1988, 1992) has added to our understanding of these early cultures, highlighting differences from each other and from Upper Egypt. In addition, new excavations at Tell Fara'in-Buto (Faltings and Köhler, 1996; Way, 1986, 1987, 1988, 1989, 1991a, 1991b, 1992), Minshat abu Omar (Kroeper, 1988, 1989), and Mendes (Friedman, 1991, 1992) have further defined the Lower Egyptian culture, its relations with Canaan, and its eclipse by the Nagada culture of Upper Egypt sometime in the Late Predynastic period.

Since the 1970s fieldwork in the Predynastic has flourished, and many important new contributions have been made. It is beyond the scope of this paper to consider them all, and readers are encouraged to consult the abbreviated bibliography for some of the relevant publications. Following a short discussion of the traditional Predynastic chronology and a summary of earlier views about how ancient Egypt emerged from the Predynastic, I discuss three developments that I believe are central to the renewed contribution that Egypt can bring to the study of early complex societies. These are (1) a growing appreciation of regional developments along the Nile Valley in the Predynastic; (2) a refined chronological framework that helps anchor not only Egyptian prehistory but also the larger Near East; and (3) the study of sociopolitical developments and trade, which frames a fresh understanding of the evolution of the Egyptian state. These considerations are not independent of each other. Many researchers are beginning to appreciate this fact, and a nascent consensus appears to be forming that emphasizes the gradual coalescence of a series of small polities, encouraged by competition in the mortuary regime and the effort to control foreign trade.

### **Predynastic Chronological Considerations**

Chronological difficulties abound in the Predynastic. Petrie's Amratian, Gerzean, and Semainan periods were replaced by Kaiser's (Kaiser, 1957) Nagada I, II, and III, and a complicated set of 11 to 15 subphases. The Semainan was generally rejected by Egyptologists, some of whom referred to the last part of the Predynastic as the "Protodynastic period" (see Kantor, 1944, 1992). An earlier tradition, now called the "Badarian," was foreseen by Petrie (who had started his Sequence Dates at 30 to leave room for it) but not documented until Brunton and Caton Thompson's (Brunton and Caton Thompson, 1928) work at Badari and Hemmamiah. The growing appreciation of regional differences along the Nile, which I discuss later, has encouraged some researchers to set aside chronological schemes that assumed similar cultural trajectories, in favor of tying regional chronologies together through external methods such as radiocarbon dating. Hassan's (Hassan, 1985, 1988) radiocarbon-based chronology recognizes four absolute periods in the Nile Valley: (1) the Early Predynastic (ca. 5000–3900 B.C.), (2) Middle Predynastic (ca. 3900–3650 B.C.), (3) Late Predynastic (ca. 3650–3300 B.C.), and (4) Terminal Predynastic (ca. 3300–3050 B.C.). These periods are roughly equivalent to the Badarian, Nagada I (Amratian), Nagada II (Gerzean), and Nagada III (Protodynastic).

The term "Dynasty 0" complicates the chronology as well. It describes a political period rather than a cultural period, sometime before the 1st Dynasty (belonging to the Nagada III or Protodynastic), during which some researchers believe Egypt had already been unified under the rule of Upper Egyptian paramount chieftains or kings (e. g., Kaiser and Dreyer, 1982). Renewed work at the Umm el-Qaab near

Abydos has revealed a series of tombs belonging to rulers attributed to Dynasty 0. Royal names have been found incised on pottery vessels, including “Scorpion” (not the “Scorpion” from the well-known “Scorpion Macehead” discovered by Quibell, 1900, at Hierakonpolis) and “Ka” (Kaiser and Dreyer, 1982, p. 263). Two other, as yet undeciphered royal names are referred to as “King A” (Brink, 1996) and “King B” (Wilkinson, 1995, p. 206, 1999, pp. 52–58). These new discoveries document the power of the Thinite royal family before the unification of Egypt, although the term “Dynasty 0” implies a family of kings ruling over the whole of Egypt, and this has not yet been demonstrated.

The development of regional chronologies has fostered a reinterpretation of existing mortuary data. Where once variation in the mortuary regime was thought to reflect temporal development in a relatively straightforward way, new research suggests that Predynastic cemeteries are far more complicated spaces where descent group rivalries demanded different burial treatments. These document the existence of local and regional competition in the Predynastic, setting the stage for the unification of Egypt at the beginning of the 1st Dynasty (ca. 3050 B.C.).

### **The Origins of Ancient Egypt—Earlier Views**

#### *The Legend of Menes*

In considering the origins of the Egyptian state, it is best to start with the Egyptians themselves. The traditional story was recorded by Manetho, a priest who lived during the late fourth and early third centuries B.C. Looking back over 2,500 years, Manetho described 30 dynasties who had ruled Egypt. The first two consisted of a family of rulers from This, who conquered Lower Egypt (see Trigger, 1983, p. 52) to found the state. Manetho names Menes as the first king of the 1st Dynasty. Before Menes, Manetho states that Egypt was ruled by a series of demigods from Upper and Lower Egypt; on the Pyramid Texts of the late Old Kingdom (ca. 2350–2150) they are called the “Divine Souls of Nekhen” (ancient Hierakonpolis) and “Divine Souls of Pe” (Buto in the northwest Delta). “Together, the Souls of Nekhen and Pe are considered to be collective representations of the deceased kings of the Predynastic Upper and Lower Egyptian kingdoms whose capitals were housed at Hierakonpolis and Buto respectively” (Friedman, 1996, p. 344).

The traditional explanation of Egypt’s beginning, like Manetho’s dynastic division of Egyptian history, is much more recent than the events it describes. There are no extant copies of Manetho’s text; it is described in the writings of Josephus from the middle of the first century A.D. However, several lists of kings from ancient Egypt appear to support Manetho’s system, including the Palermo Stone (which lists kings from the 5th Dynasty back before the 1st Dynasty, and a series of mythological kings who had ruled over a prehistoric, unified

Egypt); the Karnak Tablet from the 18th Dynasty lists kings back to Menes. The Abydos Tablet from the reign of Seti I and the Saqqara Tablet from the reign of Rameses II (both 19th Dynasty) list rulers at least as far back as the 1st Dynasty. The Turin Papyrus, written sometime in the 19th Dynasty, includes mythical, semidivine kings before the 1st Dynasty (see Hoffman, 1984). The name Menes (or *Meni*) does not appear in the lists until the 18th Dynasty (Vercoutter, 1992, p. 199).

The discovery of the Narmer Palette at Hierakonpolis (Quibell, 1900) provided artistic, if not archaeological, support for the traditional view; it also introduced the difficulty of a Thinite versus Hierakonpolis origin for the founder of the Egyptian state. On one side of the palette, Narmer is depicted wearing the white crown of Upper Egypt, delivering the coup d'grace to a helpless victim identified with the sites of Buto and Sais in the northwestern Delta; on the other side of the palette, Narmer wears the red crown of Lower Egypt and observes a procession of standard bearers carrying nome symbols. The main register on the palette depicts two mythological "serpo-leopards" with their necks intertwined. The traditional interpretation of the iconography views the intertwined beasts as a symbol of political unification resulting from warfare.

There are many problems with the traditional view, which stem primarily from the lack of historical connections between the sources and the events, difficulties related to the interpretation of specific finds, and a tendency to read the artifacts literally. Fairservis (1991) recently reevaluated the meaning of the Narmer Palette, concluding that it has nothing to do with the unification of Upper and Lower Egypt. Moreover, it is of uncertain archaeological provenience, having been found in the "main deposit" of the temple enclosure at Hierakonpolis, where Fairservis describes it as having been "'junked' by later occupiers of the temple area" (1991, p. 1). The cache of objects may be a foundation deposit accompanying the remodeling of the temple (Quibell, 1900), but the remodeling may have taken place as late as the 2nd or 3rd Dynasty, several centuries after the event the palette purports to describe. Wilkinson (1999) and Millet (1990) further caution against reading the Narmer Palette literally; Wilkinson indicates that "it is perhaps safer to ignore the palettes and maceheads as potential historical sources" (1999, p. 49).

The identification of Narmer as the first king of the 1st Dynasty is fairly secure, although his identification with the legendary Menes is less certain. Menes might have been Pharaoh Aha, Hor-Aha, or he might have been Narmer. It is clear, though, that Narmer was a historical figure, his tomb has been excavated at Abydos, and his name is found incised on potsherds and other objects from Tell Erani in the north (Ward, 1969) to Hierakonpolis in the south (Wilkinson, 1999, p. 69, lists numerous other examples).

The issue is not Narmer's existence, but rather the role he may have had in bringing about the unification of Egypt. Dreyer's reexcavation around the tomb of



Narmer at Abydos revealed a small ivory label on which Narmer smites an enemy identified with Buto by the papyrus reeds sprouting from his head. Dreyer states that it is “the same event as depicted on the Narmer Palette. From this we may conclude that the Narmer Palette indeed refers to an historical event which took place in a certain year” (Dreyer, in Davies and Friedman, 1998, p. 35). Although Wilkinson has cautioned against reading the Narmer Palette literally, he agrees that the label lends new weight to the historical interpretation (1999, pp. 49, 68). In any event, as Wenke (1991) points out, the traditional description is more of a political history than explanation. Recent research has shown that there probably was no unified polity in existence in Lower Egypt around 3100 B.C. (Kemp, 1989, pp. 43, 44).

### *The “Dynastic Race” Hypothesis*

Petrie (1939) believed that ancient Egypt was unified by an invading “dynastic race” that originated in the east, somewhere around ancient Elam or Sumer, and entered Upper Egypt via the Wadi Hammamat around the beginning of the Gerzean period (ca. 3500 B.C.), conquering the “primitive” Egyptians. Influenced by the appearance of Mesopotamian trade items and architectural elements found in Predynastic and Dynastic contexts, Petrie’s views were based on the hyper-diffusionism of his day. The idea was discarded by Massouard (1949) in favor of indigenous development, though several researchers (e.g., Baumgartel, 1955; Edwards, 1971; Emery, 1961) continued to espouse the older view. Modern scholarship agrees with Massouard (though see Rice, 1990, for an exception).

### *Recent Views, Anthropological and Otherwise*

Anthropologists have suggested several possible explanations for the development of the Egyptian state. Wittfogel’s (Wittfogel, 1952) hydraulic hypothesis attributed the rise of political power to the need to manage expanding irrigation systems; Carneiro’s circumscription hypothesis (Carneiro, 1970, also see Bard and Carneiro, 1989) outlined a process of conflict over scarce resources, leading finally to the creation of a single state polity. Both of these ideas have been rejected by later scholarship. While Wittfogel’s notion may be applicable to ancient Mesopotamia, it appears that irrigation in the Nile Valley was not centrally controlled because basin agriculture, fed by the annual Nile flood, was the dominant mode (see Hassan, 1988; Lamberg-Karlovsky and Sabloff, 1979). Likewise, population pressure, or circumscription, may not have played a significant role. Hassan (1988, p. 165) argues that the population of ancient Egypt was insufficient to create much circumscription, as do Kemp (1989, p. 31) and Wilkinson (1999, p. 45). However, Hoffman (1984, pp. 309, 310) suggests that population concentration (though not

necessarily actual growth) resulted in locally circumscribed environments. Bard and Carneiro emphasize that social circumscription may have played as large a part in creating interpolity friction; by the later Predynastic, Upper Egypt was essentially filled up with regional polities such that “the splitting off of new groups would have been less permissible” (1989, p. 21).

An explanation based on multiple causes seems better suited to the available data. A combination of factors, including trade (though Kemp, 1989, does not think trade was an important factor), iconography, and competition among descent groups and larger polities appears to form the developmental milieu out of which a unified state in Egypt finally emerged (Hassan, 1988; Lamberg-Karlovsky and Sabloff, 1979; Trigger, 1983; Wilkinson, 1996, 1999).

Kemp’s (Kemp, 1989) research points to a gradual process of coalescence, in which many small polities formed along the Nile from independent agricultural villages in the Nagada I (Amratian) period, later being absorbed into a series of larger units in Nagada II that merged into the kingdoms of Upper and Lower Egypt. Kemp describes the process as a sort of Monopoly game, in which everything began relatively equal and ended when one family (the 1st Dynasty rulers) controlled virtually everything. The process may have begun as far back as the Badarian period (ca. 5500–4000 B.C.), when Anderson (1992) notes that there were already differences between elite and nonelite graves.

### **Predynastic Sociopolitical Units**

The sociopolitical landscape of Egypt in the historic period reinforces Kemp’s explanation of the development of complexity. During the historic period, Egypt was divided into administrative districts called nomes. Egyptologists have seen in the nome structure what they believe to be the ancient remnants of preunification political and social structure. Breasted (1964, p. 66) noted that, “These ‘nomes’ were presumably the early principalities, from which the local princes who ruled them in prehistoric days, had long disappeared.” Trigger agrees, stating that “It has also frequently been assumed that the original Egyptian states were small units equivalent to the nomes or districts that served as administrative divisions of the country in historic times. Out of the union of these tiny states, two coherent, independent kingdoms were thought to have emerged. . . .” (1983, pp. 44, 45). Grimal (1992, p. 58) notes that “although the provinces were not actually identified as such until the time of Djoser [3rd Dynasty] . . . the emblems representing each of the nomes date back to the period before the unification of Egypt. These were the territories of the ancient provincial dynasties. . . .” Kemp’s model envisions a gradual process of political unification of Upper Egypt; during the early to middle Predynastic small polities were gradually merged into three larger configurations, centered at Hierakonpolis, Nagada, and This (near Abydos). During the middle to

late Predynastic, Kemp believes these three polities merged into what he called the “proto-kingdom of Upper Egypt,” which then continued its expansion northward to encompass the “proto-kingdom of Lower Egypt.”

These polities were probably large chiefdoms. Several researchers have suggested or implied that chiefdom-type social organizations existed in Predynastic Egypt. For example, Hoffman (1982) believed that the Painted Tomb at Hierakonpolis was possibly that of a local paramount chieftain; Hassan (1988, pp. 170–172) describes the Predynastic in terms of a “hierarchy of chiefs”; Bard and Carneiro (1989, p. 21) suggest that chiefdoms existed in Upper Egypt by Nagada II.

For anthropologists, confusion has been created by the way Egyptologists borrow or use terms like “chiefdom,” “state,” “ranked society,” and “stratified society.” Although these terms were optimistically described by Service (1971) and Fried (1967), they have proven more elusive in the archaeological record (for example, see Binford, 1971; Brown, 1981; Chapman and Randsborg, 1981; Earle, 1987, 1991; Flannery, 1995). Scholars working with early Egyptian materials frequently borrow the terminology but use it rather loosely. For example, Anderson (1992) suggested that Badarian graves exhibited a two-tiered social structure that might already have been stratified, implying that certain individuals enjoyed greater status and the preferential access to resources that went with it. Likewise, Wilkinson (1999, p. 29) states that “the stratified nature of Upper Egyptian society in Naqada I is also highlighted by the presence, in certain graves, of objects that seem to indicate a special role for the tomb owner, though not necessarily a position of political power.” From a strict anthropological point of view, such items might indicate a ranked society rather than a stratified one. But in Nagada II, “elaborate child burials point to a ranked society with inherited status” (Wilkinson, 1999, p. 30). This presents the rather awkward picture of a developing society moving from a more complex stratified form in Badarian and Nagada I times to a less complex, ranked form in Nagada II. Certainly, however, this is not what Anderson and Wilkinson mean to suggest; their use of these terms should probably be understood in a more vernacular sense.

Another example is seen in the various terminology used for the polities in Predynastic and Early Dynastic Egypt. By Nagada II, Kemp (1989) suggests the presence of “kingdoms” at Hierakonpolis, Nagada, and This, but he calls the polity that resulted from their unification the “proto-kingdom of Upper Egypt.” Clearly, he doesn’t mean to imply that kingdoms evolve into more complex polities that are merely proto-kingdoms. Wilkinson (1999) implies that the unification event is what created the state in Egypt, that is, that earlier polities were not states, but kingdoms. Trigger, however, clearly suggests that there were states in the Predynastic period, in both his 1983 discussion quoted earlier and in his 1968 work: “there is also the question of why a southern state should have been the one to unite all of Egypt” (p. 87).

The tiny states to which Trigger refers are the same polities that Hassan calls chiefdoms and Kemp calls kingdoms, while Trigger's state in his 1968 discussion clearly means the Upper Egyptian polity that Kemp calls a proto-kingdom. Guksch (1988) believes that Egypt was not a state, anthropologically speaking, until the end of the First Intermediate period (ca. 2040 B.C.), because many of the criteria that Renfrew (1973, p. 543) discusses as being characteristics of chiefdoms were not present in Early Dynastic, or even Old Kingdom Egypt. I have suggested elsewhere (Savage, 1997) that many of the anthropological characteristics of states developed in Egypt after the unification rather than before it. In any event, the various uses of these terms means that the polities that are discussed in the following sections should be thought of as chiefdoms in a rather loose sense.

### **State Formation in Ancient Egypt**

Recent developments in Predynastic Egyptian archaeology in regional differentiation, chronological refinements, and the nature of Predynastic sociopolitical relations have allowed researchers to develop exciting new interpretations of old evidence. These developments are clearly nested; one cannot reinterpret Predynastic mortuary treatments and gain fresh insights into social organization without first reevaluating cemetery chronology. If we see temporal drift as the only cause of the spatial layout in cemeteries, then many other social factors that contributed to their final form will be obscured. But by developing new seriation and radiocarbon-based cemetery chronologies, we reveal complex social relationships hitherto unseen. It makes sense that Predynastic cemeteries would be organized along descent group lines, especially since later ones were, as Reisner (1932) pointed out, but it has taken a fresh chronological approach to reveal them.

The reanalysis of Predynastic chronometrics would not have been undertaken without a renewed appreciation of regional differentiation along the Nile. Although Scharff saw regional differences in Predynastic ceramics as long ago as 1928, it has taken more thorough analyses of ceramics (Finkenstaedt, 1980, 1981, 1985; Friedman, 1994), lithics (Holmes, 1989), and settlement patterns (e.g., Patch, 1991) to specify precisely what the regional differences are and to establish their approximate boundaries. Their work helped spur Wilkinson (1996) and Savage (1995, 1997) to develop their regional chronologies, which in turn encouraged fresh approaches to the problem of the origin of the Egyptian state.

What motivated the rulers of Upper Egyptian polities (and ultimately Narmer) to expand their influence northward might have been economic rather than political. The disproportionate wealth of Cluster 3 burials at Naga-ed-Dêr in the period from 3510 to 3340 B.C. included items of west Asian origin (Savage, 1997). Trigger (1983, p. 49), and Hassan (1988, p. 172) have suggested that interpolity conflict probably resulted from a desire to control trade. In recent years significant amounts of Canaanite materials have been found at the east Delta sites of Maadi (Caneva

*et al.*, 1987; Rizkana, 1989) and Minshat abu Omar (Kroeper, 1988, 1989). The North Sinai Survey (Oren, 1973, 1989) recorded more than 250 sites of the EB I (late Predynastic) period with mixed Egyptian/Canaanite materials. Several EB I sites in the Levantine Coastal Plain and northern Negev contain significant amounts of Egyptian material, which suggests the presence of an Egyptian trading colony at 'En Besor and possible trading stations at Taur Ikbeinah and Tell Ma' ahaz (Harrison, 1993; Joffe, 1993).

One consequence of the effort to extend the power of Upper Egyptian chiefs northward and monopolize trade routes to western Asia was the creation of a single, larger polity, ranging from the area of the First Cataract in the south to the Mediterranean. Immediately, it seems, Egyptian trading colonies were established in the Negev region; Levy *et al.* (1995) have published a *serech* (an early form of the royal name, containing the ruler's name above a palace facade) of Narmer from the Lahav Terrace in southern Israel and evidence of Egyptian ceramic manufacturing and architectural styles. Their results suggest that by the beginning of the 1st Dynasty the Pharaohs were already beginning to exert control over the northern trade routes.

The political union of Upper and Lower Egypt achieved by the end of the Predynastic seems tenuous at best, and there are ample reasons to suggest that it did not immediately result in the formation of a state, at least in the conventional anthropological sense (Savage, 1997, pp. 258–261). Rather Narmer's conquest of Buto in the Delta seems to have created only a more territorially extensive version of the southern chiefdom. The formation of the state in Egypt was an unintended consequence of Narmer's initial expedition to take control of the northern trade routes and the incremental efforts of later 1st and 2nd Dynasty kings to consolidate their political, economic, and ideological power.

## REGIONALISM IN THE UPPER EGYPTIAN PREDYNASTIC

The evidence of regional differences along the Nile has existed for some time. Prehistorians and Egyptologists have long recognized Upper and Lower Egyptian cultures that appeared to legitimate the traditional division of Egypt into the "Two Lands." Differences in ceramics, housing, and mortuary treatments in the Early and Middle Predynastic had disappeared by the end of the Late Predynastic in favor of southern material culture and practices; archaeologists have interpreted these developments as evidence of the spread of Upper Egyptian cultural influence into the Delta in the later Predynastic, and political expansion by some time in Dynasty 0.

However, there is evidence of significant regional variation in Upper Egypt itself, especially in the Early and Middle Predynastic. The three principal regions of Upper Egypt (Fig. 1), moving from south to north, are (1) Hierakonpolis, (2) Nagada, and (3) Abydos (or Thinis). While the Elephantine region in the far

south functioned in the Predynastic as an important entry point for Nubian trade and a source of pink granite and other crystalline rocks, the agricultural potential of the area could not support enough people to have allowed the area to develop into a significant polity on its own. However, further south, in Lower Nubia, Wilkinson (1999, pp. 40, 41) suggests that a major center of Predynastic kingship evolved around the region of Qutsul. There, early rulers had at least adopted some of the iconography of Upper Egyptian rulers (including the White Crown, the god Horus, and niched mud-brick architecture). Furthermore, cemeteries at Hierakonpolis and Qutsul contain cattle burials (Hoffman, 1982, pp. 55, 56; Williams, 1986, p. 176). Early trade in ivory clearly would have traversed the region, and it is clear that this important center, while outside Egypt proper, participated in a complex web of material and ideological exchange with the Hierakonpolis polity to the north (Wilkinson, 1999, pp. 345, 346).

### Hierakonpolis Region

The Hierakonpolis regional tradition is centered in the upper Nile River Valley, from Lower Nubia north to a line somewhat upriver of Armant (in this sense, it includes the area around Elephantine). Badarian period settlements appear concentrated in the northern part of the region, from Hierakonpolis to Asyut (Fig. 1). During the Nagada II and III periods, it is thought that the political influence of the Hierakonpolan polity gradually spread northwards, absorbing the Nagada region (Hoffman, 1984, also believed that Hierakonpolis absorbed the Abydos region). More than 70 “localities” have been discovered near Hierakonpolis (Hoffman, 1982, Table VI.3). Settlements, cemeteries, and industrial sites also were found up the Wadi Abul Suffian at Hierakonpolis, a settlement pattern atypical of other regions (Hoffman, 1982, 1984; Patch, 1991). Decreased rainfall and lower Nile floods are thought to be partly responsible for the gradual nucleation of Predynastic settlement closer to the river (Hoffman *et al.*, 1986, pp. 183, 184). By the middle of the Nagada II period, settlements in the Hierakonpolis region were generally found on Nile levees, buried wadi fans, and the low desert terraces at the edge of the flood plain. Settlement clusters were usually not spaced closer than 4–5 km apart in the more densely populated stretches of the river valley (Patch, 1991). Regional centers were flanked by smaller outlying sites of various functions, while cemetery sites continued to be located in the low desert, sometimes reusing earlier locations (Hoffman, 1982, p. 123; Hoffman *et al.*, 1982). Smaller agricultural settlements appear as clusters of simple structures and associated hearths, pits, and other features. Little evidence of community organization has been found; villages appear to have developed organically and do not appear to follow any preconceived plan. Spaces between houses are irregular in shape and size. Small-scale ceramic manufacturing appears to have occurred at the household level, while larger, industrial-scale production facilities were located up wadis, in locations where kiln fires could

have been fanned by prevailing winds. By the Nagada II period, the larger centers appear more nucleated. Larger structures may have served religious/administrative functions (Hoffman, 1982; Hoffman *et al.*, 1986). Houses were circular and small, or slightly larger, rectangular, and semisubterranean (Hoffman, 1980, 1982).

The later Predynastic economy in the Hierakonpolis region was founded on surplus production of wheat and barley, cattle, sheep, goats, and (to a lesser extent) pigs; the economy in the Early Predynastic suggests some remnant foraging/hunting as well (Allen, 1997; Bard, 1994a; Endesfelder, 1984; Hassan, 1988; McArdle, 1982; Wetterstrom, 1993). Trade with Lower Egypt and the southern Levant is attested by Maadian and Palestinian ceramics in cemetery and settlement sites (Adams and Friedman, 1992).

Ceramic production occurred at various scales, from relatively simple household production to specialized industries devoted to supplying the funeral cult (Hoffman, 1980, 1982, 1989a). Several classes of pottery are diagnostic of various subperiods. Friedman (1994) found that temper, manufacturing technique, surface decoration, and shape of utilitarian ceramics varied among the Hierakonpolis, Nagada, and Hemamah regions; variation was pronounced in the Nagada I period but disappeared by the middle of Nagada II. In the Hierakonpolis region, these wares in the Nagada I period were tempered with shale fragments. In contrast, the black-topped red and polished red classes show little regional variation (Friedman, 1994, pp. 862–882).

Lithic tool types from Hierakonpolis include burins, retouched pieces, end scrapers, notches, microdrills, winged drills, and transverse arrowheads. Crescent drills and sickle blades appeared in Nagada II, associated with a large, temple-workshop complex (Locality HK-29A). Utilitarian, chipped stone tools were made on flakes and blades, but “ceremonial” stone implements such as ripple-flaked knives and fishtail flints were standardized throughout Upper Egypt (Holmes, 1987, 1989). The microdrills and crescent-shaped drills were probably used for manufacturing beads and groundstone jars/maceheads, two other Hierakonpolis lithic specialties (Hoffman, 1982, p. 13, 1987, pp. 213–216).

### Nagada Region

The Nile River Valley from slightly south of Armant to a line slightly upriver from Hu (Diospolis Parva) encompasses the Nagada region (Fig. 1). The area immediately around the town site of Nagada is considered the heartland of the Nagada culture, which spread south to Hierakonpolis in the early Nagada I period before being carried northward to the Delta by the Late Predynastic.

Butzer (1976, pp. 13–19) suggests that the natural levees of the Nile, its banks, and the edge of the low desert terraces were the main loci of Predynastic settlement. Many lower-lying Predynastic sites were located on raised banks of the Nile, where they have been buried by accumulated alluvium and more recent

settlement (Butzer, 1982; Hoffman, 1989b). At Armant, features included circular to ovoid post structures, stone rings, hearths, wattle-and-daub lined pits, and other trash pits (Ginter and Kozlowski, 1994). Early settlements in the Nagada region consist of small sites (3 ha or less) on low terraces overlooking the edge of the flood plain, spaced about 2 km apart. House features consist of small postholes but no built structural remains, suggesting that their walls were probably made of woven reeds, perhaps smeared with mud, around a frame of wooden posts. There are many blocks of Nile mud and stones on some sites, suggesting that some structures (or at least their foundations) were made of bonded mud and stone. Houses often contained hearths and storage pits, and sometimes subfloor burials. Trash pits and animal pens were scattered among the dwellings. The sites are thought to have been home to between 50 and 250 people (Hassan, 1981, 1988). Some sites appear to have been occupied for several generations, with “sets of up to five overlapping occupations with lateral shifts suggesting a pattern of abandonment and reoccupation” (Hassan, 1988, p. 155). Larger communities in the Nagada II period appear more planned; Nagada South Town had rectangular, mud-brick buildings inside a 2-m thick wall thought to be a fortification system (Petrie and Quibell 1896, p. 54; Spencer, 1995, p. 35).

Farming and herding were already well established in the Nagada region by Badarian times. By Nagada I, Predynastic peoples were growing barley and wheat, raising sheep, goats, cattle, and pigs. Hunting was vestigial by this time, indicated by very limited gazelle remains, but fishing was widely practiced (Hassan, 1988, p. 156). Field irrigation does not appear to have been practiced. Instead, small earthen berms were made to hold the Nile flood in natural basins (Hassan, 1988, p. 156).

In the Nagada region, utilitarian ceramics were tempered with grog and coarse organic materials in the Nagada I period. In contrast, the black-topped red and polished red classes show little regional variation (Friedman, 1994, pp. 862–882). White Cross-Line ware (Petrie’s C-Ware, see Petrie, 1901) exhibits different decorative motifs in the Nagada region than in the Abydos region further north (Finkenstaedt, 1985). “The principle subject matter of the Naqada painted wares comprises domesticated animals or potential domesticates grazing peacefully in a landscape setting. None of the cultic apparatus nor the active hunting scenes of the Abydos group occurs” (Finkenstaedt, 1981, p. 10).

Regional variation also occurs in lithic artifacts, a fact recognized by the excavators at Armant (Mond and Meyers, 1937, p. 2). Holmes (1989, p. 330) describes a unified lithic tradition in the Nag Hammadi-Nagada-Armant area. In Nagada I, this industry was characterized by high proportions of end scrapers, notches, burins, and retouched pieces, chipped from secondary flakes produced by hard-hammer technology. The Nagada II assemblage was essentially similar, with the addition of a few blade tools, such as sickles (Holmes, 1989, pp. 336–337). The production of bifacially worked, flint axe blades, many with their working edge



prepared by the removal of a transverse flake, also appears centered in the Nagada region. Although there are isolated specimens from Hierakonpolis (Needler, 1984; Quibell and Green, 1901) and further south at El Qara (Morgan, 1912), and axe preparation flakes are known from the Badari region, Holmes (1989) agrees with Huzayyin (1937, 1939) that the axes are indicators of a regional cultural facies centered in the Nagada area.

Social differentiation was already apparent in the Nagada cemeteries by the early Predynastic, where Bard found evidence of a two-tiered hierarchy in several cemeteries in Nagada I. By Nagada II, a four-tiered hierarchy is evident (Bard, 1994b, pp. 91–96). These results at Nagada contrast with those of the more provincial Armant cemetery, where a two-tiered hierarchy was seen in all time periods except the late Nagada II (Bard, 1994b, pp. 59–68). Griswold (1992) suggests that inequality decreased at Armant through time. Cemetery T at Nagada is recognized as the burial ground of an elite social stratum (Bard, 1994b, p. 105; Davis, 1983; Kemp, 1989). Evidence from dental morphology (Johnson and Lovell, 1994) and cranial nonmetric traits (Prowse and Lovell, 1996) suggests that this social stratum was endogamous, while Hassan (1988, pp. 157, 169) indicates that village exogamy was probably the norm and that lineages were probably matrilineal (based on the exclusive internment of women and children at Merimda). Hassan (1988, p. 172) describes a “hierarchy of chiefs” of at least three levels, legitimated through the bestowal of sumptuary goods, the mortuary cult, and maintenance of order among squabbling underlings and peer-polities. He further speculates that intergroup military conflicts probably developed during the Nagada III period, from disputes related to trade, and that “systematic warfare . . . must have become an integral element of the iconography of regional chiefs” (1988, pp. 172, 173). Wealth interred in Nagada III burials declined at Nagada (Bard, 1994b), a process perhaps explained by the expansion of the Hierakonpolis polity, which may have absorbed this region by Nagada III (when the large tombs at Hierakonpolis Locality 6 were constructed). However, the recent reexcavation of Dynasty 0 tombs at Abydos, especially Tomb U-j, which is somewhat earlier than Locality 6, suggests that Nagada may have been absorbed by the Abydos polity instead (Wilkinson, 1999, p. 50).

### **Abydos (Thinite) Region**

The Nile River Valley from Asyut south to Hu (Diospolis Parva) was the home of a regional polity named for the principle Dynastic period sites of Abydos or This (Fig. 1). The Nagada culture is thought to have spread north to the Abydos region, from its heartland around the Qena bend of the Nile during late Nagada I and early Nagada II. Most of the settlement pattern data from the Abydos region is extrapolated from the distribution of Predynastic cemeteries (e.g., Ayrton and Loat,

1911; Brunton, 1927, 1928, 1937, 1948; Brunton and Caton Thompson, 1928; Lythgoe and Dunham, 1965; Naville, 1914; Peet, 1914). A recent archaeological survey by Patch (1991) has located a few settlement sites; Patch believes that the Abydos region in Nagada I and early Nagada II was not as densely settled as the Nagada and Hierakonpolis regions. Part of the reason may have been that the large basins in the floodplain were not amenable to the available farming techniques. Unlike the Hierakonpolis region, Predynastic sites are not found in the major wadis (Hoffman, 1982, 1984; Patch, 1991). Instead, settlements in Nagada I and early Nagada II were generally placed within 100 m of the boundary between the low desert and the edge of cultivated land. Settlements on the east bank of the Nile were about 1–2 km apart, while on the west bank the sites were further separated. Cemeteries are of relatively equal size and spacing, implying a rather undifferentiated settlement pattern.

During the late Nagada II and throughout Nagada III, settlements became more nucleated; several cemeteries were no longer used or had fewer graves in this period. Affiliated settlements were either abandoned, sharply curtailed, or adopted other cemetery sites that have not been found. The available data show that only the cemetery at el-Mahasna increased in size (Ayreton and Loat, 1911; Patch, 1991, p. 307). Settlement in the Late Predynastic seems aggregated around Naga-ed-Dêr and Abydos. Villages in the Abydos-Thisis region were probably not occupied by more than 100 people (Patch, 1991, p. 337), and few have been excavated from the Abydos region. Caton Thompson (Brunton and Caton Thompson, 1928) recorded several small hut circles in the Amratian (Nagada I) level at Hemamieh, but some of these may have been animal pens or grain storage bins (Holmes and Friedman, 1989, p. 17).

Friedman (1994) found that Nagada I utilitarian wares in the Hemamiah area exhibit a continuation of earlier Badarian manufacturing techniques; they are made of relatively coarse to fine Nile silt, tempered with grass stems, or of unrefined Nile silt with smaller, naturally occurring organic inclusions. Vessels have rounded or tapered rim profiles, in contrast to the squared-off rim profiles in the Nagada region (Friedman, 1994, pp. 868, 869).

White Cross-Line ware (Petrie's C-Ware, see Petrie, 1901) exhibits different styles in the Abydos and Nagada regions (Finkenstaedt, 1980, 1985). In the Abydos region, decorative motifs include hunting scenes, and cultic vessels are also found; but neither are present in the Nagada region (Finkenstaedt, 1981, p. 10). There are also differences in the composition of the paint used. In the Hemamiah area, the paint is chalky and pinkish, while in the Nagada and Hierakonpolis regions the paint is generally whiter (Finkenstaedt, 1980, p. 116; Friedman, 1994, p. 874).

Regional variation also occurs in lithic artifacts found in settlements, where local Badarian technology developed into the subsequent Mostageddan industry; neither has much in common with lithic industries from the Nagada or Hierakonpolis regions (Holmes, 1989, p. 323). The main tool classes present near el Badari, in

the Abydos region, include end scrapers, truncations, backed pieces, sickle blades, and retouched pieces. The later Mostagedda industry adds large circular scrapers, truncation knives, blade knives, and glossy bladelet tools (Holmes, 1989, p. 326). There appear to be no significant differences in lithic assemblages from cemeteries of Gerzean and later date; thus cemeteries indicate interregional contact and probably only a few specialized lithic production locales devoted to supplying the mortuary regime (Holmes, 1989, pp. 328, 333).

Clear social distinctions existed between elites and nonelites as far back as the Badarian period. Anderson (1992) suggests that a two-tiered social hierarchy existed in which elite graves contained exotic goods, such as ivory. Some burials included abundant sumptuary goods. Thus a pattern of differential access to exotic items was established early in the Predynastic and continued throughout, with differences between rich and poor graves increasing through time. There is no evidence of differential burial by sex in the Badari cemeteries (Anderson, 1992, p. 57) and very little at Naga-ed-Dêr, though females buried in Cemetery N7000 may have had more social roles available than did males (Savage, 2000). The graves from Cemetery U at Abydos are part of a sequence of elite tombs that began in Nagada I, developing into the royal graves in Cemetery B from the Nagada III period (Dreyer, 1992a; Kaiser and Dreyer, 1982; Peet, 1914). This long developmental sequence makes a Nekhen (Hierakonpolis) origin of the 1st Dynasty more difficult to sustain.

It is also likely that different burial areas were used by members of different descent groups. The cemeteries in the Abydos region are thought to be too small to include whole village populations and probably represent smaller social groups (Patch, 1991, p. 308). At Naga-ed-Dêr, it looks as if six different descent groups used Cemetery N7000 simultaneously, each group burying its dead in a separate part of the graveyard. The various descent groups controlled different exotic goods, experienced waxing and waning economic fortunes through time, and probably pursued different power-building strategies (Savage, 1997). Early in Cemetery N7000's use, one group appears to have controlled ivory and created the wealthiest graves; later this group was eclipsed by a different group, which had access to imports of northern origin (Savage, 1995, 1997). Grave robbing soon after the burial, already evident in the Badarian (Anderson, 1992), intensified throughout the later Predynastic (Savage, 1995, 1997) at Naga-ed-Dêr.

Based on the differences between the three regions, it is tempting (though not yet conclusive) to view the evidence as indicative of what would later develop into the three principle polities of Upper Egypt (see Wilkinson, 1999, Chapter 10, for additional discussion of regionalism in early Egypt). While it is probably too simplistic to merely read the regional differences in material culture as direct evidence of regional polities, groups of settlements in a region that share cultural traits might have been more amenable to early assimilation than groups that did not share such characteristics. Later, the division of Egypt into nome districts in

the dynastic period is thought to have its roots in an earlier, prehistoric configuration (Breasted, 1964, p. 66; Rice, 1990, p. 108; Trigger, 1983, pp. 44–45). If the historic nomes can be traced back thousands of years to polities that existed in the Predynastic, it does not seem too unreasonable to speculate that the larger chiefdoms that seem to have emerged in Upper Egypt by Nagada II could have been founded upon groups of smaller polities that shared similar cultural characteristics.

### CHRONOLOGICAL DEVELOPMENTS

The regional variation that existed in Upper Egypt and between Upper and Lower Egypt during the Predynastic has only recently begun to be appreciated fully. Until the last few years, it was essentially assumed that Upper Egypt was a relatively unified cultural region during the Predynastic, different from Lower Egypt, but internally consistent from place to place. In the past, this assumption led to an uncritical acceptance of chronological schemes based on the analysis of whole forms recovered from Predynastic cemeteries in Upper Egypt. Petrie's (Petrie, 1901) ceramic seriation, periodization, and sequence-dating approach was based on his work in the Nagada region; Kaiser's (Kaiser, 1957) description of the Nagada I–III periods and his development of *stufen*, or stages, within his larger periods was based mostly on a reanalysis of Mond and Meyers' (Mond and Meyers, 1937) excavation of the Armant cemetery (see Hendrickx, 1996; Savage, 1997, 1998, for discussion and critique). Both systems have been applied from the Delta south to the First Cataract of the Nile, operationalizing the hidden assumption of similar cultural trajectories across this vast region. And Kaiser's dating method rests on the assumption that "space equals time" in Predynastic cemeteries, an observation that originated with Junker (1912) at Tura and Brunton at Badari (Brunton and Caton Thompson, 1928). Using Petrie's sequence-dating methods, Brunton observed a tendency in the small Badari cemetery for early graves to be located near the center, with later graves arranged near the outside edge. Kaiser used this observation to develop his dating method; he assumed that early graves at another small cemetery, Armant, would be in the center and later ones to the outside, and proceeded to date the ceramics accordingly. The result is somewhat tautological, since there are known errors in Petrie's methods (Hendrickx, 1996; also see Baumgartel, 1955, p. 42; Friedman, 1981, p. 2; Scharff, 1926, p. 73; Vercoutter, 1992, p.101), and it reaches an extreme when empty graves are dated based on the dates of other graves nearby.

The ceramic forms that Kaiser assigned to his various *stufen* have been used like "index fossils" by other archaeologists to redate graves in other cemeteries, and to date the deposits on settlement sites "from Hierakonpolis in the far south (Adams, 1987) to Buto in the northwestern delta (Way, 1991a)" (Wilkinson, 1996, p. 10).

The implicit assumption of uniform ceramic development that underlies these applications of the *stufe* system (or Petrie's, for that matter) is beginning to be replaced by an understanding of the regional character of Predynastic ceramic production and development. Naville stated emphatically that "for pottery, the only true classification is not chronological: it is geographical, or rather, local" (1914, p. xi). Scharff (1928) suggested that regional variations in Petrie's C-Ware class existed, and Finkenstaedt distinguishes three principal regions, each of which "produced a type of C ware peculiar to it." She infers that "in some cases, individual sites evolved a distinctive local variation on the regional style" (1981, p. 7). Kaiser warned that differences between sequences at Armant and Nagada might reflect differences in development at the two sites (1957, p. 73). More recently, Patch notes that "it would be surprising if all Predynastic sites followed the same development" (1991, p. 192).

Computerized methods of ceramic seriation have begun to replace the more traditional methods. Kemp (1982) used a multidimensional scaling (MDS) program, HORSHU, to test the sequence of graves in Cemeteries A and B at el-' Amrah, Armant 1400-1500, and el-Mahasna. MDS, a technique like correspondence analysis, is a form of dual scaling that can arrange both cases and types in chronological order (see Nishisato, 1980). HORSHU, developed by Kendall (1971) specifically to automate the process that Petrie used to create his original seriation, could handle no more than 100 graves on the machines of its day, because of the computationally intensive nature of nonmetric MDS (see Shennan, 1990, pp. 281-283, for a brief discussion of MDS). Kemp condensed the Petrie corpus (see Petrie, 1928) into 43 types for his analysis and distinguished three clusters of graves based on these types. The clusters were interpreted to confirm Petrie's basic division of the Predynastic into Amratian, Gerzean, and Semainean (and the major divisions in Kaiser's *stufe* dating method), although Kemp's division between Amratian/Nagada I and Gerzean/Nagada II appears somewhat later than Petrie's.

Since Kemp's initial computer seriation, others have used similar methods. (1) Seidlmayr (1990) employed seriation to identify local chronologies at individual sites and then correlated the results. (2) Wilkinson (1996) used the Bonn Seriation Program (a form of correspondence analysis, see Scollar, 1993) to develop independent chronologies at eight different Predynastic and early dynastic sites. He subsequently correlated them by connecting the various phases from the eight sites to the *stufe* system. His results lack external dating controls, such as those provided by radiocarbon dating, but are illuminating nonetheless. (3) Savage (1995, 1997) used correspondence analysis to date 143 graves from Cemetery N7000 at Naga-ed-Dêr and plotted the burial order on the cemetery map (Fig. 2). Temporal drift clearly cannot account for the burial order, and other analysis suggests that the six spatial clusters (Fig. 3) observed in the cemetery were the burial grounds of distinct descent groups, as were later cemeteries in the Naga-ed-Dêr region. Reisner stated that "it is to be understood of course that the cemetery [Cemetery 500-900] falls into family groups several of which were begun at nearly the same

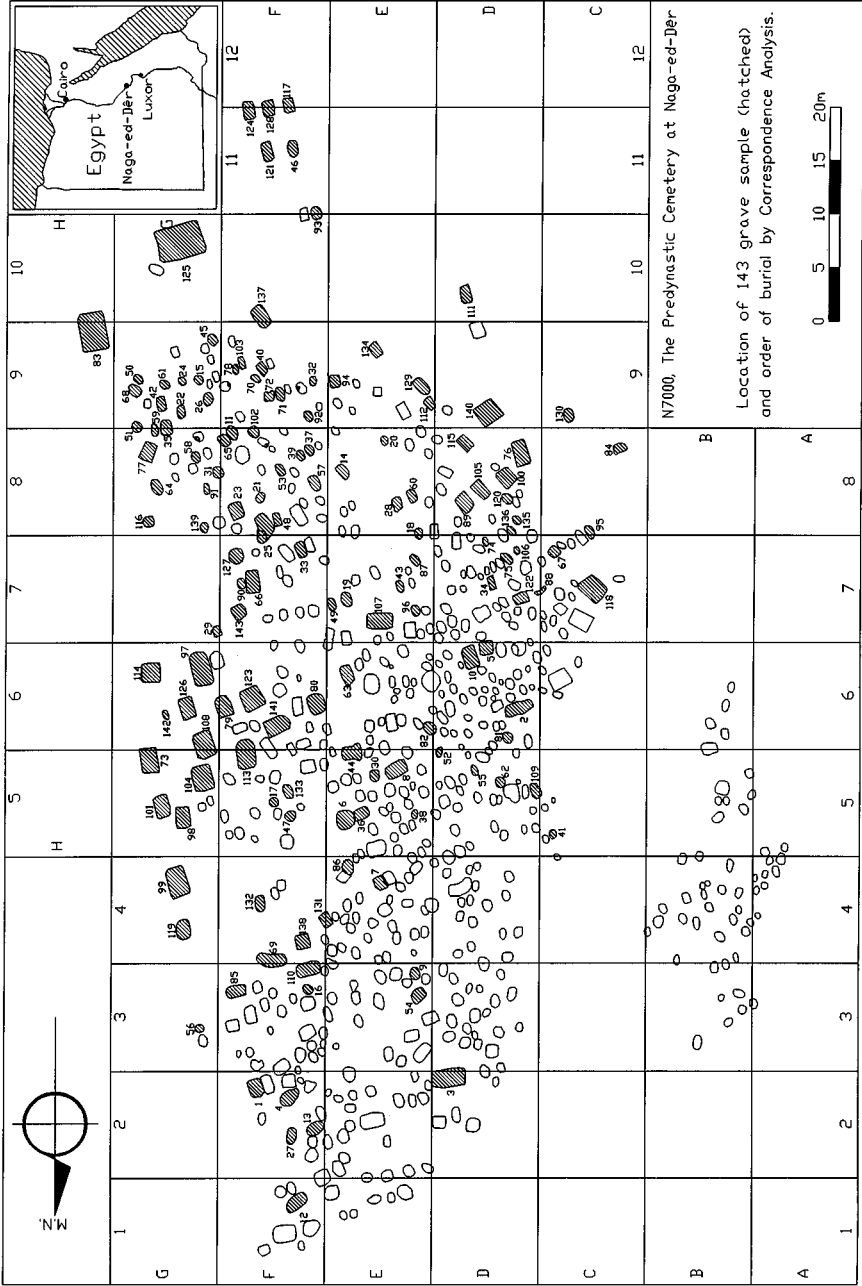


Fig. 2. Burial order of 143 graves at Cemetery N7000, Naga-ed-Dér, based on correspondence analysis. Adapted for AutoCad and ArcView from Lythgoe and Dunham (1965).

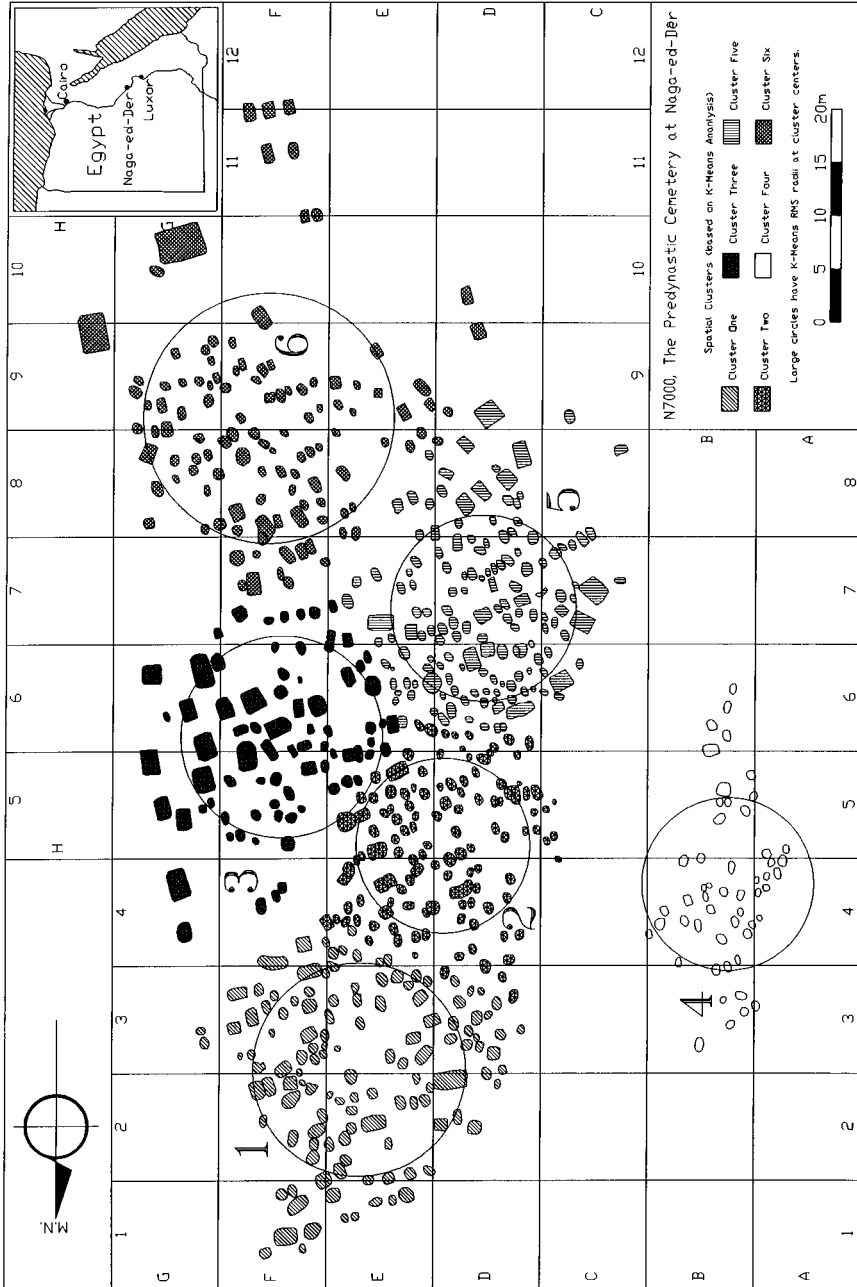


Fig. 3. Burial clusters in Naga-ed-Dér Cemetery N7000, based on k-means analysis of grave locations.

time and grew simultaneously” (1932, p. 181) and “the ‘western’ nucleus of the whole cemetery was similarly composed of separate family groups” (1932, p. 183).

There are clear problems with traditional chronological methods. While the three methods used in the past all agree on a tripartite division of the Predynastic (after the Badarian), they disagree on further subdivisions, and attempts to rectify problems in any method by resorting to another and then redating graves in the first only created tautological nightmares. Furthermore, regional variation in Predynastic ceramic assemblages is generally not considered (but see Wilkinson, 1996, for a notable exception), meaning that chronological schemes worked out in one place are applied uncritically in other places. The whole question of “space as time” rests on an assumption that needs to be verified by an external, independent dating method. O’Shea stresses the importance of independent reference points: “precise dating, particularly dating that is independent of the material culture and behavior being examined (as in radiometric dating), provides a critical underpinning for any serious anthropological research into the past” (1996, p. 16). The only way out of the current muddle is to develop a radiocarbon-based chronology.

Efforts are underway. Radiocarbon dates have been obtained from many Predynastic and Dynastic sites (for some recent compilations see Close, 1980, 1984, 1988; Derricourt, 1971; Hassan, 1984, 1985; Hassan and Robinson, 1987; Kantor, 1992). Hassan’s radiocarbon-based periodization of the Predynastic has already been mentioned. However, the corpus of radiocarbon dates from Predynastic contexts is not without problems—most absolute dates are from settlement sites, not cemeteries. Because of the history of Egyptian archaeological research, there are two parallel chronological schemes for the Predynastic period. The first, based on relative methods, is exemplified by the work with ceramics from cemetery contexts (mostly whole vessels) by Petrie (1901), Kaiser (1957), and Kemp (1982). The second is based more on sherds for its ceramic typology and on radiocarbon dates obtained mostly from settlement sites (and tombs from the later dynastic period). However, the ceramic assemblages in settlement sites are different from those in cemeteries. Decorated, marl clay pots, termed “D-Ware” by Petrie, are very rare in settlements (see Hoffman, 1987) but fairly common in cemeteries, and low-fired, coarse clay pans, called “Bread Molds,” are hardly ever found in cemeteries but are abundant in settlements. The chaff-tempered, coarse pottery known as “Rough-faced Ware,” or “R-Ware,” is far more dominant in settlements than in cemeteries during Nagada I, only becoming the dominant type in cemeteries in Nagada II (see Ginter and Kozłowski, 1994, pp. 95–101; Hendrickx, 1996, p. 39). Radiocarbon dating in settlements and relative dating by ceramic seriation or horizontal drift in cemeteries are not well connected. Predynastic cemetery sites remain largely undated by radiocarbon methods, and the possibility exists that cemetery chronologies may not coincide with those from settlements.



A radiocarbon-based chronology for the Predynastic cemetery, N7000, at Naga-ed-Dêr is underway. Recently, Savage (1998) published AMS radiocarbon dates from 12 of the 143 graves in his seriation study. The results showed that organic material curated at the Hearst Museum of Anthropology, University of California at Berkeley, could produce viable dates and helped demarcate four use phases in the cemetery. Further, a recalibration of radiocarbon dates from Upper Egypt showed that each of Hassan's four periods could be subdivided into an early and late phase (Early Predynastic I and II, Middle Predynastic I and II, etc.) and placed the Cemetery N7000 material in the Middle Predynastic I through Terminal Predynastic I, from about 3800 to 3090 B.C. (two sigma ranges, see Savage, 1998, pp. 243–247). One hundred additional samples from Cemetery N7000 have recently been submitted for AMS dating under a National Science Foundation grant; 30 dates will be published soon (Savage, in press). The results should allow a radiocarbon-based ceramic chronology to be developed for the first time with Predynastic materials.

## **SOCIOPOLITICAL DEVELOPMENTS AND TRADE**

The archaeological evidence in support of the traditional interpretation of the unification of Egypt, or a more modern update, is surprisingly thin, partly because it has not been sought and partly because assumptions operationalizing other aspects of Predynastic research have obscured it. The assumption that variation in Predynastic cemeteries was explained largely by temporal drift has precluded explanations of differences based on other social factors, although it has long been recognized that certain Predynastic cemeteries (notably Cemetery T at Nagada) were different from others. The acknowledged variation was seen to exist between cemeteries, rather than within them.

The advances in chronological research have brought our rather fuzzy understanding of Predynastic mortuary practices into sharper focus and provided exciting new evidence that helps frame a picture of Predynastic Egypt that includes intense intergroup competition, even at the local level.

### **Group Dynamics and Competition at Naga-ed-Dêr Cemetery N7000**

At Naga-ed-Dêr, Savage has shown that six different burial clusters exist in the Predynastic cemetery, N7000 (Savage, 1997, Figure 5). As noted earlier, the cemetery was used from about 3800 B.C. to about 3090 B.C., based on AMS radiocarbon dates. These dates can be divided into four phases (Table I) that correspond remarkably well with the four use phases developed from the ceramic seriation.

Descent (based on kinship), power, and competition appear as powerful organizing principles in the Predynastic at Naga-ed-Dêr. Alternative hypotheses related

**Table I.** Naga-ed-Dêr Cemetery N7000 Use Phases Based on Combined AMS Radiocarbon Dates

Phase	Graves	1 sigma range <sup>a</sup>	1 sigma <i>p</i> <sup>b</sup>	2 sigma range <sup>c</sup>	2 sigma <i>p</i>
1	7110, 7394	3760–3740	.19	3800–3630	1.00
		3720–3640	.81		
2	7036, 7159 7491	3630–3500	.82	3640–3500	.73
		3410–3380	.18		
3	7251, 7522 7526, 7603	3500–3450	.62	3510–3340	1.00
		3380–3350	.38		
4	7292, 7468 7513	3340–3290	.26	3360–3090	1.00
		3240–3100	.74		

<sup>a</sup> 68.2% confidence overall. Calendar years B.C.

<sup>b</sup> Probability of date falling into alternative date ranges.

<sup>c</sup> 95.4% confidence overall. Calendar years B.C.

to demographic, temporal, or wealth differentiation can be rejected, suggesting that the burial clusters, which might be descent groups, probably represent clan-type organizations in Predynastic society (Savage, 1997, pp. 234–249).

Economic power was clearly not shared equally among the different groups. First, Cluster 4 contained so few grave goods that none of its graves could be used in the seriation study. The location of Cluster 4 on the lower terrace of the cemetery suggests a lower status compared with burials on the upper terrace. Finally, these burials were plundered far less frequently, suggesting that they were not adorned with the kinds of items that attracted economic plundering, and that they did not attract the psychological attitudes that seem to accompany ideology-based plundering, where plundering may have been a deliberate attempt to damage the deceased in the afterlife by damaging or destroying the corpse. Cluster 4 appears to have formed an underclass in Cemetery N7000.

Competition in Cemetery N7000 is evident from the intensification in plundering, elaboration of grave architecture and mortuary ritual, and the increased inclusion of grave goods through time. Different groups controlled specific, rare resources. Cluster 1 appears to have controlled the ivory, suggesting that their power was based on trade with the south, where the ivory probably originated. Cluster 3, at the time of its ascendancy and greatest power in Phase 3, appears to have controlled the products associated with Mesopotamian trade. At some time between Phases 1 and 3 the trade with the south appears to have collapsed and was later replaced with trade to the north. The group that controlled the trade to the south, Cluster 1, declined sharply from Phase 2 to Phase 3, at precisely the point where Cluster 3 experienced its ascendancy.

### Economic Changes in the Later Predynastic

As independent agricultural villages coalesced into larger units, and these into early chiefdoms that were eventually assimilated into larger polities encompassing

long stretches of the Nile Valley, economic consequences might be expected. Regional centers might find themselves eclipsed, their surplus production appropriated as tribute or taxes payable to ruling elites at larger centers; such surpluses might be funnelled through local elites before being passed up the line. Consequently, we might expect to see a decline in overall regional wealth, accompanied perhaps by the concentration of some of the wealth that remained in the hands of fewer people. Given appropriate chronological controls, it has become possible to track such shifts at several places in Upper Egypt, with varying results.

Bard's (Bard, 1994b) analysis of Cemetery 1400-1500 at Armant found some increasing energy expenditure through time (from Nagada I through Nagada III); there are larger graves and more grave goods in later burials (the same is generally true across most cemeteries in Upper Egypt, see Castillos, 1982). She reports that social stratification was not indicated, but that an incipient form of ranking existed. Significant changes did not take place at Armant in terms of social stratification, though there was evidence of the development of differential status. Bed burials occurred at Armant, which might indicate higher status or authority, but "no elite of a highly hierarchical society seems to have evolved" (Bard, 1994b, p. 74). Toward the end of the cemetery's use, two larger, brick-lined graves were constructed (numbers 1207 and 1208), which Bard suggests might signal a new form of authority (1994b, p. 75) and perhaps the concentration of wealth or status into the hands of a local elite, but overall there seems to be little evidence for economic decline as a result of state formation. Armant was clearly a provincial cemetery belonging to a small agricultural community, so it is not surprising that major economic changes seem to have bypassed it.

In contrast to the Armant cemetery, those at Nagada and Ballas exhibit some significant changes through time. Petrie excavated three cemeteries (B, N, and T) at Nagada, recording over 2200 graves. Of these, Cemetery T, used in Nagada II and III, was by far the richest, with the most elaborate tombs, and indicates the presence of a local elite class. Cemetery N can be divided into an earlier, eastern part dated mostly to Nagada I; the western part (as well as Cemetery B) dates mostly to Nagada II (Bard, 1994b, pp. 100,101).

Spatial segregation by cemetery began in the region in Nagada II, when cemeteries T, B, and N west were established. Several indices (e.g., mean number of pots per grave, grave size, the number of stone vessels) increased significantly during the Nagada II period, but declined during Nagada III. "Collectively, there is a drop in wealth of grave goods in all Nagada grave clusters, indicating an abrupt shift in cemetery development from what evolved from Nagada I to Nagada II. While the emergence of elite graves in Cemetery T during Nagada II clearly represents members of the highest status descent group, Bard indicates that it is not possible to tell if this was the result of the imposition or emergence of a paramount hierarchy (1994b, p. 105). "Differentiation in burials decreased in Nagada III times, indicating that high-status burials had ceased or shifted elsewhere" (Bard, 1994b,

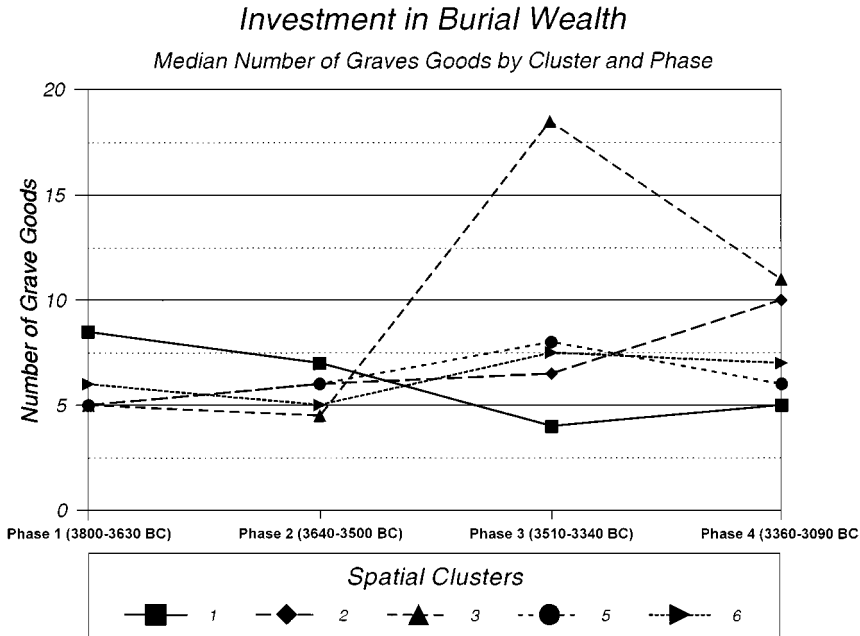
p. 103), to an area about 6.8 km south of Nagada. For Bard, this suggests a major shift in power in the region, “sometime before the Egyptian Early Dynastic state coalesced, the new authority asserted its control over Nagada, and such elite burials as were the work of the local Nagada II power base disappear from the archaeological record” (1994b, p.108). The declining wealth of Nagada III graves here might provide evidence of the assimilation of the Nagada polity by the Hierakonpolis chiefdom (Wilkinson, 1999, p. 50).

By Nagada II/III, there also was a decline in median wealth interred in the graves at Naga-ed-Dêr Cemetery N7000 (Savage, 1995, 1997). At N7000, Phase 3 dates from 3510 to 3340 B.C., and Phase 4 from 3360 to 3090 B.C. (based on AMS radiocarbon dates). The median wealth of the richest grave cluster declined from just over 18 items per grave in Phase 3 to about 11 items per grave in Phase 4, and two other spatial clusters experienced a smaller decline (Fig. 4). It is tempting to see in this decline a process similar to that reported by Bard for the Nagada cemeteries, though this interpretation must remain tentative at present.

The large tombs of Dynasty 0 rulers at Abydos, recently reexcavated by the German Archaeological Institute (Dreyer, 1992b; Kaiser and Dreyer, 1982) are indicative of the rise of this polity to dominance in northern Upper Egypt by the middle of Nagada II. Abydos might have dominated the Nile Valley as far north as Minshat Abu Omar in the Delta by late Nagada II; Tomb U-j from the Umm el-Qaab cemetery at Abydos, which dates to about 3150 B.C., contained over 200 “wine jars” imported from the southern Levant. The dominance of the Abydos/This polity at the end of the Predynastic (see Kaiser and Dreyer, 1982; Trigger, 1983) suggests that wealth may have been absorbed within the region rather than being transferred to a different area.

Recently, Wilkinson (1996) has analyzed a number of Predynastic and Early Dynastic cemeteries, including Tura, Tarkan, Matmar, Mostagedda, Mahasna, Armant, and the “Fort Cemetery” at Hierakonpolis. After conducting chronological studies, using the Bonn Seriation Program, Wilkinson examined changes in grave wealth during the Late Predynastic–Early Dynastic transition (his period of state formation). His research documents “increasing authority and social stratification” at all of these sites during the early and middle Nagada II period, when it appears that regional polities were forming. However, the later Nagada II and Nagada III periods are more complicated. The cemeteries at Matmar and Mahasna indicate declining wealth and grave differentiation in the Nagada III to Early Dynastic periods, while those at Mostagedda and Hierakonpolis document increased grave wealth and differentiation. Wilkinson interprets these results as evidence of the increasing importance of the Abydos-This and Hierakonpolis regional polities in the Late Predynastic (Wilkinson, 1996, pp. 75–85).

Finally, Stan Hendrickx (1994) has recently excavated and analyzed burials from the Nagada III cemetery at El Kab, across the Nile from Hierakonpolis. Using a dating technique based on spatial drift, Hendrickx assigned the graves to the Late Predynastic—1st Dynasty. Most of the dated graves are of the late Nagada III



**Fig. 4.** Median wealth of graves in Naga-ed-Dêr Cemetery N7000 by burial cluster and phase (dates from AMS C-14, see Savage, 1998).

period; a hiatus seems to have occurred during the early 1st Dynasty, and then other graves from the later 1st Dynasty were placed across the cemetery. Graves from the missing period might have been located elsewhere in the cemetery, of which only a part survived. Having dated the graves and organized the ceramics and other artifacts into chronological groups, Hendrickx proceeded to perform a weighted analysis of the grave contents. He concluded that the graves at El Kab are wealthier than the average graves from Upper Egypt during the transition from the Predynastic to the Dynastic period. Although the limited number of graves excavated (95) from El Kab might allow sampling error to explain the apparent wealth in the cemetery, Hendrickx (1994, p. 221) also suggested, “Considering the great importance of Hierakonpolis during the late predynastic and early dynastic times, it is not only possible that the average wealth was more elevated in this region, but also that a larger middle class existed.”

The evidence of economic change during the Predynastic to Early Dynastic periods appears to support a revised version of Kemp’s model, in which a gradual coalescence of three polities occurred in Upper Egypt, at Hierakonpolis, Nagada, and Abydos-This during the Nagada I to Nagada II periods. Sometime toward the end of Nagada II, it appears that the Nagada polity was absorbed by Hierakonpolis, and sites in the Nagada region experienced an economic decline about this time.

It is conceivable that supralocal authorities diverted surplus away from the tombs of local elites, resulting in the visible decrease in grave wealth and size described by Bard at Nagada. Elsewhere, smaller settlements appear to have contracted or been abandoned in favor of settlement nucleation around the growing centers at Hierakonpolis and Abydos. The wealth of these centers continued to expand during the Late Predynastic–Early Dynastic periods. Rather than a single proto-kingdom of Upper Egypt at the time of the unification as Kemp suggested, the economic evidence suggests that the Hierakonpolis and Thinite polities remained independent until just prior to the emergence of a united Egypt.

### Trade Relations and the Rise of Egypt

The reorientation of the trade activity at Naga-ed-Dêr appears to have played an important role in the emergence of Cemetery N7000 Cluster 3 and may have important implications for the development of further social complexity in Predynastic Egypt as a whole. The “Mesopotamian connection” may have been a primary factor that stimulated the emergence of the state in Egypt. Besides lapis, cylinder seals, and copper from the north, the Late Predynastic shows other cultural affinities with Mesopotamia. These include niched architecture similar to 'Ubaid period temple facades (especially visible in the Archaic period palace-facade tombs at Abydos and Saqqara, and later in Djoser's 3rd Dynasty mortuary complex). Mythical beasts, such as those found on the Narmer Palette, are probably of Mesopotamian origin.

Trade has been acknowledged as one of the main factors that stimulated the expansion of the Nagada culture into Lower Egypt. As early as Nagada I, items of Upper Egyptian manufacture appear in the Delta. Sites of the Maadi culture (ca. 3750–3200 B.C.) extend from Buto in the northwest Delta to Sedmet, some 100 km south of modern Cairo. The Maadians imported slate palettes, disc-shaped maceheads, diorite jars, flint tools, and black-topped red pottery (which they tried to copy, unsuccessfully) from Upper Egypt. However, their contacts with Syro-Palestine were more extensive (Mark, 1998, p. 16). Jars (imported for their contents—they were never copied), V-shaped bowls, basalt rings, tabular scrapers, flint blades, and asphalt were imported from the north. Considerable Canaanite material is concentrated at Maadi itself, at the apex of the Delta (Caneva *et al.*, 1987; Rizkana, 1989), and at Minshat abu Omar, far to the northeast on the road to the Sinai (Kroeper, 1988, 1989). The North Sinai Survey (Oren, 1973, 1989) recorded over 250 sites of the EB I period with mixed Egyptian/Canaanite materials. By early Nagada II there was a flourishing trade system established between the Delta and Canaan.

By the middle of Nagada II, the Upper Egyptian Nagada culture appears to have spread downriver as far as Minshat abu Omar. Ceramics and other Upper Egyptian traits began to dominate many Lower Egyptian sites, to the extent that

an Upper Egyptian colonization of the northeast Delta has been postulated (see Baumgartel, 1955; Kaiser, 1964; Seeher, 1999; Way, 1991b). Köhler (1995) suggests that a colonization is not required, since the pottery evidence seems to indicate a gradual replacement of indigenous ceramic production and exchange patterns by those from Upper Egypt. But the Predynastic graves at Minshat abu Omar and Abusir el-Meleq contained mostly pottery of Upper Egyptian style, and at Abusir el-Meleq individuals of an Upper Egyptian type occur alongside those of Lower Egyptian type, leading Seeher (1999, p. 93) to suggest that “the site may have been an outlying post regulating the routes of communication to trade colonies in the delta, such as Buto and Minshat Abu Omar.”

It seems clear that the spread of Upper Egyptian influence into the Delta was focussed on controlling trade routes, especially the overland route to Canaan. Bone labels from tomb U-j at Abydos are the earliest writing yet found in Egypt, and their short inscriptions (two or three hieroglyphic signs) are place names that probably identify the origin points of various commodities imported to the Abydos region. Localities mentioned include Bubastis, a town in the northeastern Delta (Dreyer, 1992a, 1992b, 1993). Wilkinson concludes that “either the Thinite king already ruled Lower Egypt or he possessed sufficient status to command surplus from the delta” (1999, p. 41).

Buto, in the northwest Delta, was not in a position to exploit overland trade with Canaan because it would have been cut off from a direct connection by the Upper Egyptians at Minshat abu Omar. Rather it appears that sea-borne contacts with northern Syro-Palestine (and thence to Mesopotamia) played a greater role. Way (1987) discovered a building with clay cones and pegs at Buto, which were similar to those from Susa. Clay bottles, similar to those from Susa and southern Mesopotamia, were also recovered from the site. Mark (1998, p. 125) believes that the distribution of imported pottery, raw materials, cylinder seals, and Mesopotamian artistic motifs suggests that the bulk of these items arrived via a water route, which would clearly have involved Buto. The site may have remained independent of an expanding Thinite polity. Rather than the abrupt shift from Lower Egyptian pottery to Upper Egyptian forms seen in sites of the northeast Delta, there was a transition level at Buto, which indicates that the adoption of the Upper Egyptian cultural repertoire was more gradual. Clay-cone decoration continued at the site after the period of ceramic transition, until the early third millennium (Way, 1988), but not at any other Nagada site. Summarizing the evidence, Mark concludes that “it is impossible to show that Buto was transformed into a Naqada site at the end of the Naqada II period” (1998, p. 103).

Rather than being absorbed early on into an expanding Upper Egyptian sphere, as the northeastern Delta appears to have been, the region around Buto may have been in protracted conflict with the polity controlled by the Dynasty 0 rulers buried in the large tombs at Abydos. A number of artifacts, such as the Gebel el Arak knife handle and the Tjehenu palette, possibly depict battles against Buto (Mark,

1998). The Narmer palette and the recently discovered label from Abydos appear to describe the same event—the conquest of Buto and unification of all of Egypt under one ruler (see Way, 1993).

### **TOWARDS A CONSENSUS VIEW OF THE ORIGIN OF THE EGYPTIAN STATE**

Much of the evidence reviewed here can be assembled into a sort of synthetic view, explaining the process of state formation in early Egypt. Kemp's Monopoly model hypothesizes a scenario in which a group of independent, Neolithic-style agricultural villages gradually coalesced into a number of competing chiefdoms in Upper Egypt. From this point, Kemp envisioned proto-kingdoms in Upper and Lower Egypt persisting until the time of the unification, at which point the Narmer palette and the traditional account of Manetho suggests the conquest of the Delta by the Upper Egyptian polity. Conflict and competition seems to have existed at many levels in Predynastic society, as shown by the intensifying mortuary cult, increased tomb robbing, and control of various resources by different descent groups at Naga-ed-Dêr. But the kind of power game Kemp describes could not have occurred solely based on conflict. Clearly, other strategies, such as alliances between local rulers, including marriage alliances, would have been used as well (Trigger, 1968, 1983); the Narmer or "wedding" macehead found at Hierakonpolis may depict the wedding of Narmer with a princess named Neith-hotep (Emery, 1961, p. 47; Saad, 1969, p. 66; though see Wilkinson, 1999, pp. 68, 69). There is some disagreement about whether Narmer or his successor Hor-Aha married the princess, but Hoffman (1984, p. 322) likened the event to the wedding of Ferdinand and Isabella.

Recent interpretations of the evidence suggest that, rather than a single, unified polity in Upper Egypt, and a polity encompassing the entire Delta at the time of unification, a more complicated situation existed. The discoveries of the German Archaeological Institute at Abydos have documented the names of several rulers of Dynasty 0. When the epigraphic evidence is combined with the size of their tombs (surpassing the large tombs at Hierakonpolis from the Late Predynastic), what emerges is a picture of a powerful chiefdom that controlled the Nile Valley from below Abydos to the northeastern Delta. Tomb U-j attests to the extent of trade with Canaan, and the place names recorded on bone labels there suggest a possible tribute relationship. The expansion of Nagada II material culture into this region points to a trade related explanation of the rise of Thinite power.

Rather than controlling all of Upper Egypt, though, the growing Thinite polity had to contend with the presence of a powerful chiefdom to its south, at Hierakonpolis. Having probably absorbed the Nagada chiefdom during the final stages of the Nagada II period, the Hierakonpolis polity appears to have remained a



force to be reckoned with right up to the point of unification. Indeed, growth of the fortified town of Nekhen, earlier ceremonial installations, the ceremonial artifacts from the Hierakonpolis “Main Deposit” (such as the Narmer palette, Scorpion macehead, and wedding macehead), the continued reverence of later Egyptians for the “divine souls of Nekhen,” and the attention lavished on the site by later Pharaohs suggested to Hoffman (1984) and his followers (e.g., Adams, 1996; Davies and Friedman, 1998; Friedman, 1994) that Hierakonpolis was the capital of Upper Egypt and that Narmer originated there. However, this view does not fit well with Manetho’s statement that the first two dynasties were Thinite, nor does it easily accommodate the burial of the 1st and 2nd Dynasty kings and queens at Abydos. It would seem that a Thinite origin of Narmer is preferred (Trigger, 1983; Wilkinson, 1999), while still emphasizing the importance of Hierakonpolis as the early center of kingship in Upper Egypt. A local king named Scorpion seems to have deposited his macehead in the temple at Hierakonpolis (later excavated by Quibell and Green), but Scorpion of Nekhen is not attested at Abydos. Thus the Scorpion king of Nekhen may have been the last independent ruler at Hierakonpolis. Wilkinson (1999, p. 51) suggests

... there may have been two rival polities governed from This and Hierakonpolis up to the very threshold of the First Dynasty. The reverence shown to Hierakonpolis by the Early Dynastic kings may reflect the site’s importance during the final stages of state formation. The end of Scorpion’s rule may have marked a decisive turning-point, the moment at which the king of This assumed an uncontested position as sovereign of all Egypt.

Perhaps a final alliance was forged between This and Hierakonpolis through marriage. Neith-hotep, the probable wife of Narmer and mother of Hor-Aha (Narmer’s successor), was buried at Nagada rather than at Abydos, a fact that might indicate her origin (Wilkinson, 1999, p. 70). Since it is likely that Hierakonpolis had absorbed the Nagada chiefdom (perhaps a century before), Neith-hotep would have probably been a member of the Hierakonpolis ruling line, even if she was born at Nagada. Thus the event depicted on the wedding macehead might signify a union between Narmer, from This, and Neith-hotep, of Hierakonpolis. Given that political legitimacy seems to have passed through the female line at times in ancient Egypt, such an interpretation could help explain the continued reverence of Early Dynastic and Old Kingdom Pharaohs for their ancestors at Nekhen. By this account, they would have been descendants of the royal houses of both This and Nekhen. A marriage alliance between This and Hierakonpolis thus would explain the Thinite origin of the first two dynasties and the position of Nekhen in legitimating the authority of the Early Dynastic kings.

Clearly, this interpretation is speculative, and considerable work needs to be done on the nature of economic relations between This, Hierakonpolis, and Nagada before we can be sure which of the two larger polities absorbed Nagada. A careful study of ceramic exchange through temper sourcing might help sort out these relationships.

A developing consensus also seems to view Buto and the northwest Delta as the final hold-out in the process of unification, but more work is required. We do not know yet what the relationship was between Buto/Sais and the Thinite polity prior to unification; it could have ranged from complete independence to some kind of client or dependency status. The Narmer palette and the tag from Abydos seem to depict the conquest of the Buto/Sais region by a king who controlled the rest of Egypt. With the assimilation of the northwest Delta, the 1st Dynasty kings were able to dominate not just the land-based trade routes but also the sea-borne traffic.

We are arriving at a consensus that sees the emergence of the Egyptian state as a gradual, indigenous process, stimulated by intraregional and interregional conflict, shifting political and economic strategies, political alliances, and competition over trade routes. Speaking from an anthropological perspective, this multifaceted explanation of the development of the Egyptian state seems far more satisfying than a single-cause approach. As I have emphasized elsewhere (Savage, 1997), I do not believe that the final assimilation of the northwest Delta resulted *ipso facto* in a state, because many of the characteristics that anthropologists ascribe to early states did not develop in Egypt until well into the 2nd Dynasty. I am, nonetheless, persuaded that the processes that led to statehood were clearly evident from Nagada I times, accelerating dramatically with the spread of Upper Egyptian culture into the northeast Delta by late Nagada II, and the rise of the Dynasty 0 kings at Abydos in Nagada III. These processes, which can be detailed with such richness here, provide valuable and compelling evidence not just of the development of the state in Egypt, but of the formation of early states in other parts of the world.

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The number of published works on Predynastic and Archaic period Egypt/Nubia now exceeds 8,500 items. Clearly, a complete listing here is beyond the scope of this paper. Two more complete lists have been published. Kent Weeks' *An Historical Bibliography of Egyptian Prehistory* (Weeks, 1985), includes 2515 items published through 1985. Hendrickx's *Analytical Bibliography of the Prehistory and the Early Dynastic Period of Egypt and the Northern Sudan* (Hendrickx, 1995) lists 7407 items, excluding some of the works included in Weeks' compilation; he has recently published updates (Hendrickx, 1996, 1997). I have taken a number of steps to reduce the size of the bibliography listed below. First, I have listed only a sample of the works published since 1985, (the list does not include works referenced earlier). To reduce the length of the list still further, if more than one chapter of an edited volume is germane I have included one reference to the volume rather than the individual chapters. I have not listed papers presented at conferences but not yet published, and, unlike Weeks and Hendrickx, I have restricted the bibliography to items that directly pertain to the Badarian and Predynastic periods.

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