

Archaeologies of the Standpoint

Chapter 2

History in Petroglyphs at the Second Cataract of the Nile

Fifteen kilometers south of Wadi Halfa at the present-day border of the republics of Egypt and Sudan, petroglyphs were made by prehistoric Nubian peoples on rocks and cliffs bordering the Nile River and on rocky islands in the river itself (there are forty or more of these formations)—the seventeen-kilometer-long “second cataract” of the Nile.¹ (The first cataract is at Aswan, 350 kilometers downstream, and the third cataract, north of Dongola, is 175 km upstream.) At Abka, local populations in ancient and in modern times have eked out a subsistence in an inhospitable and sometimes impassable territory of small alluvial flats, gravelly plateaus, rocky outcroppings, and narrow defiles strewn with boulders—a “black, forbidding topography” (SJE 1: I, 19) that is part of the land known in later Arab tradition as the *Batn el-Hagar*. The “Belly of Stones” stretches for more than 150 km between the second and third cataracts and constituted a major barrier between the peoples of Upper Egypt and Lower Nubia and the peoples of the south (for example, around Khartoum above the sixth cataract). In the *Batn el-Hagar* about 100 km south of the second cataract, “the cliffs with their polished and worn rocks often reach to the banks [of the river], where a stony bed and rugged islands prevent a smooth flow” (Hinkel, 12)—and, of course, unimpeded passage by land or by boat.

In the 1940s and 50s, near the former village of Abka (now submerged) on the east side of the main channel of the river at the southern end of the second cataract, Oliver Myers of the Gordon College at Khartoum excavated a handful of sites that included petroglyphs in the stratigraphy of the deposits—or at least could be closely associated with petroglyphs.² In the early 1960s, during the Nubian archaeological salvage

¹ For rock art in Egypt and the Sudan, see Davis 1977, additions in Wilkinson 2004.

² Oliver H. Myers, “Drawings by the Sudanese Artists of Seven Thousand Years Ago,” *Illustrated London News* 13 November 1948, 556-57; “Rock Drawings Found by the Gordon College Expedition in the Second Cataract of the Nile,” *Actes du XXI Congrès international des orientalistes* (Paris, 1949), 375-76; “Abka Re-Excavated,” *Kush* 6 (1958), 131-41; “Abka Again,” *Kush* 8 (1960), 174-81. For the artifacts

campaign mounted in anticipation of the rising waters of Lake Nubia (Lake Nasser) behind the new Aswan Dam, several international research teams found many more petroglyphs in Lower Nubia. In particular, the concession of the Scandinavian Joint Expedition (SJE) north and south of Wadi Half included the sites previously investigated by Myers—and yielded an immense corpus of rock drawings around Abka to add to Myers’ earlier documentation, which was incorporated so far as possible in the final SJE publication of the finds.³

With certain qualifications, this corpus can be treated as the record of a long-running ancient practice of rock drawing, whether or not we can characterize it more narrowly as a continuous tradition, situated in a well-defined location—the cluster of rocky islands in the river immediately southwest and immediately northeast of Abka. Some of the islands in this cluster are quite high—more than 50m higher at their highest prominences (up to 174m) than the level of the river (120m; SJE 1: I, 19). (Still, the “rounded domes” of the rocky islands of the second cataract [SJE 3: I, 3] remain under water; Lake Nasser/Lake Nubia stabilizes at 170-80m ASL [Hinkel 15].) For obvious reasons the Nile makes a westward detour around this formation; for travelers moving downstream, the islands of Abka define the beginning of the second cataract. Rock-drawings were found elsewhere in the SJE concession in a handful of locations north of Abka (the latter were defined by the SJE as “northern sites,” mostly in the Ashkeit-Debeira area around Wadi Halfa). The rock-drawings around Abka can be distinguished from them, however, in terms of certain features of setting, patina, technique, subject matter, and style—and probably in terms of

retrieved by Myers, see Raymond Vaufrey, “Industrie d’Abka,” *Kush* 6 (1958), 142-43; Arturo Palma di Cesnola, “L’industria litica della stazione di Abka,” *Kush* 8 (1960), 182-236.

³ SJE 1. For other investigations of Nubian petroglyphs conducted in the context of the Nubian salvage campaign, see Davis 1977 nn. 4-10; for related Nubian rock art, see W. F. E. Resch, *Die Felsbilder Nubiens: Eine Dokumentation der ostagyptische und nubischen Petroglyphen* (Graz, 1967). In 1974, Pavel Cervicek published a volume embodying the results of Leo Frobenius’s research expedition to the eastern desert, Upper Egypt, and Lower Nubia in 1926 (*Felsbilder des Nord-Etbai, Oberagyptens, und Unternubiens: Ergebnisse der VIII. DIAFE narch Agypten 1926* [Wiesbaden, 1974]). As far as I can determine, the earliest “scientific” observations of petroglyphs in Upper Egypt and Lower Nubia were published by G. E. Chester, “On Archaic Engravings Near Gebel Silsileh in Upper Egypt,” *The Archaeological Journal* 49 (1892), 120-30. The most influential early archaeologist of predynastic Egypt, W. M. F. Petrie, apparently accepted that some rock-drawings were prehistoric (see *Ten Years Digging in Egypt* [London, 1893], 75). At about the same time, the brilliant prehistorian Jacques de Morgan specifically proposed that the earliest Neolithic drawings antedated the arrival of the “dynastic race,” the “pharaonic Egyptians” in the Nile valley (*Recherches sur les origines de l’Egypte: l’age de la pierre et les metaux* [Paris, 1896], 162-64)—a view later adopted and elaborated by Hans Winkler.

their dates and cultural affiliations. Many of the rock-drawings at northern sites were probably produced in considerably more recent times than the drawings around Abka. While depictions of elephants and giraffes (a repertory linked to an ancient ecology and economy) can only be found at the cataract sites, most depictions of horses (a repertory linked to a modern ecology and economy) are found in northern sites. A distinctive technique of incision—used to make drawings of horses, camels, boats, and other subject matters—was almost always used at northern sites; for reasons to be noted below, it is quite different from the techniques typically used to make rock-drawings at the cataract sites. In what follows, then, and unless otherwise noted, my discussion will be confined to the corpus of drawings in the SJE documentation defined by the SJE as “cataract” rock-drawing sites.

Most important, arguably the rock-drawings around Abka were produced in a palimpsest—a long-running history of taking account of, and making reference to, drawings already deposited in the same well-defined locality of Abka (all sites were within about 2 km of one another), at the same site or “station” at Abka, or on the very same rock surface. The very fact of the immense concentration of drawings at Abka—despite the availability of rock-surfaces suitable for petroglyphs at many other locations in the broader region covered by the SJE—suggests that the Abka locality emerged in later prehistory as a coherent accumulative site *for* rock-drawing, whatever other activities might have accompanied this practice at various points in time in prehistory or later. In the SJE concession, the great majority of the drawings (nearly 6000 drawings or about 80% of the inventory) were found at “Abka” location as I define it here—i.e., on the *cataract islands*. A handful of rock-drawing sites in the SJE concession (i.e., 373a, 373b, 152b-e) can be defined—they were defined by the SJE—as “cataract sites” located on rock-faces and cliffs bordering the river to the northeast of Abka, not on islands in the river (as it were the “true” cataract). Their setting “away from” the river and “above” the channels, islands, and floodplain, though not always above the crest of the flood itself, distinguishes them in setting, orientation, and elevation from drawings on the islands themselves. But they should be included in the “Abka” locality as I define it here; they share distinctive features of patina and technique with the island drawings and were subject to some of the same distinctive and local environmental

processes. As noted, all of these cataract sites, cataract islands or not, can be distinguished from the “northern” sites, constituting about 15% of the entire SJE corpus of drawings, discovered elsewhere in the SJE concession. Among the most visible distinctions, incised drawings are found mostly at northern sites and hammered or pecked drawings can be found *only* at second cataract sites.

In the SJE terminology for identifying rock-drawings at the second cataract (e.g., “373a1”), the first Arabic number refers to the rock-drawing site, defined by the SJE as a “topographical unit” in the cataract area, such as an island, solitary hill, or hills surrounding a valley. The following Roman letter refers to the rock-drawing station, defined by the SJE as a “group or concentration” of drawings at a site; there are usually several and sometimes many rock-drawing stations at a site. Finally, the second Arabic number refers to individual rock-drawings at the station (there might be only one but usually there are several drawings at each station), defined by the SJE as “a surface with one or more figures or compositions,” usually “two or three figures” but sometimes many more (see SJE 1: I, 60). Thus “373a1” refers to Site 373, station a, rock-drawing 1 (it has three distinct figures). At northern sites in the SJE concession, rock-drawings were labeled according to site (equivalent to a “station” at the cataract) and drawing (thus “206:1” refers to northern site 206, drawing 1). This nomenclature proved to be flexible and powerful. For reasons that I will explore, it appears to observe real distinctions in the location of drawings—or the standpoints for observing them—that were constructed and recognized by the original makers and observers of the drawings in prehistory.

Nonetheless there are anomalies and ambiguities that must be kept in mind. Most important, what the SJE calls “compositions” of figures (and which the nomenclature seems to limit to “drawings” on its definition) might well jump between or cross over two or more distinct surfaces (i.e., two or more separate “rock-drawings” as defined by the SJE) at a single station (and, in principle, at *different* stations or even different *sites*)—creating a single rock-drawing *image* (i.e., a visual or possibly simply a visual-mnemonic collation of distinct marked surfaces) that stitches together topographically disjunct deposits of mark-making activity. The phenomenon is, of course, familiar in pharaonic Egyptian and many other arts, in which sophisticated techniques of composition and framing create complex integral pictures—often narrative cycles—that

spread over two or more well-defined surfaces, e.g., two or more walls of a building such as a temple or a tomb. Indeed, the argument can be made that all the pictures in an Egyptian tomb—placed on the different walls of a chamber or even in different chambers—amount to a single coherent “image.”⁴ As I argued in Chapter One, such complex images can be found in Paleolithic cave and rock art even though the topographical and architectonic differentiation of the surfaces and standpoints of observation did not use “frames” and “borders” in the same way: rather than being made by the image-maker as a material part of the mark-making activity itself, frames and borders were “given” by the pre-existing ground or were made visible *in* the ground by way of depositing marks *on* the ground.

By definition, images that spread across two or more disjunct marked surfaces cannot be *superimpositions*; marks made on different surfaces cannot be superimposed as marks. But by the same token they must constitute *palimpsests*, an observational or mnemonic collation of two or more surfaces that almost certainly must have been marked at different times—even if they were marked by the very same people in the same phase of the same cultural period. Sometimes these trans-surficial palimpsests—or what be identified as palimpsests—are quite easy to see in the existing archaeological documentation, especially in certain wide-angle photographs that show markings on two or more visible but distinct rock-surfaces at a station or site. But usually they are not readily identifiable precisely because the documentation offers verbal descriptions or a “catalogue” of “rock-drawings” defined as marked surfaces *within which* “figures and compositions” can be identified. In turn, most photographs—though necessarily made *in situ*—tend to frame and focus on *these* “figures and compositions” or at most on the “rock-drawing” surface. Finally, a typological “corpus” of figures analytically disaggregates the figures from their “compositional” contexts—in individual rock-drawings or parts of rock-drawings as defined by the SJE and certainly in palimpsestic images as defined here—and enters them into series of more or less similar individual figures defined by ostensible subject-matter. In these analytic operations the original imagistic and palimpsestic coherences—the prehistoric topographical and architectonic contexts of visibility—can be lost all too easily.

⁴ See Davis, *Canonical Tradition*; Tefnin’s semiotic studies; Bolshakov.

For example, at 157k two oxen seem to have been drawn on disjunct rock-surfaces as a pair facing “away” from each other or facing “outwards”—almost as if were heraldically flanking a small pointed rock that rises up between the two rock-surfaces. In the existing photograph of these two figures (pl. 32:4), the original standpoint for observing the pair of oxen would clearly seem to be located to the right of and somewhat below the perspectival axis constructed within the photograph itself (even though the photographic apparatus appears to have been oriented and the shot composed to capture the “pair” of figures); the sightline would have passed over the tip of the pointed rock in the lower left quadrant of the photograph. (The vanishing point constructed in the perspectival axis of the photograph appears to be located in the deep crevice in the rocks between the two drawings—presumably the very same topographical phenomenon originally marked in their bilaterally symmetrical placement on the flanking sides of this crevice. But what the modern photograph represents in *perspective* was realized in the prehistoric drawings—which were produced, of course, non- or pre-perspectively—in symmetry.) Both creatures have U-shaped horns; in both, the body is bisected by a distinctive transverse line that continues the line of the frontal hind leg (this detail rarely if ever occurs in other drawings of cattle at Abka); both creatures seem to be eating some kind of plant (this is clearly visible in the figure on the “right,” 157k9 [SJE Corpus C268], and should probably be reconstructed in the damaged area of the figure on the “left,” 157k10 [said to be “similar to Corpus 311”]). Indeed, it is likely that the figures were made by the same artist. Despite constituting what seems to have been intended as an integral visual image in a coherent architectonic topography, however, the two figures are defined by the SJE terminology to belong to different “rock-drawings.” And despite their graphic similarity in their imagistic context (they seem to be “mirror images” of each other in a heraldic pairing), they are entered into entirely different locations in the similarity-seriation of the SJE Corpus. In wider photographic overviews of the station (pls. 28:1, 29:4) it is impossible to see these two figures or to determine whether the pair belongs to any larger or more complex image.

Our dating of petroglyphs at Abka can call on several archaeological associations to provide a rough overall chronological framework for the history of the drawings. These

associations might tend to confirm what is also visible in the drawings themselves—namely, that the concentration of drawings at Abka was probably deposited over a long period of time, a duration of three or more millennia including the later fifth, all of the fourth, and much of the third millennium BC. In the SJE excavations, the finds of pottery suggest that people used the clefts and crevices on the islands of Akba—for shelter, encampment, or, perhaps, entrenched “habitation” or settlement—in each one of the major stages (sometimes overlapping) of Lower Nubian Neolithic social life in the region, namely, in the technological and cultural stages now distinguished by archaeologists as the Khartoum Variant (until approx. 5000 BC), the Abkan (from before 5000 to about 3800 BC), the Nubian A-Group (from about 4000 to about 2800 BC), and, after a significant hiatus, discontinuity, and possible depopulation, the Nubian C-Group (after about 2300 BC).

To be specific, a “significant amount” of Khartoum Variant pottery was found at Myers’ Site V (= CPE 2006), associated with SJE rock-drawing site 152b (pl. 8:1) (not an island site). Khartoum Variant specimens were the most numerous among the 2,500 sherds recovered in the “rock shelter” at SJE Site 387, whose walls display a number of drawings (378i; pl. 88:2). But a few Abkan, A-Group, and C-Group sherds were found here as well. A similar pattern can be found at Myers’ Site IX (= SJE 154a; pls. 89:4, 89:6), a large pothole. The lowest levels of the fill can be assigned to the Khartoum Variant on the basis of the preponderance of sherds and the “great majority” of the lithic artifacts (SJE 3:115). But significant quantities of Abkan, A-Group, and C-Group sherds were also recovered from these levels. Abkan sherds were predominant in the 589 sherds recovered at Site 365, associated—though at a distance—with a single rock-drawing of a giraffe placed on the “predominant boulder” at the “highest part of the site” (374a1) at some remove from the deposits. Khartoum Variant, A-Group, and C-Group sherds were recovered here as well. According to some prehistorians, the mixed assemblages at Abka might index trading relations between the Khartoum-Variant and Abkan populations; these groups seem to have overlapped in the sixth millennium BC.⁵

In the deep and narrow “crevice” at Site 387, about 30 m long and 2.5 m deep, the walls on both sides of the crevice and the horizontal rock surfaces surrounding the lip of

⁵ See J. L. Shiner, “The Cataract Tradition,” in F. Wendorf, ed., *Prehistory of Nubia*, vol. 2, 626.

the crevice were covered with rock-drawings (378g). The sherds recovered here were mostly A-Group, but they included Abkan and numerous C-Group sherds as well. More than 50% of the 784 sherds recovered at Site 414, where rock-drawings (378d) were found at the southeast side of the apparent “habitation area,” were A-Group, but 44% were typical of the Abkan.⁶ Finally, at Site 371, where a single drawing was located at the highest part of the site (387a), a “very heterogeneous” array of sherds was recovered. To quote the excavation report, in this deposit “nearly all culture periods are represented, with the Khartoum Variant and the Abkan at one end and the Christian/Muslim at the other.” In other words, the recoveries of lithic and ceramic artifacts in association with the rock-drawings at Abka suggest that the drawings could have been made, or more exactly that the practice of rock-drawing continued, throughout Late Paleolithic, Neolithic, Egyptian dynastic, and more recent times. This is a perfectly credible finding. But unfortunately it is not especially informative about the particular date of individual drawings or about the relative chronology of drawings in the accumulations at Abka.

Moreover, we must take care to note that seeming associations between closely-dated lithic and ceramic deposits on the one hand and rock-drawings on the other hand can be tenuous—perhaps merely fortuitous. As noted, at Site 365 and Site 371 the drawings were located some distance away from the deposits with which they might be associated. In fact, we can draw on only two instances of *stratigraphic* association between deposits and drawings at Abka. At two sites near Abka (his Sites IX [= 154a] and XXXII [=382d]), Myers discovered drawings, some of which had evidently fallen from rock surfaces which were still exposed to his view, covered by layers of fill containing lithic and ceramic material. Myers obtained radiocarbon dates—nine in all—for the “lower” and “upper” levels of Site XXXII (7500 +/- 400 BC and 7225 +/- 400 BC respectively)

⁶ 1. The EES Nubian Survey discovered A-Group artifacts in association with rock-paintings in the rock-shelter at Korosko. In particular, a worn, blackened “boat-shaped” grindstone from the lowermost, A-Group level (Level C) of the floor of the shelter retained “considerable traces of red ochre embedded in it, so that it may well have been used for grinding the paint for the decoration of the shelter” (H. S. Smith, *Preliminary Reports of the Egypt Exploration Society’s Nubian Survey* [Cairo, 1962], 89). However, the survey team noted parallels between the shelter art and incised designs on C-Group pottery (see also Williams, *OINE* 4, 12). The paintings from Korosko reproduced by Dunbar seem to be C-Group (*Rock Pictures*, pl. 24; Z. Zaba, “Third Czechoslovak Expedition to Nubia,” in *Fouilles en Nubie 1961-1963* [Cairo, 1967], 217-24, questions this copy). It would seem, then, that only a portion of the shelter art could be A-Group. 2. According to Bietak, the oldest paintings in the rock-shelter at Sayala were made by A-Group artists. But these images “seem to have stimulated C-Group people to add cattle representation, possibly under some kind of magic belief” (Bietak, *Nubian Culture* 1987, 123). 3. Wadi Shaw?

and for each of five levels from Level 6 (the lowest) to Level 2 at Site IX (ranging from 6310 +/- 400 BC for Level 6 to “about A.D. 675” for Levels 3 and 2). According to Myers, on the basis of these determinations various “geometric” designs at Site IX can dated to no later than 7000 BC (Myers 1960: 177-79; 1958: fig. 1, top left, pl. 34.1 = SJE 154a7, pl. 16 bottom). Other figures—they include a “stylized” human figure and a child’s figure (?), four or five drawings of human hands, traps, a club, and two crocodiles—were dated by Myers to 6000 BC or earlier. These drawings were covered by the lowermost levels of the fill. The “pythons” covered by Levels 4 and 5 of the fill might be dated, Myers thought, to 5000-4000 BC (WD87n5). At Site XXXII, many “geometric” designs and an antelope (?) (382d3) might be dated, Myers proposed, to 7000 BC at the latest, for they were covered by the lower fill (WD87n6).

At Myers’ Site IX, as noted already, potsherds and lithic artifacts recovered from the lower fill can be assigned to the Khartoum Variant, the earliest cultural tradition in Lower Nubia to which rock-drawings have plausibly been attributed. But it has been noted that “the majority of [available radiocarbon] dates for that industry are significantly later” than the date at the end of the seventh millennium BC obtained by Myers. And at Site XXXII, no cultural materials apart from the rock drawings themselves could be associated with the datable fill; the radiocarbon dates—at the end of the eighth millennium BC—were derived from shell. All of Myers’ radiocarbon dates were obtained using the solid carbon method, and for that reason they have been judged to be less than reliable. Myers’ dates for the early strata at Sites IX and XXXII (and for the rock-drawings he associated with them) have not, then, been included in some authoritative surveys of secure dates for Lower Nubian sites in the late Pleistocene (e.g., Connor and Marks 1986: 172). We probably should not jettison Myers’ dates altogether. They present an internally consistent picture at both sites and they can be supported by lithic and ceramic associations and by other considerations to be addressed momentarily. But admittedly they are slender buttresses for the chronology of the immense corpus of rock-drawings at Abka beyond Myers’ two sites.

This leaves us, then, with “internal” criteria for dating the vast majority of rock-drawings at Abka—such criteria as patina, technique, style, and subject matter, and especially, of course, superimposition. As in the study of other rock-art traditions around

the world, modern analysis of the ancient rock-drawings at the second cataract of the Nile—despite the publication of excellent photographs of the petroglyphs *in situ*—has tended to disaggregate individual figures from the figurative arrays and “compositions” within which they are typically found, as if these contexts were invisible. In turn, the individual figures tend to be classified by ostensible subject matter, and sometimes according to apparent style, and entered into iconographic tables and typologies that can provide data for statistical analysis—for example, counts of the number of examples of different subject matters (typically different animal species) and therefore of the differential proportional representation of particular depicted species in the overall counted number of figures in the entire corpus that have been individuated in this fashion. This kind of information is useful for limited purposes. It will tell us, for example, that there are numerically more depictions of one subject matter than other subject matters in the corpus. If we simply count figure by figure in the rock-drawings at Abka, cattle (including oxen and calves) were by far the most common—we might be tempted to say the most popular—subject matter for depiction. But obviously this simple count does not imply that the numerically dominant subject matter was most important or more visible to the prehistoric makers and observers of the rock-drawings in place. And it certainly does not show, of course, that the cattle drawings had been produced—or were visible—throughout the millennia-long history of drawing on the rocks at Abka. Indeed, there is reason to suspect that drawings of cattle must be somewhat bunched, if not entirely concentrated, in later chronological stages of the long history of production of *all* the drawings at Abka.

If information about the numerical representation of different types of techniques, styles, or subject matters is to be significant, it must be comprehensively cross-indexed and it must be correlated, where possible, with data about the siting, orientation, and elevation of drawings—data that might or might not be available in the documentation of the corpus. The final publication of rock-drawings at Abka by the SJE in 1970 contained a great deal of data. Still, it was presented in ways that require considerable further cross-indexing and correlation. In some respects it demands a thorough re-examination of the descriptive, topographic, typological, and photographic components of the overall record in light of specifically chronological and cultural-temporal considerations. The

SJE publication team did not attempt to conduct this analysis. In particular, the final publication—despite presenting a lengthy and detailed descriptive “catalogue” of rock-drawings, a useful typology of figures, and excellent photographic documentation of the rock-drawing sites—abstained from systematic chronological attribution and temporal or historical analysis of the ancient production of the corpus as an emergent palimpsest.

In the mid-1970s, I essayed a provisional historical interpretation.⁷ General chronological trends—and more important, apparent contemporary principles of the sequential production of the drawings—could be discerned. But crucial aspects of the history were not resolved. For example, many rock drawings at the second cataract had acquired visible patinas—a darkening or coloration created over time—ranging from virtually unpatinated (a condition that is highly visible because the drawings stand out plainly from the patinated rocks) to complete blackening (although such drawings can be difficult to see, of course, because they are indistinguishable in color from the rock surface). To be sure, the formation of patina—especially the familiar “desert varnish” found on rock-drawings elsewhere in the Nile Valley and the deserts of Egypt and the Sudan, though *not* at Abka—has been shown to be highly sensitive to the situation of a single rock-surface or even of a single figure or mark on a rock-surface.⁸ Handbooks of “rock art science” properly warn that all generalizations about the absolute chronological vintage of any particular degree of patina must be hazardous.⁹ Direct physical-chemical

⁷ Whitney Davis, “Toward a Dating of Nile Valley Prehistoric Rock-Drawings,” *Journal of the Society for the Study of Egyptian Antiquities* 8, no. 1 (1977), 25-34, and “Dating Prehistoric Rock-Drawings in Upper Egypt and Nubia,” *Current Anthropology* 19 (1978), 216-17; see also “Representation and Knowledge in the Prehistoric Rock Art of Africa,” *African Archaeological Review* 2 (1984), 7-35; “The Study of Rock Art in Africa,” in Peter Robertshaw, ed., *A History of African Archaeology* (London: John Curry, 1990), 271-95.

⁸ On desert varnish, see Georg Knetsch, “Über aride Verwitterung unter besonderen Berücksichtigung natürlichen und künstlerische Wände in Ägypten,” *Zeitschrift für Geomorphologie*, Supplement 1, *Internationale Beiträge zur Hang- und Wandformung* (1960), 190-205; Georg Knetsch and E. Refai, “Über Wüstenverwitterung, Wüstenfeinrelief und Denkmälzerfall in Ägypten,” *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen* 101 (1955), 227-56.

⁹ In an important study of pictographs on the high western plains of Arizona, E. G. Renaud vigorously defended the use of patination in establishing a relative chronology (*The Archaeological Survey of the High Western Plains: Eighth Report* [Denver, 1936], 5-7). In a pioneering study of dating rock art in the Canadian Shield, Selwyn Dewdney concluded that at least twenty-five identifiable variables pertaining to the degree of weathering and the orientation and vulnerability of the site and/or the drawing had to be taken into account (*Dating Rock Art in the Canadian Shield Region* [Toronto, 1970], *Royal Ontario Museum of*

dating of the patina might be feasible, but it was unavailable during the Nubian salvage campaign.

Nevertheless, whatever the actual age of a given patina might be, the *differences* between patinas are now—and in prehistory almost certainly were—visible, and they can now be attributed—and in prehistory they almost certainly were attributed—to particular causes and histories. As such they can contribute to a relative phasing of drawings in terms of their visible patinas—especially when different marks in the same location on a rock-surface (and having the same or different patinas) have been placed close together or have actually been superimposed. More exactly, they could have contributed to a contemporary interpretation—a visual and cultural construction—of the relative phasing or history of the production of the drawings *as it seems to be projected or represented by patinas when construed as differently aged*. In my initial analysis, however, this obvious possibility—an aspect of the visual effect of the drawings accumulated over time—remained obscure because I placed my emphasis on the real dates instead of the *projected or representational* ages of the different patinas to be observed on the drawings at Abka. The significance of patina at Abka was obscure partly because the superimposition sequences, as far as they can be reconstructed, do not seem to have a straightforward correlation with the long-term evolution of the local ecology and economy and in particular of the faunal populations and their exploitation by human beings—with older, earlier pictures of older, earlier ways of life uniformly superimposed by younger, later pictures of a younger, later way of life. As in Gargas, a palimpsest at the cataract emerged in part recursively; and as a palimpsest it doubles back or “returns” on itself in various ways. Even if patina must age in a single direction on a single rock-surface—getting darker and darker over time until it was finally indistinguishable from the rock—the images do not have to instance the same development, always getting earlier (while getting older) as they fall further below pictures laid down after them and sometimes right on top of them. An explanation for this disjunction might be that the

Art and Archaeology Occasional Papers 24). Dewdney concluded that strictly speaking the environmental contexts of patination, so far as they can be reconstructed, could be used to date rock-drawings, but the complexity and laboriousness of the task would appear to outweigh its feasibility—a point of view now widely accepted in rock art research in dealing with questions of real or absolute chronology. It should be noted, however, that the patina of rock-drawings at the second cataract is a special case for reasons to be discussed momentarily.

regional economy and ecology did not evolve in a single uniform direction; they too doubled back, returned, or reversed. But initial analysis—motivated by the notion that iconographic development should *reflect* ecological-economic development rather than *represent* it—missed this possibility.

Part of the difficulty in lies in the fact that at Abka there are very few cases of rock-drawings with visibly different patinas superimposed directly on one another. There are only nine cases in all (Table 1). (In my analysis of the SJE documentation, I identify more than 80 cases of the superimposition of rock-drawings at Abka [Table 2]. But in the majority of these cases, no difference can be detected in patina between the lower and the upper figure—even if there could have been considerable disparity in their actual dates of production.) Considered as a small corpus or as if they could all have been surveyed by an observer at some single point in time (needless to say, a point in time *after* all the nine superimpositions had been produced), the cases of patina difference in superimposition do not yield a single obvious pattern or trend. But they do contain information that could have been used in the projection or representation of the history of the drawings by the original observers of the accumulation of drawings.

For example, at 154a7 (pl. 67:2) completely patinated drawings of hands were superimposed by less completely patinated drawings of giraffes. By contrast, at 376a1 a completely patinated giraffe was itself superimposed by a less completely patinated ostrich. (In turn, if one wanted to associate drawings of hands with drawings of human figures, the completely patinated hands at 154a7 could be contrasted with the lightly patinated human figure, superimposed on a more completely patinated quadruped, at 152b22 [pl. 8:2].) One could conclude from this set of relations that hands were earlier than giraffes and giraffes earlier than ostriches—but also that when ostriches were later than giraffes, giraffes were the same age as hands when *they* were earlier than giraffes. In other words, a kind of temporal shift, rendered visible as the darkening and perhaps the “aging” of the giraffe drawings, could be noticed—if, of course, an observer actually made a visual comparison between 154a7 and 376a. Similar shifts—perhaps to be interpreted as “agings” in the same kind of way—could be visually extracted from the “darkening” of hands/human figures, superimposed on and by other figures, between

152b22 (light) and 154a7 (dark) or from the “darkening” of crocodiles, superimposed on and by other figures, between 157a 5 (light) and 154a1 (dark).

Each one of these possible comparisons—and the kind of historical construction that can logically be derived from it visually—might have been difficult to notice. Relative to the entire inventory of drawings, there are relatively few superimpositions in the first place (we can estimate that about 1% of the total number of rock-drawings at Abka involve superimposition). But outside the context of direct superimposition, there are many cases of the apparent darkening of the patina of figures that otherwise have a common technique, subject matter, style, or location. By the same token, there are many cases of apparent differences in patina between two or more contiguous figures—whether or not a regular “darkening” can be detected in any series of them defined, for example, by a common technique, subject matter, or style. These readily visible facts could be taken as the basis of a general visual principle of shift, phasing, or “aging” that was secured most vividly in—but was not essentially dependent on—the relatively few cases of direct superimposition between drawings that actually had visibly different patinas.

In considering patina differences inside or outside contexts of direct superimposition, then, the question must arise whether patina difference could have been seen—could have been projected or interpreted—to have a consistent general attributed cause *regardless* of its actual causes and real dates. At Abka—unlike other rock-drawing sites in the Nile Valley and in the deserts of Egypt and the Sudan—the answer to this question seems to be affirmative. At Abka it would have been possible—indeed, it would have been almost unavoidable—to see patina differences as having a regular historical periodicity that was in turn threaded through the visible history of all rock-drawings in the entire locality.

The grey-black patina of petroglyphs at Abka—at the second cataract of the Nile—is visibly different from the yellow-brown “desert varnish” one typically finds on rock-drawings located well away from the floodplain and in the deserts. In fact, the black patina on the rock-drawings at Abka, matching the black or complete patination of the rocks themselves, was largely caused by complete submersion of the drawings in river water—submersion that must have occurred regularly, though not necessarily every year,

over long periods of time.¹⁰ Desert varnish forms very slowly, though probably most quickly in pluvial conditions; a rock-drawing showing fully developed desert varnish, it has been suggested, must be several millennia old. Cataract patina appears to form more quickly.¹¹ But it appears that a single episode or one season of submersion was not sufficient to cause complete blackening, though it probably contributed to some degree of patination—otherwise all of the drawings, even at the lowest-lying elevations, would probably now be completely blackened. Indeed, probably many episodes or seasons of submersion were required before a drawing acquired any visible patina. Whatever the real rate of patination might have been in the past, it is now visible—and could have been visible at the time—that there must have been a *history of submersions* and thus a *history of drawings* made at different times in relation to it: there is, after all, a visible spectrum of differences in the patina of rock-drawings between very light (i.e., infrequently submerged) and completely blackened (i.e., frequently submerged).

Of course, we do not definitively know whether or not the makers of the rock-drawings understood that the patination of drawings—the patination of drawings they were making at any given point in time and the patination of drawings already situated nearby or on the same surface—was caused by submersion. But it is likely that they understood the process quite well. Some of the drawings at the second cataract of the Nile would have been submerged every few years, if not annually—for some of them were located at or very close to the river’s edge and very close to if not actually below the waterline, i.e., the seasonally changing height of the Nile. During the annual flood, when the waters rise substantially, or every few years, during an especially voluminous flood, these drawings would have been fully submerged. Over time they would have visibly

¹⁰ The first study of the phenomenon appears to have been Alfred Lucas, *Blackened Rocks of the Nile Cataracts and of the Egyptian Deserts* (Cairo, 1905). The current understanding of the chemistry of cataract patina is outlined in SJE I, 29: “the patina or ‘cataract varnish’ consists of manganese and iron compounds which have been derived from the rock itself by capillary action which only takes place in periodically submerged rock.”

¹¹ See Eliot Blackwelder, “The Historical Significance of Desert Lacquer,” *Bulletin of the Geological Society of America* 59 (1948), 1367; C. B. Hunt, “Desert Varnish,” *Science* 120 (1954), 51-66; and Celeste G. Engel and Robert F. Sharp, “Chemical Data on Desert Varnish,” *Bulletin of the Geological Society of America* 69 (1958), 515-16. According to the geologist Siegfried Passarge, major patination (desert varnish) on rock-drawings in Aswan area should be dated to a moist paleoclimate (quoted by Karl W. Butzer and Carl L. Hansen, *Desert and River in Nubia: Geomorphology and Prehistoric Environments at the Aswan Reservoir* [Madison, WI, 1968], 74)—for desert varnish also seems to be encouraged in the presence of moisture (see Alfred Lucas, “Were the Pyramids Painted?,” *Antiquity* 12 [1938], 28-29).

darkened in relation to drawings—sited at *higher* elevations relative to the water’s edge or the flood’s crest at any given time of the year and in any given year—that were not submerged or would have been seen over time to be submerged less frequently. All of these drawings—more or less susceptible to submersion—darkened differently from the coloring accrued to rock-drawings in the desert (“desert varnish”) that were *never* submerged. Even if the drawings did not visibly darken during any *particular* period of submersions, it would have been possible to infer that they would darken after a *sufficient* period of submersion. Drawings that already had been sited in a place where they could be regularly submerged—that is, below the level of the flood crest—would have darkened visibly relative to drawings placed in the same location later on; the difference between these drawings would likely have been attributed to the obvious intervention of the flood. If one could not actually *see* the darkening to occur over a period of years or decades, one could readily infer that the existing “earlier” drawings—substantially blackened by water relative to the newly-produced and “later” drawings—must have been made “long ago.”

We do not know exactly how this readily-visible temporal yardstick was actually parsed in chronological terms, for we do not know how many years it actually took for drawings to become darker—granting that they could have been understood, if not directly seen, to become darker at faster or slower rates relative to the frequency of their submersion. It is likely that differences in the patination of the drawings measured durations of several decades or more—the durations or phases of a history of blackening occurring at the very horizon or possibly even entirely outside its visibility as a natural process in any given human generation and *its* history of observing and responding to the causal agency itself, i.e., the history of inundations. But because the inundation causing the blackening occurred *every year*, the history of blackening could be projected to be a result of a regular natural periodicity occupying a historical time-span that must have involved several or many human generations of interaction with it in the act of making drawings that might be—though they were not always—inundated by the Nile.

In this respect, it must have been clear to later makers in the tradition that some rock-drawing sites, or some rock-drawings at these sites, were comparatively ancient: situated at an elevation relatively close to the waterline(s), and at sites where drawings that had

been made recently (and whose real “date” could therefore be known) would have been incompletely patinated (because infrequently or never submerged), one could find drawings that were completely patinated—that had been submerged more frequently, or over a longer period of time, than the latest productions. Several sites at or below 140m ASL at Abka present rock-surfaces with a *mixture* of more completely blackened (a- or b-patina) drawings and less completely blackened (c- or d-patina) drawings (see Table 3). And they can be distinguished from sites at the same elevation that tend only to display less completely blackened (c- or d-patina) drawings. For example, SJE Sites 144 and 151 are situated between 130-40m ASL on the same 1.5km-long island of small rocks, hillocks, and silt plains. All the drawings at Site 144, the northern reach of the island (known as Abkassab), were incompletely patinated (c- and d-patina). At 151a, a large rock on the southern flank of the island (in the area known as Abkanarti) with drawings placed up to 2m above the present-day ground level, most of the drawings were less completely patinated (c-, d-, and e-patina, SJE pl. 5:4, Presedo-Velo 1965: pl. III: 1-2). But the group includes two panels with more completed patinated drawings of antelopes (b-patina, L199 and L200) and one drawing, perhaps depicting an ox, now completely blackened (a-patina, similar to C27). Relative to all the other drawings on the island, it would have been difficult *not* to see these three figures as the oldest on the island. Such sites and relations—sites and surfaces displaying *different* patinas as well as relatively more (or less) complete patination in relation to *other* sites and surfaces—can be found throughout the entire array of sites at the second cataract and at every elevation from the highest (150m ASL or above) to the lowest (about 130m ASL) (see Table 3), although the vast majority of rock-drawings at Abka at every elevation are *less* completely patinated.¹² (The low-water level of the Nile at Wadi Halfa and the second cataract of the Nile, more than 5,100 km from the source of the Nile, can be set at 115-120m ASL in the twentieth century [Hinkel 11, SJE 19; the disparity in the figures?]. The lowest drawings in the SJE concession, then, are situated about 10m above the waterline in the twentieth century.)

¹² The SJE derived the elevations of rock-drawing sites and stations from the 1955 1:25,000 map of Egypt prepared by the United States Army, which was later proved to be incorrect. To obtain accurate statements of elevation above sea level, a standard correction must be made for elevations cited by the SJE (SJE I, 17). But in order to ensure easy correlation with the SJE publication, this correction will not be made here; it is not necessary for any analytic or interpretive purposes.

We can assume, then, that drawings were understood by their makers and by observers at the time and later to darken and eventually to blacken completely due to submersion by the waters of the inundation—an understanding that could be made visible in the accumulating array of rock-drawings throughout the locality even if it could not actually be “seen” to be occurring to any one of them in the life-span of a single human observer. Given this principle, the accumulation of drawings at Abka indexes a striking history: comprehensive analysis of the SJE catalogue and corpus shows that many of the completely-blackened (a- and b-patina) rock-drawings, frequently submerged at one point, were mixed with much-less-completely blackened drawings at sites at *high elevations* (150m ASL or above) (i.e., 152b, 154g, 154h, 154l, 154m, 156c, 160m, and 381f) and indeed that the three sites at Abka which display *only* completely-blackened (a- and b-patina) drawings (i.e., 156f, 382c, and 382d) were located at similarly high elevations (150m ASL or above). (The lone exceptions are the a- and b-patina drawings of giraffe, hand-prints, and clubs at 378q [140-50m ASL].) In other words, at least some of the most heavily-patinated rock-drawings could be seen, after the requisite passage of time, to have made in (or before) an era when the crest of the annual flood of the river was considerably *higher* than in more recent times (and at the time of observation), including the “recent” period in which many of the lower-lying and less-completely-patinated drawings were made—for many of the lower (and indeed many of the higher) but less-patinated drawings had to have been made in eras, including the time of observation, in which it would be seen that the inundation did *not* crest, and in immediate living experience had probably *never* crested, at the higher levels indicated by some of the more completely-patinated drawings. Stated most simply in terms of the basic principle of interpretation that could be applied most readily at any point in time except the very earliest time when drawings were made, some drawings were made “long ago” when the crest of the flood was much higher than “now.” For what it is worth, Myers’ dates for his Site XXXII (= SJE 382d at 150m ASL) tend to confirm what could have been visible in later prehistory: located on horizontal surfaces on the flat summit of an island hillock sloping gently down to the river, a suite of entirely blackened drawings of tools, weapons, traps, and concentric circles and other “geometrics” at this site might have been made as early as about 7000 BC (more likely in the period 6500-5500 BC) and

can be associated with the Khartoum Variant tradition in Neolithic culture in Lower Nubia (cf. SJE 382c).

The historical context indicated by this evidence is well-documented. Throughout the likely period of the production of the earlier phrases of rock-drawing at Abka—that is, a period from the seventh through the fourth millennia BC—the average height of the Nile flood in Upper Egypt and Lower Nubia was sinking. Geomorphological and correlated archaeological evidence shows that from about 9,000 to 3,500 BC, the average flood crest dropped about 4 meters. (This figure is very approximate but suffices for our purposes here. In a well-known calculation, A. J. Arkell [1953: 7-8] concluded that the Neolithic flood at Esh Shaheinhab was 5 meters higher than it was in the mid-twentieth-century; Randi Halland [1982: 49-56, 1987: 194-95] has revised this figure downward to 3-4 meters.) In Lower Nubia the decline in the floodcrest was “most dramatic,” it seems, in predynastic times (Hassan, *Before Food Production*, 45; “Environment and Subsistence,” 58-59) and in the early dynastic period. Karl Butzer (1984: 105-6) has estimated that in Upper Egypt a net 1-meter decline in the average floodcrest occurred between the late First Dynasty and the mid Second Dynasty. He suggests that this decline over a period of some decades would have been equivalent, in modern times, to the disastrous reduction in discharge in the low flood of 1877, the lowest flood between 1869 and 1903, which “precluded cultivation of 35% of the valley alluvium.”

To be sure, the long-term lowering—lessening of the volume—of the floodcrest did not necessarily take place steadily. In any given year, a flood could have been higher or lower—sometimes much higher or much lower—than the year before. Partly for this reason, in the span of a human lifetime around 4,000 BC it probably would not have been possible to *witness* the long-term change—a change occurring over decades and centuries and correlated, of course, with other major climatic and ecological shifts. As Fekri Hassan has noted, the climatic and ecological history of northeastern Africa in the late pleistocene—the period during which the earlier petroglyphs at Abka might have been produced—displays “a series of transformations reflecting the *disparity* between human time scale and that of natural phenomena” (1987: 21, my emphasis). Hassan estimates that the major linked climatic and ecological transformations—notably an aridification of the Sahara beginning around 7000 BC—occurred over a period of “ten generations at

least.” Before the advent of systematic notations and written records maintained over the long haul, only a practice such as the permanent marking of the land in petroglyphs in a tradition that lasted many decades or more—or a practice that recursively returned to past traditions to revisit or repeat them—would have rendered these transformations visible in representation.

On inferring that some completely patinated rock-drawings located at high elevations at Abka must have been made “long ago,” an observer could readily notice a number of correlated trends, confirmed (for us) by comprehensive analysis of the catalogue, typology, and photographs of the corpus, that index the similarities and differences between earlier and later episodes of drawing at higher and lower elevations—indexes tending in turn, and insofar as they were visible, to *represent* similarities and differences between earlier and later times. As I have shown elsewhere (Davis 1977), a very general trend appears to be a gradual shift from horizontal, small, smooth surfaces, used in the earlier and “older” phases of drawing, to large, rough, vertical or “wall” surfaces, with a corresponding gradual decrease in average station elevation from 150m or above to 140-50m and below. It is likely that the “first” rock-drawings in the locality of Abka tended to have been situated on the summits of the islands, the edges of the most prominent escarpments, or the highest rocks in an area. (What appear to be the two earliest rock-drawing sites at Abka, 382c and 382d, both displaying largely “geometric” drawings—some perhaps to be understood as depicting hunting tools, weapons, or traps—were completely patinated [a-patina] on smooth horizontal surfaces.¹³) Later

¹³ According to the SJE, “it may be that even the rock itself had not yet acquired its black patina at the time of settlement at these stations” (SJE I, 29). For further discussion of these two early sites at Abka (SJE 187-91, pls. 108-15), see Whitney Davis, “The Earliest Art in the Nile Valley,” in L. Krzyzaniak and M. Kobusiewicz, eds., *The Origin and Early Development of Food-Producing Cultures in Northeastern Africa* (Poznan: Polish Academy of Sciences, 1986), 81-94. 382d is Myers’ Site XXXII. 382c1-3 are rock-surfaces not associated with archaeological deposits. 382c4 is a small horizontal rock-surface with a simple outline circle (X15). Beside the rock there is a 4-meter-deep pothole. At the top of the wall of the pothole there is a “circular net-pattern” and faint lines and tool-marks, possibly a second net-pattern; the designs are fully patinated (a-patina) (SJE I, pl. 108.3). The filling of the pothole was excavated. No artifacts were found in the uppermost level of sand. In the silt below, a few artifacts (including C-Group potsherds) and animal bones were recovered, as well as red and yellow ochre. According to Nordstrom, who reports the excavation, “there is no evident chronological relationship between the patinated drawings on the walls” of the pothole and these finds, “although it is possible that the drawings were made before the formation of the silt layer” (A-Group Sites, Site 424, 229).

drawings tended, then, to be situated “lower” in relation to the sites already occupied by drawings. The horizontal drawings at high elevations are always completely patinated (a-patina). Indeed, completely patinated (a-patina) drawings—whether on horizontal or “vertical” surfaces—tend to be found at the higher elevations. Only three sites that have completely patinated drawings can be found below 140m (151a and 206b); these, of course, would have been submerged most frequently. In addition, and probably equally important from the vantage point of prehistoric observers, the patination and the elevation of drawings (bespeaking both the era of production and the frequency of submersion) seem to have been correlated with observable differences in the *subject matter* and in the *technique* of the drawings.¹⁴

In terms of subject matter, animals that were sometimes depicted at the higher elevations in more completely patinated form—these drawings could be judged to be older—could also be depicted at lower elevations and in less completely patinated form in drawings that might be taken to be younger. Drawings of giraffes can be found in a-, b-, c-, and d-patina (that is, in every state of patination but “entirely unpatinated” or e-

The interpretation of the “geometric” designs at Abka—concentric-circular, spiraling, meshing or lattice-like, and wavy lines—is uncertain because they are not accompanied by depictions of animals or human figures. Elsewhere, however, spiraling and wavy lines sometimes attach to the feet or necks of animals and lead to men standing nearby (Winkler 1938: pl. 29, 1939: pls. 51, 53, 58-60, 61.1; Dunbar: figs. 7, 8). In one drawing from Abu Sir, an animal appears to be trapped in or surrounded by spiraling wavy lines—presumably a trapping device such as a “wheel-trap” or perhaps a net (F. Hintze, “Preliminary Note on the Epigraphic Expedition to Sudanese Nubia, 1963,” *Kush* 12 [1964], fig. 5; for other examples, see Winkler 1938: 21, pl. 19.2, 1939: pls. 33.1, 38.2; Dunbar: figs. 23, 164; Paul Huard and Jean Leclant, “Figurations de pieges des chasseurs anciens du Nil et du Sahara,” *Revue d’Egyptologie* [1973], 136-77; for ethnological evidence, see J. Hornell, “Traps and Snares from Upper Egypt,” *Ethnos* 2 [1937], 65-73). We should also note the extremely general similarity between the “geometric” designs in petroglyphs and incised or impressed decoration on Neolithic pottery from Abka (Nordstrom II, pls. 139, 141) and incised ostrich eggshells from elsewhere in Lower Nubia (R. L. Carlson, “A Neolithic Site in the Murshid District, Nubia,” *Kush* 14 [1966], 61; cf. C. M. Firth, *Archaeological Survey of Nubia: Report for 1909-10* [Cairo, 1915], 60-61; Williams).

¹⁴ The correlation between the elevation and subject matter of rock art has sometimes been remarked in Egypt and Nubia. As long ago as 1933, K. S. Sandford and W. J. Arkell noted that at the Wadi el-Arab near Sayala giraffes and elephants appear higher up on the rocks than boats and cattle (*Paleolithic Man and the Nile Valley in Nubia and Upper Egypt* [Chicago, 1933], OIP 17, 66-67; Sandford and Arkell noted that the cliffs with drawings must have been submerged at some point in what they took to be the “paleolithic” period—*ibid.*, 69-71); the correlation was noted by the SJE team (see Karl Vibe-Mueller, “Some Notes on Neolithic Sudanese Nubia,” *Actes du VIIe Congres international des sciences prehistoriques et proto-historiques* [Prague, 1970], 164). Hans Winkler noted that the drawings of “hunters” in southern Upper Egypt were “as a rule found in sunny places, often on the tops of hills or boulders,” though he did not present systematic data about the elevation of these drawings (*Rock Drawings of Southern Upper Egypt I* [London, 1938], 32). J. H. Dunbar presented an intriguing study of the “stratigraphy” of rock drawings in Lower Nubia (*Rock Pictures*, 34-52 and pl. 26). But to date the palimpsestic structure of these correlations or “stratigraphies” have not been identified.

patina) and drawings of elephants can be found in a-, b-, and c-patinas. But some animals that were depicted at lower elevations were never depicted at higher elevations or, if they were depicted at higher elevations, were never completely patinated. Cattle (oxen, cows, and calves) never appear above 140-50m (although there are a significant number of other drawings at Abka at 150m or above) and a significant number of cattle appear at 140m and below. In the large number of cattle drawings at Abka (the SJE Corpus includes 468 cattle for cataract sites), only four were completely patinated (a-patina) (namely, 390f4 [C68 and C83] and 382b2 at 140-50m, 206b4 [C206] at 130-40m; 206b is one of the lowest rock-drawing sites at Abka and would have been submerged more frequently than all sites at higher elevations). About 100 cattle had advanced but not complete patination (b-patina). Few if any of these cattle had collars or other paraphernalia, which appear on more lightly patinated cattle, and none has an udder; possibly, then, they were undomesticated.¹⁵ Similarly, although some crocodiles and human figures were depicted at 150m or higher, these drawings were less completely patinated. Among the sixty-nine boats depicted at various sites at Abka, only one (154h22, pl. 26:1F) appeared at a high elevation (150m) in a darker (b) patina. All other boats were less patinated (c- or d-patina); these tended to be situated at lower elevations. Camels and horses were always incompletely patinated (c-patina) and at Abka can never be found at elevations higher than 140-50m. (The camel probably reached north Africa in the fifth or fourth century BC.¹⁶ It would be reasonable to take drawings of these creatures to be the most recent productions. Most human figures are found at 140-50m;

¹⁵ The morphological transformations that accompany the domestication of cattle (see Wolf Herre, “The Science and History of Domestic Animals,” in *Science in Archaeology*, ed. Don Brothwell [London, 1970], 169-70) cannot be detected as depicted in the rock-drawings of cattle at Abka, and it is not clear whether collars and head-ornaments indicate domestic (or incipiently domesticated) status (see Paul Huard and J. M. Massip, “Gravures rupestres de Ye Lulu Loga (confins nigero-tchadiens,” *Bulletin de la société préhistoire française* 8 (1964), 192-97, and Smith, “Problems and Possibilities,” 10.

¹⁶ See E. Mounier-Leclercq, “L’art préhistorique de l’Afrique du nord: quelques découvertes récentes,” *Chronique d’Égypte* 11 (1936), 326. The darkest patina found on any drawing of a camel in the SJE concession (b-patina at N22:2) can be attributed to the extremely low elevation of the drawing (120-30m), a few meters above the river, on a horizontal surface. It is interesting to note, however, that the artists who drew camels and horses, which sometimes bear armed riders, preferred smooth or very smooth rock-surfaces—a preference usually associated with what seem to be the oldest (prehistoric) drawings in the SJE concession. It is possible that these artists—many millennia of established wall-painting and –relief probably stood behind them—selected rock-surfaces closely resembling the smooth, prepared surfaces of the bounded and framed fields of monumental wall art. The very smooth surfaces of prehistoric art must have had a different valence for observers.

human figures at 150m or above are always incompletely patinated, although human-related images (drawings of what might be tools, weapons, and traps) do appear completely patinated at 150m (382c and 382d).¹⁷

At Abka, three principal techniques of rock drawing were defined by the SJE: “hammered linear designs” (which were quite infrequent); hammered designs that were not surrounded by an outline (more or less of the rock cortex could be removed); and hammered outline drawings (the outline establishing the figure could be more or less wide). Because all the drawings were hammered, the principal visible difference in technique, then, must have been between outlined drawings (with none or only some of the interior cortex removed [h-, I-, k-, and l-technique]) and non-outlined drawings (with all or much of the interior cortex removed [e- and f-technique]). In j- and m-technique, the interior surface was closely hammered within the outline. As photographs and line-drawings suggest and as the SJE Glossary acknowledges, these rock drawings can be difficult to distinguish from e-technique non-outline drawings—a fact that must be kept in mind in making sense of the corpus as it has been described in the SJE catalogue and typology. But despite the fact that the SJE recognized a continuum in techniques of making drawings and that some drawings—e-technique on the one hand and j/m-technique on the other hand—are often difficult to tell apart, at Abka the vast majority of drawings belong to clearly distinguishable techniques, namely, e/f-technique on the one hand and h/i/k/l-technique on the other hand. It is a major difference: each type of drawing technique is the virtual inverse of the other. Several rock-drawings at Abka suggest that the artists themselves were self-consciously aware of this visual difference in graphic technique—whether or not they also attributed chronological or historical significance to it. For example, at 206s11, two felines (probably cheetahs) were drawn side by side and partly superimposed (pl. 53:1); the left-hand creature (M14) is completely hammered without an outline while the right-hand creature (M15), is outlined with minimal interior hammering—though in profile aspect the animals are clearly replications or “copies” of one another. 169j2 is a striking example (pl. 60:5): an

¹⁷ Three drawings of handprints appear completely patinated (a-patina) at 154a7 at 140-50m. Two drawings of footprints are completely unpatinated (e-patina) at 152b at 150m (152b12 and 152b88) while a third is more completely patinated (152b51)—perhaps visibly “older” than, and thus “repeated” by, the “younger” versions. Seven mysterious drawings that could be interpreted as vulvae appear at 376c5 at 140-50m in dark patina (b-patina).

outlined ox (C312) is paired with a completely hammered ox (C437); again, the creatures seem to be constructed as close replicas. Within the broad division between the two major classes of technique, the artists at Abka also played self-consciously with the finer distinctions within each of the classes. At 169j11, for example, the artist or artists placed an outlined ox with its head and neck hammered completely (C415) facing right in “upright” orientation; above it, an outlined ox with completely hammered body and peculiarly branching or bifurcated horns (C322) was placed “sideways.” The two creatures have been fitted together graphically—horns and tails touching or practically superimposed—to establish an overall pattern that seems to play with the visual permutations of figure and ground and their outlined and/or in-filled shapes. In a handful of cases, leaving “blanks” or ground “showing through” in otherwise completely-hammered figures contributed to establishing depictive details such as eyes (e.g., the antelope in 377f2 [L146]; pl. 76:5) or the spots on an animal’s hide (e.g., the oxen in 157m5 [C423; pl. 34:1] and 377f61 [C445; pl. 77:5]); the complex composition at 379b22 (pl. 98:1) carefully distinguishes the several different animals’ markings, including a lion with a “mane” (M3), a “tripartite” cow with a pendant and udder (C221), and a cow with udder and irregular net-pattern on its hide (C340).¹⁸

In the more advanced or complete patinas (a- and b-patinas), more giraffe and elephants tended to be produced in the non-outline technique than the outline technique (16:5 for giraffes and 17:5 for elephants). Conversely, more cattle tended to be produced in the outline technique than the non-outline technique (9:88). It would be fair to say, in fact, that cattle at Abka would have been seen usually to be less completely patinated (they are mostly c- and d-patina) than other drawings of large animals and nearly always made in outline technique in any patina (whether or not the interior of the outline was hammered); as noted already, moreover, they never appear at the highest elevations (150m and above). Collectively in the array of drawings at Abka (i.e., in the corpus) and cumulatively in their collation over time, these properties would have strongly distinguished cattle-drawings from the drawings of giraffe and antelope with which they were sometimes contiguous.

¹⁸ However, the suggestion of modeling or highlighting evoked by some SJE line-drawings e.g., one of the antelopes in the superimposition at 378g49 [L44; pl. 86:1]) should be approached cautiously.

Antelopes, the second most frequent category of subject matter by simple count (212 examples in the SJE Corpus for the second cataract), were produced in both major techniques in the darker patinas (a- and b-patinas) and they could be found at all elevations from 150-60m to 130-40m. But in darker patinas the non-outline examples tended to be found at the higher or intermediate elevations (in e-technique, 6 examples at 150m and 3 at 140-50m) while the outline examples, somewhat more frequent, tended to be found at intermediate or lower elevations (in h-technique, 1 at 150-60m, 10 at 140-50m, 1 at 130-40m). There would appear to be little visible “sorting” here. But the non-outline drawings of antelopes always depicted the creatures with horns sweeping back while the outline examples always depicted the antelopes with horns oriented upward or forward. Despite the fact that antelopes can be found at both higher and lower elevations and in both major techniques, then, observers likely made a distinction between them even if the examples were all judged to be roughly the same age (i.e., relatively “dark” and “old”)—a distinction tending to reinforce the emergent correlation between elevation and technique (i.e., non-outline/higher and outline/lower) to be observed in the case of the three other major categories of fauna depicted in the overall accumulation of rock-drawings at Abka.

It is worth noting that there are 5 cases of outline over non-outline superimposition and 3 cases of non-outline over outline superimposition (Table 4). (In fact, there are 26—not just 8—cases of the superimposition of drawings that have different techniques according to the SJE classification. But 17 of these cases involve drawings that are “visually” close; either they both belong to one or the other of the two major *types* of technique, non-outline or outline, or they belong to techniques in each type that look similar across the type. Thus they cannot reliably be used to infer that observers could *see* a difference in technique between upper and lower drawings in the superimpositions.) In the entire catalogue of second cataract rock drawings, I have been able to identify only two examples of superimposition in which we find *both* a patina difference *and* a difference in technique between the upper and the lower drawings—i.e., 154a1 [m-technique c-patina antelope over e-technique a-patina crocodile, pl. 17:2] and 376a1 [h-technique c-patina ostrich over k-technique a-patina giraffe, pl. 67:2]. Both examples are consistent with the overall finding that outline drawings tended to be “later” than non-

outline drawings—and suggest that the temporal difference in question could have been a considerable one, i.e., a difference measured, for retrospective observers, by the transformation of the lighter c-patina over a long period of time into the completely blackened a-patina. In both examples, however, the techniques in question [e and m; k and h] were visually similar; this apparent difference in technique might simply be due visually to the actual difference in patination.

Later or more recent observers in the rock-drawing tradition at Abka could resolve these complex relations and correlations—despite the variations, overlaps, and ambiguities—in a coherent overall perspective (Table 4). Giraffes, elephants, and e-technique antelopes, a set of “older” drawings, began to be drawn in a time “long ago” when the Nile flooded much higher than it flooded in more “recent” times—possibly separated from the earliest phase of the tradition by a considerable duration—when k-technique antelope, cattle, and boats, a set of “younger” drawings, began to be drawn. The older drawings had examples located lower down alongside the younger drawings; they were visibly more recent than the *earlier* older drawings though they could well have been contemporary with, or younger than, the earlier *younger* drawings. The younger drawings had examples located higher up alongside the older drawings; they were visibly more recent than the *earlier* older drawings though they could well have been contemporary with, or older than, the later *older* drawings. In other words, over time the depiction of giraffe, antelope, and e-technique antelopes was supplemented by the depiction of k-technique antelopes, cattle, and boats; at the same time, the elevation of a drawing, regardless of its age in the accumulation, and the technique of making it tended to be contemporary, that is, to reflect later or the latest stages of the emergence (i.e., higher elevation = non-outline-technique; lower elevation = outline technique). The older tradition of drawing on the rocks (it involved the depiction of giraffe, elephants, and e-technique antelopes) did not simply *end* in more recent times. Indeed, it was “updated,” as it were, at lower elevations, in the more recently emerged technique, and in admixture with depictively younger drawings. But in more recent times, a newer phase of the tradition (it involved the depiction of k-technique antelopes, cattle, and boats) was introduced—as it were tending to “replace” older drawings that continued to be made in newer terms. In turn, this historical shift could be seen to represent—and to be caused

historically by—the lowering of the Nile flood between the time the older (higher, darker) drawings were made and the time the younger (lower, lighter) drawings were made.¹⁹

Over time, and certainly during the younger phase of the history of the accumulation as it could be observed at lower elevations in view of the many lighter drawings there, the accumulation—the emerging palimpsest—seemed to show that cattle-keeping (as indexed and sometimes clearly depicted in the drawings of cattle) had displaced the hunting of big game (as indexed and sometimes clearly depicted in the drawings of giraffe, elephant, and antelope.) (A handful of drawings from southern Upper Egypt and Lower Nubia seem to depict men hunting cattle, but I cannot identify any depictions of this kind at Abka.²⁰) More exactly, the emergent palimpsest showed that the depiction of big game was historically rooted in an era when the floodcrest of the Nile was much higher, and evidently no cattle and boats had been depicted, and that the depiction of cattle and boats was historically rooted in an era when the floodcrest was much lower. But it also showed the notional possibility of long-term *continuity* and even *reversal or reversion* in this regional history. Just as one could go “down” into a newer era of cattle-keeping and boat transport, one could also go “up” into an older era of hunting big game—an ecological and cultural possibility that might not actually be earlier *in time* (for it could “continue” into the present moment of observation) even if it was higher *in place* (where it had originated in a time understood to be long ago). These coordinates could be projected at various standpoints in the palimpsest not only as millennial or generational

¹⁹ According to Winkler, the “earliest hunters” (*Dirwa-Leute*) of southern Upper Egypt—a population contemporary at the latest with the earliest Naqadan culture in Egypt—knew the elephant (1938: pls. 27.2, 28.1, 1939: pls. 56.1, 57.2) and the giraffe (1938: pls. 28.1, 2, 29.1, 2, 30.1, 1939: pls. 51, 52.1, 53.1, 54, 58.1). According to him, “these archaic hunting people . . . never depicted cattle in the earlier part of their long existence in these regions” (R. A. Bagnold, O. H. Myers, R. F. Peel, and Hans Winkler, “An Expedition to the Gilf Kebir and ‘Uweinat,” *Geographical Journal* 93 (1939), 308 —a view I take to be confirmed by the analysis presented here. But the giraffe and elephant were also known, according to Winkler’s classification, by the succeeding “early Nile dwellers” (*Standarten-Leute*) contemporary with the Naqadan and early dynastic periods in Egypt (1938: 30, pl. 14.1, 1939: pl. 14.1).

²⁰ Hans A. Winkler, *Rock Drawings I*, 20, 24, and pl. 15.1; Dunbar, *Rock Pictures*, fig. 27. And we should remember that the depictions need not be documentary; they might well have narrative-symbolic values. Paul Huard has published a drawing from Myers’ survey near Wadi Halfa showing a human figure (?) astride a cow or bull (Paul Huard, “Nouvelles figurations sahariennes et nilo-soudanaises de bouefs porteurs, montes et attelées,” *Comptes rendus des séances mensuelles, Bulletin de la société préhistorique française* 65 [1968], fig. 3, no. 9)—not likely to have been a regular practice among ordinary cattle-herders though perhaps it had some kind of ludic, ritual, or festival connotations.

transformations—though in later times they could be seen to be caused, or to have been caused, by profound long-term shifts indexed by the cumulative record of the petroglyphs. They could also be projected as seasonal, economic, or political oscillations represented by the accumulation *regardless* of the long-term trends that constituted its palimpsestic order and visibility in the first place.

The real chronological and cultural correlations of the petroglyphs at Abka—and in particular the absolute dates of their production—require further investigation. But the palimpsest itself, it should now be clear, produced an *indigenous* visualization of a regional history—a view of, or more exactly a view into and a view through, its archaeology, or more exactly a *series* of views available at different standpoints at different times even if these points of view were spatially interrelated. In this petroglyphic history, the relation between hunting and cattle-keeping seems to have been pictorialized not only as an economic or cultural superimposition—the sequential succession of one historical kind of economy and its culture by another kind of economy and culture—but also as an on-going interaction.

In the palimpsest, the “nonfigurative” drawings at 382c and 382d (Horizon A) were located at high elevations (among the highest recorded for all rock-drawings at Abka) and now display the darkest degree of patina—though at the time they were situated on the rocks, of course, they need not have been regarded as “high” (for at the time the low waterline and the floodcrest were commensurately closer) and they could not have been regarded as “dark.” At these two well-defined locations, they constituted a small number of distinctive and closely similar displays—especially a series of nested or concentric half-circles (X34-X37) and a series of complex “lattices” (X74-X80), although outlying cases can be found (for example, a concentric pattern at 154a15 [X36]). According to Myers’ two radiocarbon dates for his Site XXXII (SJE 382d), these drawings might be as old as 7,500 BC. If this is correct, and as the emergent palimpsest anyway encouraged later prehistoric observers to infer, these “nonfigurative” drawings could be taken to precede the earliest depictions of wild fauna and big game (Horizon B)—giraffe, elephant, antelope (at least in the “older” e-technique), rhinoceri (only 4 examples in all [I1-4]), and probably some or all of the ostriches (82 examples in all [Q1-72]), along with

the human hunters (sometimes equipped with bows, boomerangs, clubs, spears or stakes, and other paraphernalia) often visibly associated with them. According to Hellström (SJE 1: 29), eleven very-similar-looking drawings (apparently a clear and specific type) of “a tall man seen full-face” and with his penis hanging between his legs (A1-11), though not obviously depicted to be a hunter (he carries no equipment), should be included in this phase of rock-drawing at Abka. Most of these male figures appear on their own or in pairs, but at 152g68 one of them (A2) appears to be paired with an elephant (pl. 12:1). A twelfth human figure (A13), patinated completely black on the main wall at Myers’ Site IX (SJE 154a7), might be added to this group, although his or her “legs” are together and no penis can be seen. This personage seems to have been positioned more or less in the center of the visual field (at the time quite empty of other figures) presented by this large wall-like rock-surface. A second, somewhat differently constructed human figure (A46), not showing a penis, was positioned above it to its left (see pls. 16; both figures were painted white by Myers). If the patina variation on the wall is any guide, these two figures seem to have been made in the same era, and possibly at the same time, as four drawings of hand-prints placed around them, two crocodiles (R13, R14), and the several “nonfigurative” drawings placed at the bottom of the wall (X29, X31 [both fish-traps?]; X39 [unknown]; X43, X44 [both described by Myers as “jellyfish”]); like the two human figures, all of these drawings were completely patinated (a-patina). In a later period, a number of giraffes as well as hippopotami (H6, possibly H8-10), antelope, jackals or hyenas (N4, N9), and other quadrupeds (including one of the two “jerboas” at Abka identified by the SJE [02]) were arrayed above and below the central human figure. Although these drawings visually surrounded and seem to intermingle with the completely blackened drawings, they had a lighter patina (c-patina)—as did all the animals depicted on the wall as it continued around a curve in the rock to the right of the main wall (154a8, pl. 17:3 [the exception is an a-patina drawing that might be interpreted to represent an outline human figure with arms raised [X68]).²¹ This difference in

²¹ Some of the figures on 154a8, however, might be later than the latest figures—and could have been seen to be younger than the most recent figures—on 154a7. Three peculiar “double-headed” mammals—perhaps antelope (as they are classified in the Corpus [L184-186]) or oxen—have no recorded similars in the entire corpus of rock-drawing at Abka. It would be tempting to associate them with the “double bull” on the Hunter’s Palette (see Davis 1992: 101-3, 110-11). In addition, at 154a8 at least one of the antelopes (L181) appears to have been “redrawn” (SJE 1: 78—“altered in later periods”). Conceivably

coloration would have been as visible in prehistory as it is today—for when they were made the c-patina drawings would have been unpatinated even if the pre-existing a-patina drawings had not yet completely blackened by that point.

It is conceivable that there was a substantial gap—perhaps a period of a millennium or more—between the “nonfigurative” drawings at 382c and 382d (at which there are no drawings of animals or human beings) (Horizon A) and the beginning of the tradition of depicting wild fauna and big game and the associated human figures (most of them depicted as hunters) and other imagery (Horizon B) (e.g., the giraffe-hunting scene at 380b2 [pl. 101:1]). Indeed, it is possible that the completely blackened “nonfigurative” drawings at 382c and 382d were made by people who were culturally different from the people who made the now-completely-patinated (a-patina) pictures of wild fauna and associated imagery at such sites as 152b, 154a, 154f, 206b, 376a, 376c, 378d, 378g, 378q, 382b, and 390f. (The associated imagery include clubs [152b2, W15; 152b8, W28; 154a7; 378q3, W42; 378q3, W43] and wheel-traps [154a4, W16, W17; 154a7].) Alternatively, however, perhaps we should ignore Myers’ dates for his Site XXIII (SJE 382d). We could then readily include the “nonfigurative” drawings at 382c and 382d among—and contemporary with—the drawings of the hunters’ wild quarry (as suggested by 154a7, despite the patina differences between the “nonfigurative” a-patina drawings at the bottom of the wall and the c-patina wild fauna above them), some of which were completely blackened at the other sites just mentioned (including a completely blackened huntsman at 376c73 [A332]—aside from the two figures made in the first phase of drawing at 154a7, it is the only completely blackened [a-patina] human figure in the corpus at Abka). Indeed, an instance of the most distinctive “nonfigurative” drawing type at 382d, the concentric half-circle, can be found in completely blacked state at 154a15 (X36). Horizon A and Horizon B could actually have been successive or contemporaneous. Either way, the drawings of wild fauna and associated imagery (including some types of “nonfigurative” drawing) were visibly constituted in the palimpsest—from the standpoint of its later prehistoric observers—as very old.

the “double-headed” creatures were too—almost as if they graphically transformed antelopes (typically drawn with back- or forward-sweeping horns) into cattle (sometimes depicted with the U-shaped or almost circular or disc-like horns displayed by L184-86: cf. C9, C43, C121, C229, etc.). In general the wall at 154a7/8 seems to have been the site of intense and continuing replicatory activity including redrawing.

The drawings of wild fauna—subsequent to the early “nonfigurative” drawings or not—should probably be dated to the fifth and the earlier fourth millennium BC (Myers’ Site IX [SJE 376c] yields a radiocarbon date of 4300 BC) (Horizon B) with continuing expressions in the palimpsest (in the “newer” elevations, formats, techniques, and patinas) in the later fourth and first half of the third millennium BC (Horizon C). Owing to “glacial age” conditions prevailing at the time, giraffe and elephant had not been present in Upper Egypt and Lower Nubia in the late Pleistocene.²² Despite human occupation at the Second Cataract in the late Pleistocene, then, the drawings of these animals at Abka cannot be dated to that period. Butzer would place the (earliest) rock-drawings of large wild fauna in the eastern Sahara in his Subpluvial II Phase or the beginning of the so-called Neolithic Wet Period.²³ There is no reason to challenge this plausible attribution. As the palimpsest at Abka showed, however, a substantial lowering of the floodcrest of the Nile evidently occurred in the period during which the drawings of wild fauna—especially the big game—were made, whatever dates prehistoric observers assigned to it: while some of the drawings of wild fauna and associated imagery were completely blackened due to frequent submersion, and at least some completely blackened drawings could be found at high elevations (e.g., an antelope or giraffe [?] at 156f at 150+m and an elephant [152b37/38-40; G21], e-technique antelopes, and other creatures at 152b at 150m²⁴), other drawings of wild fauna (comprising the greatest number of the total number of examples in the corpus) were not completely blackened (though many of them were in the almost-completely-blackened b-patina) and/or were not to be found at the highest elevations. The large “Ethiopian fauna”—giraffe, elephant, and rhinoceros—began to die out in the Egyptian early dynastic period (c. 3,000-2650 BC); they retreated southwards in the aridification contemporary with—and one of the background ecological causes of—the rise of

²² See K. W. Butzer, “Late Glacial and Postglacial Climatic Variation in the Near East,” *Erdkunde* 11 (1957), 27-28, and especially C. S. Churcher, *Late Pleistocene Vertebrates from Archaeological Sites in the Plain of Kom Ombo, Upper Egypt* (Toronto, 1972), 127-29.

²³ Karl W. Butzer, “Das ökologische Problem der neolithischen Felsbilder der östlichen Sahara,” *Abhandlungen der Akademie der Wissenschaften und der Literatur* (Mainz), *Math.-Naturwissen. Kl. 1* (1958), 20-49.

²⁴ At 152b37/38-40 (pl. 11.2-3), a smooth horizontal surface, the a-patina drawings included what seem to be three giraffe (K93, J38) and four ostriches (Q1, Q2) recorded by Myers, and possibly a wild ox (similar to C353). At 152b, the a-patina drawings also included two clubs at 152b2 (W15) and 152b8 (W28).

pharaonic civilization founded in flood-recession agriculture in Egypt. The animals had probably disappeared almost entirely from Upper Egypt and Lower Nubia above the Second Cataract by the end of the Egyptian Fifth Dynasty (c. 2320 BC). In the later third and second millennia BC, the northern frontier of the diffusion of elephant and giraffe has been placed approximately at the Third Cataract some distance upriver from the “Belly of Stones.”²⁵

We should be cautious, of course, about assuming that the chronology of the actual distribution of the fauna should be correlated with the temporality of their pictorial distribution in the palimpsest—even if the approximate date of the introduction of the large wild fauna likely provides a *terminus ante quem* for the tradition of drawing them. It is possible that pictures of big game made *earlier* in the palimpsest (likely in the older patinas, locations, formats, and techniques) could have been reproduced graphically or “copied” by later artists who had rarely or never seen the creatures in the wild (and who would naturally tend to use the younger patinas, locations, formats, and techniques). Long ago A. E. Robinson urged that rock-drawings in Egypt depicting giraffes could not have been made prior to the Christian and Islamic eras, when people were known to have traveled far to the south—as they had done in pharaonic times.²⁶ In reply, Butzer has argued that there was little room for itinerant artists in prehistory or in the cultural traditions in question. The drawings, he implies, were produced by localized ethnic groups—“isolated in their respective regions” as Butzer puts it—who must have encountered the fauna in the immediate area.²⁷ But this does not imply that the fauna had to have been seen at the time any particular rock-drawings of them were made. The palimpsest itself, the accumulating array of drawings, contributed to maintaining their cultural visibility regardless of their immediate presence—for as the palimpsest seemed to show, the animals had been seen in the past and conceivably might be seen (again) in the future or in another place. In these terms, to draw a picture of big game at a time

²⁵ For increasing aridity in the fourth millennium BC, see discussion and references in Hassan, *Before Food Production*, 46-48, and Manzo 1999, 4 and notes 21-23. For the geographical distribution of elephant and giraffe, see Manzo pls. 3 and 5.

²⁶ “Egypt: Rock-Drawings,” *Man* 34 (1934), 32.

²⁷ “Physical Conditions in Eastern Europe, Western Asia, and Egypt Before the Period of Agricultural and Urban Settlement,” in *Cambridge Ancient History*, 3rd ed., ed. I. E. S. Edwards, C. J. Gadd, and N. L. Hammond, I, Part 1 (Cambridge, 1970), 68.

when the creatures were rarely seen might have been an act not so much—or at least not only—of documenting the contemporary environment as an act of recollecting or recreating an historical environment or perhaps more likely an act of interrelating past or ancient and contemporary contexts of life.

To be sure, this possibility poses problems for archaeologists determined to understand prehistoric iconography as a direct transcription of prehistoric visual experience—that is, of visual experience prior to and as it were setting the terms of *pictorial* visibilities—and especially for archaeologists who use paleoclimatic and paleoecological chronologies to “date” depictions. (Presumably they have avoided the methodological circle implicit in the fact that some paleoclimatic and paleoecological chronologies are partly founded on the supposed chronology of rock art.) From the standpoints of prehistoric observers of the palimpsest, however, the viewpoint in the palimpsest could well have been that the large wild fauna were increasingly *less* visible compared, it would seem, to the pictorially recorded experience of earlier generations—a long-term history explained causally and culturally in the visual-spatial structure of the palimpsest itself in its narrative of the contexts and consequences of declining floodcrests. Archaeology need have no trouble correlating this pictorial-palimpsestic temporality and real ecological history so far as we can document it—for the big game gradually did die out. Arguably the palimpsest pictured that development (in the transition of elevations, patinas, formats, techniques, subject matters, and frequencies from Horizon B to Horizons C/D) even if it would have been difficult to witness or visually to measure in the human lifetimes of any generation of observers. Certainly an observer standpointed at lower elevations in later times—*after* the time the drawings were made—would have realized that in *his* place and time the large wild fauna had decreased or (as viewing at the latest standpoints might have seen) had disappeared altogether. But even in an era in which the drawings were actually made (Horizon C), this history could have begun to come into view palimpsestically. Newer drawings were increasingly threaded through the accumulation (beginning in Horizon A/B) of palpably aging drawings of wild fauna. And these more recent entries—aging in turn in relation to the pre-existing set (Horizon A-C) and still later pictorial deposits—increasingly did not depict the Ethiopian fauna (Horizon D).

To be specific, as the palimpsest at Abka made clear (at least at the time of the accumulation of Horizons C and D), the many-centuries-long period during which the biggest game could actually be seen in the savannah and light forest around the Second Cataract was marked by the intensification of cattle-keeping—keeping pace with the aridification (and lowering of the height of the floodcrest) that was leading to the disappearance of the Ethiopian fauna in the first place. In the palimpsest, this transition could be observed in the distinction (increasingly visible at the standpoints of increasingly later observers) between *earlier* older drawings (deeply blackened like the very oldest drawings at high elevations {Horizon A}) and *later* older drawings—that is, between drawings of wild fauna and associated imagery made at a time when seemingly no cattle were kept (at least, none were depicted) (Horizons A/B) (e.g., 380b2 [pl. 101:1], the giraffe hunt) and drawings of wild fauna made at a time when cattle-keeping had become visible and even ubiquitous in the region (at least according to the petroglyphic pictorialization) (Horizons C/D) (e.g., 382d4 [pl. 119:5], which depicts eleven cattle, probably domesticated).

In real archaeological terms, this distinction between horizons in the emerging palimpsest of the accumulation of drawings at Abka is consistent with the economic and social difference between the Khartoum Variant and Abkan cultures on the one hand and the Nubian A-Group culture on the other hand. As noted earlier, pottery and other artifacts from all three cultural traditions—which were partly overlapped in time and space—were found in nonstratigraphical association with rock-drawings at Abka. The Khartoum Variant and Abkan peoples were well-adapted to their riverine location; faunal remains document regular consumption of fish and freshwater molluscs at some camps at the Second Cataract (even though no fish whatsoever were depicted in any of the horizons of rock-drawing at Abka). There is scant evidence of animal domestication in either cultural tradition (with the possible exception of the remains of a small domesticated goat, *Capra hircus*, found at a Terminal Abkan site).²⁸ As Nordström writes, “even though hunting may have declined during Abkan times in relation to the

²⁸ D. Perkins, Jr., “Three Faunal Assemblages from Sudanese Nubia,” *Kush* 13 (1965), 56-61. This single fragment of bone—along with a bovid fragment (probably *Bos primigenius*, not necessarily domesticated)—came from the top layer of the site and might not be related to the Terminal Abkan occupation deposit (see SJE 3: 16). There seems to have been “no animal domestication” in the preceding Khartoum Variant tradition (Midant-Reynes, 143).

Qadan [the ancestral epipaleolithic tradition that ended c. 6,500 BC], the faunal data suggest that wild game, within a relatively broad spectrum including birds, still formed a very significant part of the subsistence pattern on at least some of the sites” (A-Group Sites I, 16). Five fragments of ostrich eggshell found at the “Abkan” cave at Adindan (K-Cave) displayed incised depictions of giraffe.²⁹

By contrast, in the succeeding Nubian A-Group “cattle raising played a significant economic role” (A-Group Sites I, 24) although many questions remain about its scale and distribution.³⁰ Innovations in agriculture and increasing sociopolitical differentiation and stratification (including the late predynastic consolidation of high-status or even “royal” complexes and funerary establishments at Qustul and Seyala to the north) also distinguished the A-Group from its predecessors (for a judicious review, see Nordström 1998; cf. Williams, *OINE* 4, whose characterization of “pharaonic institutions” in Lower Nubia in the late A-Group probably exaggerates the matter)—though probably not in a marked way at Abka itself, which always remained a poor and marginal frontier territory relative to the more northerly Nubian sites and their substantial interaction with the emergent dynastic state in Upper Egypt. A-Group peoples occupied Lower Nubia from the beginning of the fourth millennium BC until a sudden and seemingly drastic or even total depopulation occurred around 2800 BC. During this 1200-year period, the earliest younger drawings at Abka were likely produced—the beginning of cattle-drawing in more recent elevations, formats, and patinas in the palimpsest (Horizon C).

²⁹ B. B. Williams, *OINE* 4 (1989), K-Cave nos. 17-21, fig. 1c-j, pls. 8-11. Williams compares the figures to giraffes depicted “in Naqada I painting and in rock drawings” (*ibid.*, 9), and seems to assert a parallel between the cave at Adindan and the “bays” in which rock-drawings at Abka (Abkan or A-Group) were sometimes located (p. 10, n. 12).

³⁰ At the beginning of the fourth millennium B.C., the Terminal Abkan peoples of the second cataract evidently had contact with the A-Group (see Midant-Reynes, 145-46; Gatto, “Most Ancient Evidence of A-Groups”); for their part, by the first half of the fourth millennium B.C. culturally A-Group peoples—or A-Group cultural traditions—had spread as far south as the second cataract, “enabling them to ‘absorb’ the earlier cataract traditions” such as the Abkan (Midant-Reynes, 221; see also Smith 1991 for a convincing account of the indigenous origins of the A-Group in a “hunting-gathering complex” in Lower Nubia). Cattle-raising was probably “introduced in the river valley in Nubia as a result of ecological changes in the eastern Sahara, perhaps in connexion with a stage of aridity” dated to around 3600-3100 BC (A-Group Sites, 24). As Midant-Reynes and others have pointed out, the faunal remains from A-Group settlements provide no “definite evidence for the existence of domestic species of fowl and animals.” But such species are documented in A-Group funerary deposits and in the use of dung—evidently collected from domesticated herds and/or from cattle owned by local pastoralists—to make a characteristic pottery (Midant-Reynes, 222; see *SJE* 3, 24, 42, 52).

As noted already, some depictions of cattle at Abka might well depict wild cattle: the more completely patinated examples (a- and b-patina), though in the minority in the corpus, rarely show the udders and collars or other paraphernalia that seem to be associated with domesticated (or incipiently domestic) cattle and which can be seen in many cattle-drawings at lower elevations in lighter patinas (c- and d-patina) and can also be found in depictions in other media securely dated to the A-Group.³¹ In a-patina rock-drawings at Abka, we should not be surprised to find, there are few confirmed depictions of cattle, wild or not. At 206b4, a small hillock at the edge of one of the channels of the river, an isolated single a-patina ox (C206) in outline technique can be found on a vertical surface; the low elevation of this site (130-40m), however, means that we cannot take the complete patination of this example to suggest antiquity or actually to be old. At 157o, a single drawing of a b-patina ox (C190) was found at a very high elevation (150+m)—a drawing that likely was quite old both in the palimpsest and in real time. At 390f1-4 (140-50m), the two oxen at the bottom of the very smooth rock wall (C68, C83; see pl. 134:3) were completely blackened, while a group of oxen above them had considerably lighter (c- and d-) patinas. One of the latter (similar to C212) possibly has a collar-pendant. The apparent stratigraphy of drawing at this rock-surface, then, could be taken to make visible a transition from wild to domestic cattle or, at least, from an earlier to a later period of cattle-keeping. At 382b2 (140-50m), an ox was drawn “upside down” in relation to the three or more antelopes depicted on this very smooth horizontal surface (an “old” surface preference) (see pl. 108:1); it is said to be “slightly less patinated” than the antelopes classified as a-patina. It may be that this picture of an ox was intended to be understood as “more recent” than the antelopes—notionally it must be viewed from another direction and/or a different standpoint—in addition to actually being (and being seen to be) a newer drawing. In b-patina, I have been able to identify only six examples

³¹ In the SJE concession, a typical A-Group brown polished jar found in Grave 15 at Site 277 (an “A-Group cemetery”) had an incised drawing (a “pot-mark”) of a cow with lyre-shaped horns and a prominent udder (SJE 3: I, 194-95, where the figure is said to depict an “ox or cow,” and see SJE 3: II, pl. 26, no. 15 = pl. 38, no. 10; photograph on pl. 101 [277:15]). Most finds in this cemetery were datable to the Classic and Terminal A-Group (in Nordström’s terminology), but it is worth noting that fragments of Khartoum Variant pottery—presumably lying at hand near the graves—were mixed in the in-filling of the shafts. Samples of the cow hides wrapping one of the bodies (a secondary burial) in Grave 49 at Site 277 (SJE 3: I, 207) yielded a radiocarbon date of 4655 +/- 80 BP; the wrapping of the body in Grave 65 (SJE 3: I, 212) was a cow hide coated with red ochre, yielding a radiocarbon date of 4,555 +/- 75 BP (for the dates, see SJE 3: I, 250-51). The cemetery was considerably north of the cataract rock-drawings at Abka as defined here.

(in all techniques) of cattle manifestly displaying the accoutrements of domestication: 157d1 (C294; collar-pendant and possibly disc-ornament on or between the horns?), 157m67 (C216; udder and possibly nose-ring/tether), 157m193 (C196; collar-pendant), 160s6 (similar to C158; collar-pendant and possibly girdle), 379b27 (C235; udder and possibly girdle), and 379b48 (C388; collar-pendant). The other examples of b-patina cattle (more than ninety) show no accoutrements and thus might depict fully wild creatures.

Despite the importance of cattle-raising in the Nubian A-Group (Horizons C/D), then, conceivably some of the earlier or earliest cattle-drawings (we might take the cattle-drawings at 157o and 390f4 as examples) were produced by the preceding group of image makers (likely to be attributed to Khartoum-Variant and Abkan peoples in Lower Nubia) (Horizons A/B). In other words, they can be taken as “showing two aspects of the economy of one society” (SJE I, 29) still significantly invested in hunting—whether that society (the continuous population at the Second Cataract) should be specified culturally as Khartoum Variant/Abkan *or* Nubian A-Group. But most of the b-patina cattle-drawings, like the more lightly patinated specimens, were made in the more recent outline technique (h-technique; no interior hammering). I can identify only nine examples of b-patina cattle-drawings in the “older” non-outline technique (e- and f-technique) compared to more than 90 b-patina cattle-drawings made in outline technique (with or without interior hammering; h-m techniques). Only one of these drawings, already noted above (379b48; C388), shows a beast with a collar-pendant. This drawing—it shows a group of three cattle and a “schematic human figure”(pl. 99:2; not in Corpus)—is found on a horizontal surface at an intermediate elevation (140-50m). According to the emergent visible order of the palimpsest, it could be regarded as one the “earliest” drawings of domesticated—or at least incipiently domestic—cattle at Abka (Horizon C); it is perhaps noteworthy that the human figure is not manifestly depicted as a hunter even though it seems to be similar to the “very old” figure at 154a7 (A46). Such fine-tuned attributions of the relative date of individual drawings are not, of course, secure; the palimpsest encourages the visibility of *phases* or horizons of drawing. Moreover, as the palimpsest at Abka shows very clearly, even as the makers of the more ancient cattle-drawings (in Horizons A and B) might have been hunters (and the cattle in

question might have been wild) the makers of the more recent cattle-drawings—drawings in more recent formats and especially in lighter patinas—also made, or more exactly continued to make, drawings of the big game (in both Horizons C and D). In other words, the preceding form of life emphasizing the hunting of wild fauna had not been entirely displaced in the Nubian A-Group. Even if its day-to-day role in subsistence had gradually been reduced, it remained ideologically significant—a continuing subject of representations “updating” the previous horizons of depiction. Imagery on other artifacts from other A-Group sites tends to confirm this; the “scepter-mace” belonging to one of the “princes of Seyala” displays elephant and giraffe in depictive formulae that seem to be related to the complex iconography of late predynastic and proto-pharaonic Egyptian art.³² Indeed, cattle-raising in the A-Group could be seen in the palimpsest specifically to be a more recent historical phenomenon or at least a new depictive practice relative to the earlier pictorial practices deposited and historicized in the palimpsest—a temporality visible in the palimpsest as the appearance of cattle-drawings at lower elevations and lighter patinas associated with decreased floodcrests and decreased frequency of submersion.

One striking composition at 160e5 (pl. 47:1) shows a giraffe with a net-pattern on its body standing to the left of a cow (with a clearly marked udder) with a net-pattern on *its* body (found only on a small number of other cattle-drawings at Abka). The giraffe (K6) has four projections on its head, presumably meant to indicate two ears and two small

³² H. S. Smith, “The Princes of Seyala,” 364-66, has enumerated the parallels between the creatures depicted on the scepter-mace from Seyala and on predynastic Egyptian cosmetic palettes produced in a period of about three centuries at the end of the fourth millennium B.C. (Naqada IIc/d-Naqada III) (cf. B. B. Williams, *Decorated Pottery and the Art of Naqada III* [Munich, 1988], 4-5; Nordström 1998, 364). The three pairs of opposed giraffes still visible on a remarkable Egyptian (Naqada II) painted bowl from the elite or “royal” A-Group Cemetery L at Qustul can likewise be related to a depictive formula deployed on late predynastic Egyptian decorated palettes (see Williams, *OINE III*, 154-55, 180-81, pls. 88-92, although Williams’ view that the bowl “depicts a claim of conquest in Upper Egypt” on the part of its A-Group owner can hardly be sustained in view of the Egyptian iconography, and probable manufacture, of the bowl itself). As I have argued elsewhere, the late prehistoric Egyptian decorated objects—palettes, combs, and knife handles above all—display complex narrative metaphors that serve to relate an ancient hunting form of life with the cosmic identity of the Egyptian ruler or king contesting his human enemies. The mace-head from Seyala does not conform fully to the depictive formulae elaborated in the principal Egyptian sequence or chain of replications (see Davis 1992: 68-70), as we would expect if it was produced as a partial replication of Egyptian iconography on the part of a Nubian (A-Group) artist; it is not clear whether it is an Egyptian import like the painted bowls at Qustul. But the point here is simply that the scepter-mace from Seyala uses depictions of large wild fauna for symbolic purposes that might have little to do with their actual frequency and exploitation as game animals.

horns, and the cow (C224) *also* has four projections on its head, depicting the two ears and the two lyre-shaped horns—a very unusual if not unique occurrence in cattle-drawing at Abka. In addition, the descending tail of the cow has been drawn in a careful parallelism with the descending tail and hind- and forelegs of the giraffe. The two figures have been neatly fitted together graphically and almost certainly were drawn by the same artist at the same time. (A horizontal line, not mentioned in the description but visible in the available photograph, seems to connect the hind legs of the giraffe, running “behind” its forelegs, with the upper left part of the cow’s hide, but it is difficult to tell whether this line—whether man-made or not—was part of the original composition. It is not a groundline. A jackal [? N7] placed below the cow also seems to belong to this image. A more crudely hammered ox at the bottom of the surface seems to be a “copy” of the cow above it, but it is not integrated graphically with the three other figures; probably it was made by a different artist at a different time.) This finely made picture seems to propose a subtle relationship—a set of similarities and a set of disjunctions—between the giraffe and the cow, as if representing their possible transformation into one another or as if literally measuring the two creatures against one another in terms of their visible morphological properties (heads, hides, etc.). Although the “origins” of drawings of large wild game lie in Horizons A/B, in this drawing—it must belong to Horizons C/D—the earlier horizon (in the figure of a *later* “old” drawing of the giraffe) has literally been matched visually with the later horizon of cattle-drawing (in the later figure of the cow partly drawn, however, in “old” style). As this composition was seemingly constructed deliberately by one artist, it gives evidence of the absorption of the palimpsestic history into an individual historical episode of drawing: a *new* drawing takes account of and makes explicit reference to the *past* of drawing at Abka.

As Di Lernia and Manzi have noted (16), there is nothing “inevitable and ineluctable” about the transition from a “pre-pastoral” economy of hunting, gathering, and fishing (characteristic of terminal Pleistocene human culture) to pastoralism and agriculturalist “food production” (increasingly characteristic of early Holocene cultures). In the terminal Pleistocene, as Connor and Marks have written,

In the absence of any dependable regimen of rainfall, the seasonal importance of any component of the adaptation must have been conditioned largely by the level of the Nile and its impact on the plant and animal populations. In general, food supplies must have been at their height in the months of late summer and early fall following the flood, when fishing was good and lush pasturage fattened the large game animals. Fowling may have been the mainstay during the winter months when the grains also ripened. The dry season of spring and early summer must have been the most difficult, forcing reliance on hunting and whatever resources had been stored. The situation may have been eased to some extent with the onset of the inundation as game animals were forced into smaller and more easily exploited territories at the edge of the floodplain. . . . The resource base was always subject to the magnitude and duration of the flood. As such, successful human adaptation required a wide range of exploitative skills and strategies and a flexible and opportunistic application of them which could only be guided by a clear understanding of how the ecosystem behaved (Connor and Marks 1986: 187-88).³³

In the early Holocene, a “strong seasonality” (Haaland 1987: 67) can continue to be detected in Nile-side economies increasingly based on animal husbandry and plant cultivation. Fowling and hunting in the floodplain was probably carried on practically throughout the year (with the obvious exception of the high weeks of the flood); hunting in wadis and the desert would have intensified during the inundation (when some parts of the floodplain would have been inaccessible) and soon after the onset of the summer and winter rains when pasturage would have appeared in some locales (see Hassan, “Environment and Subsistence,” 61, fig. 3 for an explicit model). In an explicit model of the process, Haaland (1987: 216, diagram 5) has shown that over time an “increased subsistence importance of cultivation” and “new localization of base sites for cultivating” might lead to the “reduced subsistence importance of game.” In particular, human sedentarization, the development of high-yield domesticated plants, and a resulting increase in human population would have increased adaptive pressures on many species of game animal. In turn, reduced returns from hunting would have fed back into the

³³ Connor and Marks 1986: 180-88 (and fig. 4) present a detailed summary of the “Nilotic adjustment,” a “tough and tenacious adaptation” involving “well-organized, cooperative effort” (p. 188).

system—increasing investment in sedentarism and plant cultivation. This powerful process certainly took hold in the Khartoum Neolithic traditions to the south of the Belly of Stones and in the Upper Egyptian predynastic traditions to the north. But it probably never gained much traction at the Second Cataract. Given the topography, large-scale flood-recession agriculture would have been impossible; at best, a few plots of arable soil might have been maintained, in contrast with the “vast expanse of cultivable land” that was available elsewhere in Lower Nubia and Upper Egypt.³⁴ The indigenous peoples of the cataract region probably *always* lived a relatively “ancient” way of life; even during the later cattle-breeding horizons of occupation at Abka, the “deliberate management of cattle,” as Hassan puts it (Nubian Culture 1987: 18), probably remained semi-pastoralist (and fully pastoralist in the surrounding deserts).

The intensification of goat- and cattle-keeping (especially the exploitation of domesticated long-horned *Bos*) reached its “climax,” to use Nordström’s term (SJE3:6), in the Nubian C-Group several hundred years later. The “Ethiopian fauna” had all but entirely disappeared from the region. Cattle-keeping (including the transport of cattle by boat) constituted the dominant activity of the local population and became the overwhelming focus of depiction in Horizon E at Abka (whether or not Horizon E should be attributed exclusively to the C-Group). As Williams puts it, “cattle raising was a major focus of C-Group life,” documented by such striking artifacts as the “cattle bowls” in Chicago and Cairo from Cemetery T at Adindan.³⁵ But the continuing ideological—and perhaps the economic—significance of hunting in C-Group culture can

³⁴ Seidlmayr, 111; Seidlmayr is referring to what he calls the “rather extreme” topographic and economic situation at the First Cataract” (Elephantine) in the late predynastic period, but the point can be made with reference to the Second Cataract as well.

³⁵ Williams, *OINE* 5, 116. For the bowls, see Williams, *OINE* 3, 105, figs. 9-10, pls. 17a, b, 19-20, 46-47. The bowls seem to be depictively concerned with the sexes and ages of the cattle—they distinguish bulls, cows, and calves—and possibly with different breeds (especially one or more large horned types and a smaller, hornless or dehorned type). On the Chicago bowl “an animal that looks like an elephant” on the basis of its rounded head and what seems to be a trunk (?) was incised over a cracked area “which seems to have appeared during the decorating process” (*ibid.*, 105; see fig. 9, bottom). This creature—if indeed it is an elephant—might well have been replicated from old rock-drawings.

perhaps be documented by a fragmentary stela from Cemetery K at Adindan depicting an archer and his dog bringing down one or more ibexes.³⁶

The depiction of boats belongs to Horizons C, D, and E at Abka. At Abka there are no a-patina boats and only one secure case of a b-patina boat (376c6 [V10]).³⁷ All other boats at the second cataract (28 examples) are in c- or d-patinas and are found at 140-50m or below.³⁸ Cattle transport by boat (possibly signifying export to Egypt) is depicted quite clearly in three northern (incised) rock-drawings (87d10, V42; 87e1, V44; 89g, V43) and possibly in one cataract drawing (169j7 [V24]; the human figure standing in the boat is depicted to be an archer—a hunter [?] [pl. 61:4]). While Horizon D can be attributed to the A-Group—and the boats (see Engelmayer 1965) presumably pictorialize reciprocities and commerce among and between Nagada peoples in Egypt and the A-Group peoples of Lower Nubia as far north as a “contact zone” at Elephantine (Seidlmayr, 111-12) and as far south as the second cataract (Midant-Reynes, 223-24)—Horizon E at Abka might be partly C-Group.³⁹ If most *northern* (incised) drawings in the SJE concession should be attributed specifically to the C-Group and later, as I believe is likely, it is significant that there are no northern drawings of elephant or rhinoceros. Only two of the 10 northern giraffes (209:6, K108; 210:2, K109) are drawn in the incised technique usually found at northern sites; the other examples are in the

³⁶ Williams *OINE* 3, 101-4 and pls. 100-101; the stela also displays a large female figure not clearly associated with the archer and ibexes. As Williams notes, the stela may have been cut from stone on which the hunt scene had previously been incised as some kind of petroglyph (in the A-Group?). It cannot, then, be treated definitively as an exclusively C-Group artifact.

³⁷ Another b-patina example in the Corpus (154h22, V3) was not found *in situ*; it might not, in fact, depict a boat at all.

³⁸ This group includes four possible examples found at 140m on smooth horizontal surfaces, i.e., in “older” formats in the palimpsest (typical of Horizons B and C). But all these examples are problematic: 160n7 (V12-14) was a loose stone (not *in situ*?) and 378a12 (V28) is too battered and indistinct to be classified securely as a boat.

³⁹ According to Bietak 1987, 188-19, Lower Nubian rock-drawings depicting the transport of cattle by boat are C-Group. A fragmentary stela from the C-Group Cemetery T at Adindan shows a ship and part of the body of a bovine (Williams, *OINE* 3, 99-101, fig. 8, pls. 95-96). Like the stela showing an archer and ibexes, however, this artifact might have been cut from stone that had been incised with the figures in an earlier time. It should be noted that relative to concentrations of rock-drawing elsewhere in Lower Nubia, drawings of boats at Abka are uncommon. The difficulties of transportation by boat at the second cataract are dramatically represented in a striking scene of eight men dragging a boat at 160e19 (pl. 48:2), probably to be assigned to the A-Group. Does the lone ox placed at the top of the surface represent a beast to be carried in the boat? Is it merely a coincidence that this rock-drawing visually juxtaposes the scene of boat-dragging (with or without accompanying ox) with two vignettes of hunting—an armed hunter and his dog chasing an antelope and an archer and his dog bringing down a giraffe? The three vignettes—produced by the same artist, whose distinctive “hand” is visible in the construction of the two dogs (E36, E41) and the two hunters (A232, A299)—clearly were graphically integrated as a composition.

“early” non-outline technique (e/f technique) (209:3, K110-112; 209:4, K113; 290a2, K104-106) and/or hammered outline (238a, K107). This does not mean, however, that they are old. They might display a more recent and “younger” replication of earlier subjects presented in up-dated terms and contexts; contiguous drawings at northern sites, most of them depicting cattle, were incised (C469-553). One intriguing composition at a northern site (290a2) shows fully hammered non-outline giraffes (K104-106; e/f technique) standing in a row and partly on top of a horizontal line that extends from an outline-hammered boat (V42; h-technique) (see plate 160:3). (Another drawing of a giraffe on a nearby hillock, though it looks similar to one of these three giraffes, has a hammered outline [290c1].) The giraffes are drawn in an unusual way—with sinuous S-curving necks different from the straight necks usually depicted in “earlier” horizons at Abka (although see 152b22). One of them seems to look backwards (not replicated anywhere in the corpus at Abka)—presumably toward the boat (the penis of this giraffe appears to be the terminus of the horizontal line extending from the boat). Had this artist ever seen a real giraffe—or simply old drawings of giraffes that he assimilated to ostrich, antelope, and cattle? It would be tempting to see this northern drawing as a retrospective visualization—outside the palimpsest at Abka itself—combining earlier and later subject matters and older and younger temporalities of drawing, a possibility that could only have been fully realized in the very latest phases of rock-drawing in the region.

Some historians have observed a marked distinction between A-Group and C-Group styles of depiction (see especially Williams, *OINE* 3, 108-9). But no radical stylistic transformation can be detected between Horizons C/D (very likely to be A-Group) and Horizon E (perhaps partly C-Group) at Abka. The incised rock-drawings at northern sites in the SJE concession are technically quite distinct from the hammered drawings at Abka. But they depict many of the same conformations in and details of the subject matters depicted at Abka—especially details of the horns, hides, and paraphernalia of cattle—without the supposed “simplification” and “abstraction” of outline shape to be observed on the “cattle bowls” from Adindan and related non-petroglyphic C-Group art and epigraphy. If a distinction between A-Group and C-Group cultural traditions had been constructed in rock-drawing at Abka, it lay *within* the palimpsestic framework already considered—that is to say, in a shift in the location, elevation, formats,

techniques, and subject matters of the most recent petroglyphs relative to the horizons that had already been deposited at the sites of drawing. Nonetheless, any distinction—visible in the general shift between Horizons C/D and Horizon E—would have been significant and striking in the palimpsest because of the substantial historical *gap* between A-Group and C-Group occupation in Lower Nubia: as far as we can tell, the entire region was substantially depopulated, and A-Group cultural traditions almost entirely suppressed, for a period of several centuries after aggressive Egyptian incursions (penetrating as far south as Wadi Halfa and the second cataract) in the First and Second Dynasty. This political and cultural perturbation was plainly documented—and pictorially celebrated in a vivid way—in early First Dynasty reliefs carved in the rocks at Gebel Sheikh Suleiman across the river from Wadi Halfa. The most important of these monuments depicts a Nubian captive (designated by the bow held in his hands bound behind his back) as well as a boat with a bound and kneeling captive tied to it and dead bodies floating in the river below.⁴⁰

At Abka, one important drawing (157c26, pl. 31.2) shows a man (A266) in a kilt (or “loincloth?”), facing right, carrying a staff in his right hand and seemingly a rod or

⁴⁰ For the original publication of the principal relief, see A. J. Arkell, “Varia Sudanica,” *JEA* 36 (1950), 34-40; for historiography and current interpretations, see W. J. Murnane, “The Gebel Sheikh Suleiman Monument: Epigraphic Remarks,” *JNES* 46 (1987), 282-85. For my purposes here it is not necessary to unravel the many specific iconographic, historical, and chronological problems posed by this picture. But Williams’ suggestion that the relief should be understood as an *indigenous* monument of a royal “A-Group victory” over (Nubian?) peoples (*OINE* 3, 171-72) has not found general acceptance—even though one of the incense burners from the elite A-Group cemetery at Qustul shows a seated prisoner with hands bound behind his back (*OINE* 3, 143, fig. 56). Quite apart from the likelihood that the standing prisoner in the principal relief at Gebel Sheikh Suleiman is depicted to be a Nubian, the image clearly replicates an Upper Egyptian iconography of the ruler’s victory over his enemies (see Davis 1992: 124-32)—an iconography that the elite A-Group Nubian artists did not always replicate with the same fidelity. Other Egyptian rock-carvings at Gebel Sheikh Suleiman show scorpions holding captives; they might document and depict the same or different Egyptian raids and conquests before or during the First Dynasty (see Winifred Needler, “A Rock-Drawing on Gebel Sheikh Suliman (Near Wadi Halfa) Showing a Scorpion and Human Figures,” *JARCE* 6 [1967], 87-91).

Egyptian depictions—or indigenous drawings stylistically replicated to depict Egyptian soldiers, officials, and rulers—were made at northern sites in the SJE concession (i.e., near Wadi Halfa). A Middle Kingdom drawing (with hieroglyphic names) at 287.1 depicts an official “in Egyptianized style” with bow and arrow (?) or more likely staff and scepter (A368, pl. 162:3). The drawing at 359.17 is an “Egyptianized” man with a sword accompanied by a hieroglyphic name (SJE 3, 235)—probably also Middle Kingdom. 77.3 displays an “Egyptianized” man holding a scepter in front of him (A373); above him there is a bold drawing of a horned animal, probably an ox (C480). At 139.1, an Egyptian official with a staff in his right hand is accompanied by oxen and cows as well as a second man carrying a bow (A361) and a third standing man (A346)—both also “Egyptianized” (SJE 3, 234). But it is unlikely that any of these examples, with the possible exception of the last, can be attributed to the Nubian A-Group or C-Group.

scepter in his left. The figure has clearly been constructed to resemble canonical depictions of Egyptian officials. Seemingly, however, the man wears a feather in his hair, like many of the human figures in other drawings at Abka—an indigenous Nubian trait or a concession to indigenous traditions of the representation of authority? To the left of this figure, a second standing figure has been hammered out in an “Egyptianized” fashion as well (A267); possibly it is a “copy” of the main figure (SJE 1, 98). But this man carries a spear pointing downward and the artist clearly shows him to rest his right hand on his hip—a striking pose not to be observed in canonical Egyptian depictions of officials and rulers. He seems, then, to be shown to be a “local”—a Nubian. To the right of the main figure, a third man (A38) carries a shield (?) and holds a staff or sword horizontally in his left hand; apparently the construction is fully frontal (not “Egyptianized”), like a great many of the depictions of human figures at Abka. He too would appear to show a local personage. Above him there is a mysterious sign—an hourglass-shaped pattern composed of hammered dots (X82; cf. X81 at 157c24 nearby). All three men have been hammered in the “early” e-technique. Below the three men, two oxen with U-shaped horns (C213, C284) have been incised (h-technique) facing one another and/or confronting the men in a different register. The drawing can be reasonably interpreted to show a transaction between an Egyptian official and two Nubian cattle-keepers or pastoralists in the C-Group period.⁴¹ It is likely that the artist was local—and familiar with the horizons of rock-drawing in the palimpsest into which this drawing was deposited—though he must have seen canonical Egyptian depictions. At 157c48, a nearby drawing, the same or a similarly educated artist tried to hammer out an “Egyptian” personage in “Egyptianized” style—a man with a kilt, staff, and feather in his hair (A267) like the main (and very correct) Egyptian official at 157c26. But this figure has been constructed mistakenly by canonical Egyptian standards: while his two feet face left, his head faces right, and he seems to carry his staff “behind” him in the “wrong” hand. Facing him there is an incised ox with U-shaped horns. Neither of these drawings, of course, documents or depicts an Egyptian military conquest or political administration of cattle-keeping peoples at the second cataract. But they offer vivid

⁴¹ See Törogny Säve-Söderbergh, “Preliminary Report of the Scandinavian Joint Expedition: Archaeological Survey Between Faras and Gamai, January – March 1961,” *Kush* 10 (1962), pl.18(b).

evidence (apparently constructed within the framework of the palimpsest at Abka) of the Egyptian presence and the *cultural* horizon—and depictive conventions—it had introduced. Horizon F can be defined as the Egyptianized horizon of the palimpsest in the C-Group—whether or not Horizon E, from which Horizon F emerged, was entirely C-Group.

Apart from “Egyptianized” drawings of human figures—that is, human figures in Egyptian garb and constructed in conventional Egyptian style—artists in Horizon F depicted the figures of certain animals according to conventions developed in early dynastic and later Egyptian art. A seated lion at 206c1 (M2) resembles the profile aspect of small sculptural figurines of lions commonly found in early dynastic Egyptian contexts as well as the hieroglyph (Gardiner Sign List XX). The artist has drawn the beast—it is facing an object of some kind, now unidentifiable—on a groundline, a standard compositional device in canonical Egyptian art that virtually never appears in rock-drawing at the second cataract (although see a solitary standing lion [M11], also Egyptianized in aspect but crudely hammered, on a groundline at 157c52). Behind the seated lion at 206c1, the same or another Egyptianizing artist started to draw the outline of a lion lying down (M1), also in Egyptian style; the unfinished drawing appears to be an attempt to replicate the complete outline (see pl. 64:5). At 154e1, the stiffly profile construction and the general aspect of the animals in a hunt scene (pl. 20:1)—especially the two “cheetahs” (M12, M13) and a hunting dog (E47)—seem to reflect the influence of Egyptian depictive conventions even though the figure of the human hunter, an archer (A246), closely resembles human figures constructed according to indigenous conventions found in the earlier horizons of drawing. In general, Horizon F at Abka represents the melding of indigenous and Egyptian modes of representation rather than the simple stylistic replacement of the former by the latter.

In fact, with the obvious exception of Horizon F, the horizon of partial Egyptianization, the palimpsest at Abka lacks any dramatic evidence of major stylistic transformation between the horizons of rock-drawing. In this regard, the palimpsest visualized a *continuity* between horizons of drawing (from Horizons C/D to Horizons E/F) despite the extreme *discontinuity* between the historical situations (A-Group and C-Group) in which

they were produced. If the end of the Nubian A-Group seems to have involved deterritorialization and depopulation due to Egyptian aggression and incursion, C-Group history in Lower Nubia seems to have involved *re*-territorialization—reclaiming the local grounds of cattle-keeping and the indigenous or traditional Nubian culture of the region (including “re-starting” the practice of rock-drawing itself) in the shadow of entrenched Egyptian administration and culture. This reclamation and reproduction could have proceeded in part on the basis—the visual evidence and practical or informational significance—of the palimpsest itself: despite what might have been a centuries-long hiatus, at Abka one could see what his cattle-keeping ancestors had been like—how they had lived. As already noted, however, in the C-Group phase of the latest horizons of drawing there would have been little or no large wild game in the area; the palimpsest would have shown, then, that life in the region in the past had apparently been different from “today.” To the causes of this development that had long been visible in the palimpsest—the lowering of the Nile floodcrest and the introduction and intensification of cattle-keeping—one could increasingly add, at least in the latest horizons of drawing, the effects of Egyptian incursion and of Egyptianization (whether in the terminal A-Group or in the C-Group or in both). Indeed, in its later horizons the palimpsest at Abka—a representation of regional continuities and indigenous history *despite* change and discontinuity—was quite literally framed by early dynastic Egyptian ideology in the rock-carvings at the military frontier at Gebel Sheikh Suleiman in the A-Group. This frame began to penetrate the palimpsest itself in the incipience of “Egyptian” techniques of graphic construction and composition—probably in the C-Group. Nonetheless the latest horizons of drawing—despite up-dating, revision, retrieval, and renewal—maintained their visible descent or derivation from the very earliest horizons. One could see that “long ago” his predecessors—though they had been or had become cattle-keepers—had been hunters. And one could visually infer—regardless of what had occurred “long ago”—that hunting might *recur* under certain well-defined ecological, economic, and political circumstances. Of course, the palimpsest did not know the absolute chronology—the actual dates—of long-term regional ecological and economic development from the eighth through the fourth millennium BC; rock-drawing simply deposited its phases as interlocked Horizons A through F. In the visible facts of its

sedimentation, however, observers placed in the emergent palimpsest could see that this history had occurred. They extracted and sometimes literally *re-marked* the distinctions of place and time—of location, elevation, and objects of interest and activity—that constituted its historical structure or historicity.⁴²

But if the original or earlier hunters had “then” been able to develop a cattle-keeping way of life—as the palimpsestic history implied—the *later* cattle-keeping part-time hunters were comparatively disabled. Likely they experienced a latter-day or present-tense history of competition and conflict (in the A-Group), possibly even dispossession and destruction (in the C-Group). After all, in the A-Group they had seemingly been subordinated to rulers elsewhere (whether elite A-Group chieftains at Qustul and Seyala in Lower Nubia or Egyptian overlords in Upper Egypt) and in the C-Group they might have entirely lost their traditional land. Although the two forms of life represented to occur at the higher elevations—earlier and later, then and now—had been stitched together as a visual history of continuity, recurrence, and return in the emergence of the palimpsest, they were not, for all that, to be regarded as equivalent. To adapt the elegant work of T. K. Park on trends toward class stratification in the flood-recession agriculturalist regimes along the Senegal River, “in runs of bad years there is insufficient arable land of satisfactory quality for ‘non-priority users,’ requiring those groups to adopt other means of livelihood—typically hunting, fishing, mining, trading, or pastoralism.” The regional archaeology of the second cataract in the late prehistoric period allows us to wonder whether the richer, more settled A-Group peoples—and, in the First and Second Dynasty, Egyptian invaders and settlers—had seized the best lands around the cataract or otherwise come to dominate its access to wider transportation and trading networks—pushing the local people aside. As Park writes, “the ‘extruded’ people can retain claims to land when better conditions return. But if they are reincorporated as agriculturalists, it is often only with access to poor, insecure land, a socioeconomic impoverishment, with cultural disapproval of their position as ‘returnees’ or even ‘outsiders.’ This status means they will not be permitted major roles in production,

⁴² See Eric Hirsch and Charles Stewart, “Ethnographies of Historicity,” *History and Anthropology* 16 (2005), 261-74. As Hirsch and Stewart write, “Western history is generally predicated on the principle of historicism: the idea that the ‘past’ is separated from the present. People around the world, including Western historians, recognize, however, that the past, present and future are mutually implicated” (p. 261).

reproduction, and leadership.” Despite representing a history—rendering it visible—the palimpsest at Abka did not necessarily envision a stable territorial or political identity for its makers. Indeed, it could figure—it might always have figured—the dispossession of status and place as a paradoxical deposit of, and monument to, status *in place*—that is, *marginal status in impoverished place*. At the same time as the palimpsest shows that “we cattle-keepers were once hunters,” an association incorporated (in the time of the later horizons of rock-drawing at Abka) in elite A-Group and early dynastic Egyptian iconography as a metaphorical celebration of the origins and essence or principle of rulership, it shows that “we hunters now keep cattle,” a representation—at the second cataract—of dependence and loss. In canonical Egyptian art, cattle-keeping is entrusted to the lowliest and largely anonymous actors in scenes of work-a-day labor on a great lord’s estates—the kind of people who represented, and could pictorially understand, themselves at Abka as precursors of the great Nubian lords and Egyptian kings who *now* displayed the hunter’s ancient symbols. Each sequence interprets the other—and that standpoint where one is now.

[[At Abka, the earlier glyphs—small, high on the rocks, and quite blackened—could have been overlooked; if they had, of course, the interlocking of later back into earlier strata—then and now, and later nows (and thens), and up and down, and later ups (and downs)—would not have occurred in the first place. It is perfectly possible that earlier glyphs were discovered fortuitously by the later image makers—at that point, whenever it was, constituting the earlier pictures as “then” in a tradition of making rock-drawings relative to the “now” in which the later makers discovered the earlier marks. But this does not eliminate the fact that the later image makers—in their established “now” they worked in a different place and produced pictures of different animals—had returned to a place where earlier image makers had made their own pictures of earlier animals (“now” in part non-existent in the area). We must avoid building too much intentional analepsis into the palimpsest. In particular, we should not assume that later image makers knew in advance—or knew all along—that earlier images, submerged in a time past, had been made of animals quite different from the ones depicted in the latest, lower places and

practices of rock-drawing. The palimpsest precipitated from the discovery that *superimposition* was occurring—a superimposition that need not have been expected or planned in advance precisely because the palimpsest that could have organized it had not yet fully emerged as its historical ground and frame.]]