

A COMPANION TO ANCIENT EGYPTIAN ART

Edited by

Melinda K. Hartwig

WILEY Blackwell

Contents

Notes on Contributors	ix
Foreword	xiii
Preface	xv
Acknowledgments	xvii
List of Abbreviations	xix
List of Illustrations	xxi
List of Plates	xxxi
Chronology of Egyptian Kings	xxxiii
Chronology of Kushite Rulers	xli
Maps	xlvi
1 What Is Art? <i>John Baines</i>	1
PART I Methodological Approaches	23
2 Historiography of Ancient Egyptian Art <i>Diane Bergman</i>	25
3 Style <i>Melinda K. Hartwig</i>	39
4 Connoisseurship <i>Jack A. Josephson</i>	60
5 Iconography and Symbolism <i>Maya Müller</i>	78
6 Semiotics and Hermeneutics <i>Valérie Angenot</i>	98

7	Gender and Sexuality <i>Gay Robins</i>	120
8	Reception and Perception <i>Alexandra Verbovsek</i>	141
9	Representing the Other: Non-Egyptians in Pharaonic Iconography <i>Ann Macy Roth</i>	155
10	Interpreting Ancient Egyptian Material Culture <i>Salima Ikram</i>	175
PART II Materials and Mediums		189
11	Sculpture <i>Melinda K. Hartwig</i>	191
12	Relief <i>Alexandra Woods</i>	219
13	Painting <i>Francesco Tiradritti</i>	249
14	Coffins, Cartonnage, and Sarcophagi <i>Kathlyn M. Cooney</i>	269
15	Luxury Arts <i>Arielle P. Kozloff</i>	293
PART III Concepts in Art		307
16	Ideology and Propaganda <i>Ronald J. Leprohon</i>	309
17	Religion and Ritual <i>Emily Teeter</i>	328
18	Narrative <i>Nadja S. Braun</i>	344
19	The Ordering of the Figure <i>William H. Peck</i>	360
20	Portraiture <i>Betsy M. Bryan</i>	375
PART IV Interconnections with the Larger World		397
21	Egyptian Connections with the Larger World: Greece and Rome <i>Barbara Mendoza</i>	399
22	Egyptian Connections with the Larger World: Ancient Near East <i>Mehmet-Ali Ataç</i>	423

23	The Art and Architecture of Kushite Nubia <i>Peter Lacovara</i>	447
PART V Reception of Ancient Egyptian Art in the Modern World		463
24	<i>Egyptomania</i> : Fascination for Egypt and Its Expression in the Modern World <i>Jean-Marcel Humbert</i>	465
PART VI Technology and Interpretation		483
25	Interpretation <i>Nigel Strudwick</i>	485
26	Technology <i>Richard Newman</i>	504
27	Conservation of Egyptian Objects: A Review of Current Practices in the Field and in Museum Settings <i>Susanne Gänsicke</i>	522
	Index	545

CHAPTER 10

Interpreting Ancient Egyptian Material Culture

Salima Ikram

Material culture is the bedrock of our understanding of ancient Egypt as every artifact, whether large or small, forms part of a wider narrative. Each artifact is a part of the enormous jigsaw puzzle of ancient Egyptian culture whose reconstruction depends not just on the object, but all that is allied to it, its “backstory” (Appadurai 1986; Hodder 1989; Miller 1997; Schiffer and Miller 1999). The holistic interpretation of Egypt’s material culture, as has been traditional in Egyptian archaeology and Egyptology, allows scholars to extract information from an object itself that relates to its form, function, material, manufacturing technology, and economic value. By extrapolation, this leads to a broader understanding of different aspects of ancient Egyptian culture and society such as social organization, history, economy, trade, politics, diplomacy, ideologies, religion, and aesthetics. Thus, in the study of Egyptian art, what the art historian and curator, Jules D. Prown (1996) calls “the farmers and the cowmen” can indeed be friends. Prown identifies the farmers with investigators more concerned with the “material” aspect of objects: provenance, age, substance, technology; the cowmen are those who focus more on the cultural aspect: the meanings embedded in an object or/and transmitted by it. Broadly speaking, in contemporary art history a combination of these modes of analysis is meant when the phrase “visual culture” is used, that is, a focus on the cultural meaning of a work of art or an artifact, rather than just its aesthetic or material value. This type of interdisciplinary analysis with a pronounced bias toward lateral thinking has a long-standing tradition in Egyptology.

The Parameters of Ancient Egyptian Material Culture

The definitions of material culture are many and diverse. In its most encompassing sense, it can be said to include all objects produced by humankind (Miller 1997; Auslander

(2005), 1015). Fortunately for the scholars of ancient Egypt, the country's arid climate has preserved vast amounts of the ancient Egyptians' material culture for us to study, ranging from the contents of trash heaps to temple treasures. In terms of structures for the living and the dead, the Egyptians left houses, palaces, tents, temples, chapels, tombs, cemeteries, quays, workshops, and stables. Tools of different sorts, whether for scribes, doctors, jewelers, carpenters, potters, weavers, stone-workers, farmers, soldiers, and sailors, as well as the accoutrements of the minutiae of daily life make up a considerable part of Egyptian material culture. Two- and three-dimensional representations and texts are a rich source of information and most traditionally the focus of art historical study. It should be understood, however, that for the ancient Egyptians these might not have been "art" in the way that it is currently understood; rather, many of these monuments and images played a critical role in religious thought and belief, as well as in the sphere of politics. The mummies and skeletal remains of humans and animals together with their containers also yield evidence for the study of ancient Egypt. Thus, scholars of ancient Egypt can use a myriad of sources in order to construct their individual, and often very personal, visions of ancient Egypt (Kemp 1991), while bearing in mind that, despite the wealth of material culture that has been excavated from Egypt, not all types of objects or buildings have been found, and not all strata of society are equally represented.

Of course, some objects might be more informative than others, or might reveal different sets of information as well as appeal to different aesthetic standards, depending on their purpose. Two very different examples of material culture will serve to elucidate the range of information that pertains to Egyptian art, culture, technology, and religion and can be derived from a careful study of its artifacts. For example, from a pot made of Nile silt, we can learn its date based on its shape and decoration, as well as on the technology used to produce it (Figure 10.1). Both the form and decoration contribute to its aesthetic evaluation. The shape together with its material might also suggest a region of manufacture, which might inform our understanding of trade networks and the regional production of ceramic vessels. The pot's form could suggest a possible function for the vessel. Its material, decoration, and shape provide some indication of its intrinsic economic worth at the time it was produced, while analysis of its contents might provide further information regarding its economic role. All of these factors reflect the social and economic status of the vessel's owner, although revealing little about the vessel's maker.

A carved and painted limestone relief fragment yields a slightly different set of data (Figure 10.2). The material itself is expensive and the quality of the carving and the paint further indicates the degree of cost, and thus, by extension, the wealth and rank of its owner. If the white paint was made from a rare imported material such as huntite, this mineral may have been imported from as far afield as the desert near modern Tunisia (Lee and Quirke 2000; Heywood 2001). Thus, the use of huntite indicates a higher material cost and provides evidence for far-reaching international exchange. A close examination of the carving can establish the methods and tools employed in its manufacture. The style of the relief helps to date it to a particular period and place: in this case from an Old Kingdom (Dynasty 5), Memphite (here specifically Saqqara) necropolis. The quality and subject matter and decorum of the representation further indicate that it must have come from an elite tomb. The images and text carved on it provide yet another level of information. In this case, the image carved in low relief shows a seated man with pens, rolls of papyrus, and ink, identifying him as a scribe at work, with another standing



Figure 10.1 Nile silt vessel with painted decorations, Nagada II. Photograph: Salima Ikram.



Figure 10.2 Scene from the Tomb of Nefer (ca. 2452–2385 BCE) at Saqqara showing the collection of taxes. Photograph: Salima Ikram.

man, presumably a more important scribe, reading from a papyrus. The image allows the viewer to gather a wide range of data. The accoutrements of the scribes are clearly recognizable, and their presence and number indicate that the tomb owner holds a very high rank, permitting him to employ several literate (and therefore elite) people. Brief inscriptions are written above the heads of the men using the same black ink but different

styles of writing. The caption above the standing scribe is written in formal (monumental) hieroglyphs, and emphasizes that he is the most important man on the register; a message that is reinforced by the content of the inscription that describes him as an overseer. By comparison, the inscription above the seated scribe is more sketchy and informal, using a cursive form of writing rather than the more formal style used above the overseer. The fact that the inscriptions are not carved, as is the rest of the register, suggests that the work was unfinished. The tomb owner or his heirs may have run out of time due to an untimely death, or of the funds to complete the tomb to a high standard, and thus some of the decoration was completed hastily in ink.

Problems in the Interpretation of Ancient Egyptian Material Culture, General and Specific

Before addressing some of the problems of interpreting material culture, one basic fact to bear in mind concerns what can be termed “the accident of archaeology.” Art historians and archaeologists simply do not have all the specimens of material culture created by the ancient Egyptians. Only a selection of sites have been excavated, and many early archaeologists did not take requisite care when digging or finding artifacts, which resulted in many of them being broken or even discarded. The fragile and ephemeral nature of many objects ensured that they could not have survived the processes of decay, and so our data has been skewed from the start.

Interpreting the material culture that survives from any ancient civilization has numerous pitfalls. Some of these are general, while others are more specific to a genre (artifact or monument). Primary amongst these is the subjective way in which we view and interpret the material today. Filters of time, place, gender, social conditioning, religion, and life-experience all influence the analysis and interpretation of material objects, and most particularly, their iconography. Thus, the interpretation of an object and its symbolism (through visual literacy) might be different depending on whether it was being examined by a twenty-first-century banker who had grown up in the United States, an impoverished peasant from twentieth-century revolutionary China, or a member of the scientific establishment from nineteenth-century England: it is all a matter of perspective. So, the image of a dung-beetle, which for the Egyptians symbolized the god Khepri (the newly born sun) and meant “to come into being,” might be seen variously by a modern viewer with loathing as an image of an unclean pest to be squashed, with longing as a source of protein, or with interest as a specimen of a rare species.

The subjective categorization of objects can also prove to be problematic since, by the mere act of creating categories, we are imposing our ideas onto the data. This is particularly true for objects that are deprived of their original context. Context or provenance is one of the most important tools for the interpretation of an object to define its purpose and meaning in antiquity. Although the basic function of a pot is to contain something, its context further defines its cultural role. A ceramic pot found in the kitchen of a house can be interpreted as a cooking or storage vessel. If the same pot were found in the inner sanctum of a temple, it might still be regarded as a storage vessel, but it would possess an added level of meaning as a ritual vessel used for sacred purposes. Thus, it would claim a different value and place in our interpretation of both the object and the role that it

played in Egyptian culture and society. The use of simulacra (things that replace reality with representation) offers an even deeper scope for symbolic interpretation. A statue found in a tomb was not only meant to represent the deceased, but also to act as a conduit for his or her soul. An image of a person in a temple acted as an eternal worshipper gaining divine protection. Effigies of gods, both in homes and temples, were objects of veneration and also served an apotropaic function. All ancient Egyptian statues, however, share the idea that they are a symbol/likeness of an individual, and are a conduit for a life force or “essence” of that person.

Yet another general issue in the interpretation of material culture is also associated with provenance. Were objects of “daily life” that are routinely found in tombs, such as furniture, clothing, jewelry, and containers, actually used by the deceased prior to being placed in the tomb, or were they specially fabricated as grave goods? In some instances, when signs of wear exist such as sweat stains on clothing or repairs to ceramic or metal vessels, it is obvious that these are objects with a personal history, reflective of the deceased and his or her times, with an intrinsic narrative. At other times, it is less clear if an object was manufactured exclusively for use in the afterlife, because it lacks evidence of ever having been used. In this case, we can only interpret the material, technological, and aesthetic aspects of the object itself together with the belief systems, economic and social values associated with it, and to some extent (what might be termed its associative individual history), the object in relation to the deceased.

The bias towards the visual culture of the elites, particularly from tombs and temples, which represents a “high” form of this, furnishes an additional interpretative difficulty. Indeed, for many today it may seem that the ancient Egyptians spent their time only in prayer before dying—far from the reality! One reason for this bias is the physical durability of many of their monuments that were constructed from rock or stone masonry at the desert margins, or in the deserts themselves where they were well preserved by the hot, dry sand of Egypt. This situation does not apply to most domestic or industrial structures that were built of mud bricks with a high organic component. Furthermore, areas that had been attractive for settlement in antiquity continued to be so, and thus many ancient towns and cities, and all that they contained, are buried deep below modern settlements, and are thus less accessible to archaeologists. If not covered by later developments, many of the mud brick walls from which ancient buildings were made have been quarried away over the centuries by the *sebbakhin* (the diggers of fertilizer, *sebbakh*), who used the crushed bricks to increase the agricultural productivity of their land.

The choices made historically by antiquarians and archaeologists are also a major cause for the bias we have toward the material culture of the elite. Indeed, only certain aspects of elite existence related to worship and death. When antiquarians and archaeologists started excavating in Egypt and studying its culture, particularly from the nineteenth century onward, they focused on collecting and recording impressive objects: large statues, dramatic architectural fragments, beautifully painted and carved inscriptions and scenes, gold statues and jewelry, exquisitely fashioned containers, and highly decorated papyri. The obvious reason for this was that such objects held a strong aesthetic appeal. They also satisfied both personal and national pride as many expeditions to collect Egyptian antiquities were carried out competitively as demonstrations of imperial and/or colonial power as well as for personal gain or ostentatious display (Greener 1966; Fagan 2004). All these impressive objects belonged to the elites; commoners, it was assumed, possessed

little of material value, save for some pots and baskets, and could not contribute anything of interest to an understanding of the history, society, and culture of the ancient Egyptians. As is often the case in scholarship, the lives of the poor were valued less than those of the rich. Thus, the details of non-elite Egyptians' material, social, and religious lives were largely ignored, with only occasional mention made of them (Wilkinson 1878; Petrie, in passing in many of his works), giving an unbalanced view of ancient Egyptian society.

It is only recently that the study of non-elites has become a major focus of Egyptology—and such study is difficult as their material culture is indeed less in volume and variety. Their habitations together with their contents and any decoration are, for the most part, buried beneath those of the modern Egyptians and well nigh impossible to access. Their graves contain few if any grave goods. This increases the need for a thorough scientific analysis of what little has been recovered, in an effort to determine what sorts of lives the non-elites led and the role that they played in Egyptian society. The study of human, animal, and organic remains contributes to such an investigation (for very recent work, see articles by Kemp et al. (2006–2014) in *Horizon* on the Amarna Trust website; Rose and Zabecki 2009). Examining and interpreting the visual culture of the non-elites helps us to reconstruct their religious beliefs, the details of their daily lives, and their aesthetics. Until the study of non-elites progresses further, however, our interpretation of ancient Egypt remains skewed in favor of the high-ranking people and their material culture. Indeed, to some extent Egyptologists, by using only “official” elite monuments to reconstruct Egyptian political and social orders and religion, have been manipulated by the ancient Egyptian elite to reconstruct a worldview that possibly favors them far more than actually was the case.

An absence or change in the patterns of distribution of certain types of objects or materials in an archaeological setting also contributes to our understanding of a particular site or period, as the configuration of material culture helps to define a site's function and economic level. On a broader scale, the presence or absence of specific materials or objects are indicative of historic, political, and economic change. So, we might ask, what does the lack of large-scale temples during a specific period tell us? What do we learn from the absence of individual tombs in favor of group burials? A dearth of precious objects, such as lapis lazuli or carnelian or gold, in a particular period contributes directly to our knowledge of ancient Egypt through its material culture as it denotes an absence of trade and a decrease in wealth, with all its attendant political ramifications. Of course, one must be cautious and keep the “accident of archaeology” in mind: negative evidence is not always absolute, as excavators might have missed finding something by digging in the wrong place.

In some cases, different groups of artifacts have more specific issues associated with their interpretation. Prime amongst these are those objects that have traditionally been studied as “art”: representations on tomb and temple walls, and statuary of wood, bone, ivory, ceramic, and stone. What we call Egyptian art was not just an aesthetic expression, however, but also a mode of representing an ideal: a magical reality often charged with symbolism that it is difficult for us to interpret, and is dependent, in part, on styles and trends of the time. This is illustrated most clearly by the art of the Amarna Period. As this subject has been fully dealt with elsewhere in this volume, it is only mentioned in passing here.

Textual representation also poses specific interpretative difficulties (Baines (2007), 7–10 in particular; see also Baines and Yoffee 1998; Friedman and Fiske (2011),

1099–1218). Hieroglyphic writing, the monumental formal script of ancient Egypt, consists of a series of images that were chosen and laid out not only for their aesthetic appeal and meaning, but also to create an eternal verity. The sentences formed by the script, with their literary and poetical rhythms, could only be read by the very few literate members of society, and therefore would not convey the same information to the non-literate of antiquity, or even to modern scholars with an imperfect understanding of the Egyptian language. However, a partial comprehension by the non-literate is possible, based on a few recognizable signs (e.g., a pair of legs indicates movement or walking, an arm waving a mace suggests battle or victory). Additionally, the images accompanying the text could be “read” as giant hieroglyphs that expressed the essence of the complex meaning of the text in shorthand, rendering the image accessible even to the non-literate.

Regardless, these formal inscriptions have a visual impact that emphasizes the importance of the message that they contain. More significantly, they often accompanied, or were an integral part of, painted and/or carved scenes. Thus, ideally text and image should not be divorced from one another when being studied, but should be treated together as a graphic unit as well as a single cognitive group, in relation to the architecture that they adorn. Particularly in the minor arts, this could extend to the form of the object and the material of its manufacture. Of course, one should bear in mind, particularly with regard to texts and images dealing with political ideology, that these do not necessarily show historic truths, but rather perpetuate an ideology and an ideal. Hence, texts and images relating to a king attacking Egypt’s enemy and emerging victorious do not necessarily mean that that particular king literally fought that particular enemy, but, rather, that the king was depicted using the iconography of kingship, and as such was shown as the ideal of a warlike and victorious ruler.

On a more pragmatic level, text can also obfuscate rather than elucidate, particularly when establishing the ownership/authorship of objects and their chronology. In some cases, statues or entire temple walls that were made by one king were usurped by a later one. All that the later one did was to remove the name of his predecessor and insert his own, thereby rendering the object his creation or possession. Sometimes usurpation was done to eradicate all memory (*damnatio memoriae*) of an earlier ruler, as was the case with King Akhenaten (1353–1336 BCE), and at other times, it was an expedient way to achieve maximal self-publicity at a minimal expense, as is seen by the many usurpations of King Ramesses II (1279–1213 BCE). How can one establish the originator of such a piece of material culture? In some cases, the original inscription was not sufficiently well erased and is still discernible; in others the old text was so thoroughly removed that the new text appears in a depression, which indicates that a change has taken place, although what the original was is not always easy to establish. Some objects, such as the sphinxes of Amenemhet III (1818–1773 BCE) were inscribed and reinscribed by several kings and moved from one part of the country to another, creating a great deal of confusion as to how they should be interpreted, what date they are, and how they fit into the broader narrative of Egyptian (art) history (Habachi 1978). Ultimately, the issue for such statues, as well as other objects suffering from usurpation can be solved by a close study of style (see Hartwig, “Style,” this volume), first to help situate the object chronologically, so that it can be interpreted with regard to its role in cultural history.

Even when texts are original, they can create confusion similar to that engendered by usurpation inscriptions. For instance, the dating of the statue of the dwarf Seneb and his family that was found in his mastaba at Giza is problematic. The statue is inscribed with the name and titles of Seneb, listing the fact that he was a priest serving the cult of Khufu (2509–2483 BCE). Initially, the name of the king on the statue was used by scholars to date the piece and thus place Seneb into a particular historic period. However, the position of his tomb, far from that of the king he purportedly served, its plan and the style of the statues argue for a later date (Bolshakov (1994), 10 n.1; Cherpion 1998; Woods 2010). Now, the majority of scholars believe that the name of Khufu on the statue indicates that Seneb worked for the cult of that king long after his death. Based on the style of his sculpture, tomb position and its decoration, Seneb probably lived and died after the reign of Khufu, perhaps in Dynasty 5 (2435–2306 BCE).

Ways of Looking, or Methodologies of Interpretation

Ancient Egyptian material culture has been subjected to a variety of modes of analysis, and, to some extent, this has influenced the way in which the study of Egyptian art has evolved. Although the genres and corpus of material culture are fairly constant, the ways of interpreting it are myriad. By imposing different theoretical constructs on the material, one can alter the understanding of objects and their meaning independently, and within a culture (Renfrew and Bahn 2005). More than any other ancient Mediterranean culture, the material remains from Egypt, in terms of objects and iconography, have been analyzed through the lenses of archaeology and anthropology (Petrie 1901, 1920; Weeks 1979; Trigger et al. 1996; Lustig 1997; Richards and Van Buren 2000; Richards 2005; much of the work of B.J. Kemp and J. Baines). Thus, while the more traditional art historical methods of study, such as connoisseurship and style, have been applied to Egyptian art, a significant degree of anthropological theory (gender and sexuality, views of the “other,” reception and perception, mortuary values, to name but a few; see other chapters in Part I, this volume) has been used in interpreting material culture. As one might expect, each theoretical perspective has extracted different information from the material under study. At various times, different avenues of inquiry have been privileged. Thus both Prown’s farmers and cowmen, and more frequently now a combination of the two, have held sway over Egypt’s visual culture.

A particularly fruitful use of anthropological theory has been in the interpretation of tombs and cemeteries. By employing the value systems derived from anthropological and archaeological studies, tombs and cemeteries can reveal aspects of social and political organization (Richards 2005; Trigger et al. 1996; Cooney 2007; Petrie, in passing in several works). Examining the location of a tomb, its size, the materials from which it was made, the type and quality of decoration, and its inscriptions, can elucidate social and political organizations in addition to diachronic changes in both architectural and artistic styles.

One of the earliest uses of objects by scholars was to derive a chronological basis for them. This “vertical history” of an object is one of the most basic ways of using and viewing objects within the context of a chronological framework. William Matthew Flinders Petrie, the “father” of Egyptian archaeology, established the dating of the Predynastic

Period by seriation or sequence/relative dating (Petrie 1901, 1920). This is a form of relative dating that provides a chronological sequence of objects based on their style. The governing idea is that styles of objects evolve in particular ways; by documenting their evolution, objects can be placed within a relative chronological framework. Later on, more precise dates can be given to the sequence through further excavations where more or different examples might be found. Petrie established his sequence dates by studying groups of grave goods from a huge number of burials, paying special attention to specific objects that were common to all the internments. He established typologies of pottery, figurines, slate palettes, and flint tools, and studied their groupings, focusing particularly on the most numerous—ceramics. Petrie arranged these in a relative sequence, assigning to the styles that he could distinguish numbers ranging from 30 (oldest) to 80 (most recent), and leaving numbers free in case more objects needed to be inserted later at the beginning or end of the sequence. Petrie held the basic assumption that parts of certain pots changed from functional to decorative over time. One of the key ceramic types he used to establish his dating was the wavy-handled (W-ware) jar. In its earliest form it was large and had a sizeable and usable handle. Over time, it reduced in size and the handle shrank, until eventually it appeared without any functional aspect, just an undulating line along the upper part of the body (Figure 10.3). Although this mode of dating is not fail-safe, and works on the (to some extent, incorrect) assumption that style evolves in a linear fashion, Petrie's system has been proven by later scholars to be, for the most part, dependable. This sort of relative dating is still used today; often using tiny details to provide a chronology for a single type of object. Thus in sculpture, changes in the depiction of the eye and eyebrow, a royal or divine beard, or the way in which nipples are shown, can be used to date a piece.

Studies concentrating on technologies used to produce artifacts and monuments (such as Nicholson and Shaw 2000; Kemp and Vogelsang-Eastwood 2001; Lucas 1989; Arnold 1991) provide a different lens through which to examine visual culture. These give a



Figure 10.3 Pottery vessels illustrating Petrie's sequence dating. © Brian Alm.

more “horizontal history” of an object, focusing on its materiality, as well as exploring how its production might provide evidence for trade networks. Changes in methods of production can be used to document advances or shifts in technology. The identification of the source of raw materials is a key factor in understanding trade and economy. The importation of different forms, materials, or tools, also acts as a chronological indicator. For example, pottery can be dated to some extent, by whether it was hand- or wheel-made, and whether it was a slow or fast wheel, influenced by those of the Near East (Hope 1987). Innovations in gold work (for example the use of guttae or tiny drops applied in a decorative pattern on a plain surface) and other metals attest to artistic and technological influence from the Levant (Ogden 2000). Technological studies involving experimental archaeology or ethnoarchaeology also help explain how objects were produced, the organization of production, and sometimes even why they took a particular form. For example, experiments in basketry, stone and wood working, and even mummification have explained specifics on tool-use and established ways in which one can calculate how long it might have taken to produce different items. The debris that these activities leave behind is also useful as it can be used to identify similar activities in the archaeological record (Wendrich 1991; Killen 1994; Stocks 2003; Ikram 2005; Graves-Brown, in press).

Sometimes, close study of how an object is made can even identify certain artists or ateliers. The way in which a detail, such as a thumbnail or finger joint is painted or carved, can identify the hand of a specific artisan (Keller 2001; Bryan 2001), while the handwriting of particular scribes can be identified by how they form certain letters. Chemical analysis of paints might also be able to identify the pigment recipe favored by a particular workshop, or indicate the time period when the materials used for it were available (see below). Such information might lead to a better understanding of the large-scale production of tomb or temple scenes, as well as inscribed papyrus scrolls.

Obviously, material culture can be used to answer a variety of questions and to elucidate diverse aspects of Egyptian culture—it just depends on what sort of information is the focus for study. Possibly the most rewarding approach is what can be termed “biographical” or “holistic.” This combines a study of the materiality of the object (material, technology, influences on production), its (perceived) value (see Cooney, this volume, for more details), its chronological place, its social context, and the role it played in a particular person’s life.

Potential Avenues for Exploration

Surprisingly, certain forms of Egyptian material culture such as rock art, have, until now, received little attention. This form of visual culture is of extreme importance, as the origins of all later art as well as of political and religious iconography can be traced back to it. Some examples are found on the rocks bordering the Nile, particularly in the areas from Armant to Aswan, with a dense concentration in the Eastern and Western deserts. Recently some scholars have started on the documentation and analysis of rock art (Huyge 2003) and subsequent works (see issue 19 (2009) of the journal *Archéo-Nil*; see also Winkler 1938–1939; Morrow and Morrow 2002), showing that this source is a rich vein of information waiting to be mined.

Higher standards of display and conservation are crucial to our understanding of visual culture. Since the first time it was put on display, possibly, the carved surface of the Rosetta Stone had been blackened and the inscription highlighted in powdered chalk for better visibility (Parkinson 2005). This not only might have adverse effects for the long-term preservation of the artifact, but has also led to scholars misinterpreting the piece as made of basalt brought from near the Fayum. It was only after the recent conservation and study of the Rosetta Stone that its original material was revealed as granite, with a dramatic pink streak running through it, brought from distant Aswan (Parkinson 2005).

Improving and standardizing the documentation and recording of objects is also an avenue that should be pursued. For example, the publications of the tombs at Beni Hasan (Newberry 1893–1900) show all the scenes in black silhouette. Although the outlines of the images are clear, the details, colors, and nuanced representations of the ancient Egyptian artisans are completely missing, rendering the publication useless on many levels. Nowadays, there is more attention paid to proper photography as well as other forms of depicting objects, ranging from traditional drawings to sophisticated laser copies or Reflectance Transformation Imaging (RTI) of both two- and three-dimensional objects. Although the very complex forms of recording are not available to everyone, in part due to issues of cost and efficiency in the field, a standardization of conventions for illustration and an emphasis on accuracy would contribute to a better understanding of visual culture.

The study of visual culture is becoming increasingly rich, complex, and integrated with methodologies derived from other disciplines. These combined methods of seeing and interpreting allow us to extract far more information from each object or monument than any single method used in isolation. Even more data pertinent to understanding and interpreting material culture is now being provided through the application of methods from hard sciences, many of which are used on objects during the process of conservation. Indeed, conservation studies are revealing a wealth of information about visual culture (Parkinson 2005, 2008; Middleton and Uprichards 2008). Chemical or physical analyses of the different materials used to make an object are providing fresh avenues of inquiry and new data about objects that have been studied for many years. Such tests are also useful in establishing the authenticity of objects in museums or the art market, as one can now determine whether the technology or the material used to fabricate the piece is ancient or modern. The sole use of Carbon 14 (C-14) analysis for dating organic materials has now been supplemented by potassium-argon dating for ancient minerals, thermoluminescence (TL) and archaeomagnetic dating for ceramics, as well as other tests for different materials. Thin sectioning is used to shed light on pottery production, while X-rays and other forms of imaging also permit the non-destructive study of technologies used to make wood, metal, and bone artifacts. Paints, resins, oils, metals, and other substances can be chemically analyzed and studied using Scanning Electron Microscopy (SEM), X-Ray Fluorescence (XRF), X-Ray Diffraction (XRD), Fourier-transform Infrared Spectroscopy (FTIR), Gas Spectrometry, Polarized Light Microscopy (PLM), ultraviolet light (UV), and other archaeometric tools (see Newman, this volume). All these methods serve to shed further light on the technology, trade and economy of ancient Egypt.

An example of the use of such scientific techniques in the study of visual culture is the analysis of paint from Theban tombs (Lee and Quirke (2000), 104–120; see also Blom-Böer 1994; Middleton and Uprichards 2008; Vandenabeele, et al. 2009; Hartwig

2013). Using a variety of tools, the components of different paints have been identified, including orpiment. This material is an arsenic sulfide that yields a yellow color and seems, in its pure form, to have primarily been used in Dynasty 18 and 19 objects and tomb decoration, although a (thus far) unique example from Dynasty 2 has been documented (Pagès-Camagna and Guichard 2010). Even during the New Kingdom it appears to have been relatively rarely employed in comparison with the more common yellow ochre, and might well have been imported. Thus, the discovery of its use explains the reason for the particularly intense shade of this color in certain tombs, and informs one of an aesthetic decision made by the Egyptians. It is also indicative of a whole network of trade and exchange, and attests to the higher wealth and status of the individual using the paint. Similarly, the use of UV light in examining a papyrus or a wall painting can often show earlier versions of decoration (Vandenabeele et al. 2009; Hartwig 2013). Thus, changes in the schema of decoration, the hands of different artists, and changes in inscriptional content all become visible, and contribute to a better understanding of the history and development of the object itself.

Future scientific methods of analysis doubtless will be linked successfully to theoretical models in order to obtain even more data from Egyptian material culture. It is increasingly clear that interdisciplinary teams of archaeologists, philologists, and scientists, working together, can derive significant amounts of information from Egypt's material culture, enabling objects and monuments to contribute to a deeper understanding of ancient Egyptian culture, history, society, technology, religion, ideologies, and aesthetics.

GUIDE TO FURTHER READING

There are no particular texts within Egyptology that focus exclusively on the uses and interpretation of material culture. There are several artifact-specific books, however, that deal with genres of objects (e.g., shabtis, statues, stelae, and mummies). The works of certain authors, such as B.J. Kemp and J. Baines in particular, use a variety of practical and theoretical models in their interpretation of the material evidence and serve as exemplary models for ways of interpreting and presenting material culture. More general theoretical works from the disciplines of art history and archaeology deal with visual culture. Some are listed in the bibliography below: Appadurai (1986), Hodder (1989), Miller (1997), Schiffer and Miller (1999). Other works by Daniel Miller are also of interest. For an overview of the study of material culture, see Buchli (2007), and also of interest, Lemonnier (1986).

For different modes of perception, several articles in the following book are of use: Nelson (2000). Currently, several books in the field of art history deal with a holistic interpretation of visual culture; among these, see: Plate (2002), Cartwright (2007), Holly and Moxey (2002).

REFERENCES

- Appadurai, A., ed. (1986), *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge.
- Arnold, D. (1991), *Building in Egypt: Pharaonic Stone Masonry*. New York.
- Auslander, L. (2005), "Beyond Words," *American Historical Review* 110.4: 1015–1045.
- Baines, J. (2007), *Visual and Written Culture in Ancient Egypt*. Oxford.

- Baines, J. and Yoffee, N. (1998), "Order, Legitimacy, and Wealth in Ancient Egypt and Mesopotamia," in G. Feinman and J. Marcus, eds., *Archaic States*, 199–260. Santa Fe, NM.
- Blom-Böer, I. (1994), "Zusammensetzung altägyptischer Farbpigmente und ihre Herkunftslagerstätten in Zeit und Raum," *Oudheidkundige Mededeelingen uit het Rijksmuseum van Oudheden te Leiden* 74: 55–107.
- Bolshakov, A. (1994), "Hinting as a Method of Old Kingdom Tomb Decoration I. The Offering-Stone and the False Door of the Dwarf Snb," *Göttinger Miszellen* 139: 9–32.
- Bryan, B. (2001), "Painting Techniques and Artisan Organization in the Tomb of Suemniwet," in W.V. Davies, ed., *Colour and Painting in Ancient Egypt*, 63–72. London.
- Buchli, V. (2007), "Material Culture: Current Problems," in L. Meskell and R.W. Preucel, eds., *A Companion to Social Archaeology*, 179–194. London.
- Cartwright, L. (2007), *Practices of Looking: An Introduction to Visual Culture*. Oxford.
- Cherpion, N. (1998), "La statuaire privée d'Ancien Empire: indices de datation," in N. Grimal, ed., *Les critères de datation stylistiques à l'ancien Empire*, 97–142. Cairo.
- Cooney, K.M. (2007), *The Cost of Death: The Social and Economic Value of Ancient Egyptian Funerary Art in the Ramesside Period*. Leiden.
- Fagan, B. (2004), *The Rape of the Nile: Tomb Robbers, Tourists, and Archaeologists in Egypt*. Boulder.
- Friedman, R. and Fiske, P., eds. (2011), *Egypt at its Origins 3*. Leuven.
- Graves-Brown, C., ed. (in press), *Experiment and Experience: Ancient Egypt in the Present*. Swansea.
- Greener, L. (1966), *The Discovery of Egypt*. New York.
- Habachi, L. (1978), "The So-Called Hyksos Monuments Reconsidered: Apropos of the Discovery of a Dyad of Sphinxes," *Studien zur Altägyptischen Kultur* 6: 80–90, pl. 25.
- Hartwig, M., ed. (2013), *The Tomb Chapel of Menna (Theban Tomb 69): The Art, Culture and Science of Painting in an Egyptian Tomb* [American Research Center in Egypt Conservation Series 5]. Cairo and New York.
- Heywood, A. (2001), "The Use of Huntite as a White Pigment in Ancient Egypt," in W.V. Davies, ed., *Colour and Painting in Ancient Egypt*, 5–9. London.
- Hodder, I., ed. (1989), *The Meaning of Things: Material Culture and Symbolic Expression*. London.
- Holly, M.A. and Moxey, K., eds. (2002), *Art History, Aesthetics, Visual Studies*. New Haven.
- Hope, C. (1987), *Egyptian Pottery*. Aylesbury.
- Huyge, D. (2003), "Grandeur in Confined Spaces: Current Rock Art Research in Egypt," in P.G. Bahn and A. Fossati, eds., *Rock Art Studies: News of the World* vol. II, 59–73. Oxford.
- Ikram, S. (2005) "Manufacturing Divinity: The Technology of Mummification," in S. Ikram, ed., *Divine Creatures: Animal Mummies in Ancient Egypt*, 16–43. Cairo.
- Keller, C.A. (2001), "A Family Affair: The Decoration of Theban Tomb 359," in W.V. Davies, ed., *Colour and Painting in Ancient Egypt*, 73–94. London.
- Kemp, B.J. (1991), *Ancient Egypt: An Anatomy of a Civilisation*. London.
- Kemp, B.J. and Vogelsang-Eastwood, G. (2001), *The Ancient Textile Industry at Amarna*. London.
- Kemp, B.J. et al. (2006–2012), *Horizon Newsletter* [online] www.amarnatrust.com/newsletter.shtml [accessed April 12, 2014].
- Killen, G. (1994), *Egyptian Woodworking and Furniture*. Princes Risborough.
- Lee, L. and Quirke, S. (2000), "Painting Materials," in Nicholson and Shaw, eds., 104–20.
- Lemonnier, P. (1986), "The Study of Material Culture Today: Towards an Anthropology of Technical Systems," *Journal of Anthropological Archaeology* 5.2: 147–186.
- Lucas, A. (1989), *Ancient Egyptian Materials and Industries*. London.
- Lustig, J., ed. (1997), *Anthropology and Egyptology: A Developing Dialogue*. Sheffield.
- Middleton, A. and Uprichard, K., eds. (2008), *The Nebamun Wall Paintings: Conservation, Scientific Analysis and Display at the British Museum*. London.
- Miller, D., ed. (1997), *Material Cultures*. London.

- Morrow, M. and Morrow, M., eds. (2002), *Desert RATS. Rock Art Topographical Survey in Egypt's Eastern Desert*. London.
- Nelson, R.S., ed. (2000), *Visuality Before and Beyond the Renaissance: Seeing as Others Saw*. Cambridge.
- Newberry, P.E., et al. (1893–1900), *Beni Hasan*, vols. 1–4. London.
- Nicholson, P. and Shaw, I., eds. (2000), *Ancient Egyptian Materials and Technologies*. Cambridge.
- Ogden, J. (2000), “Metals,” in Nicholson and Shaw, eds., 148–176.
- Pages-Camagna, S. and Guichard, H. (2010), “Egyptian Colours and Pigments in French Collections: 30 years of Physicochemical Analyses on 300 Objects.” In J. Dawson, C. Rozeik, and M.M. Wright, eds., *Decorated Surfaces on Ancient Egyptian Objects: Technology, Deterioration and Conservation*, 142–147. London.
- Parkinson, R. (2005), *The Rosetta Stone*. London.
- Parkinson, R. (2008), *The Painted Tomb-Chapel of Nebamun: Masterpieces of Ancient Egyptian Art in the British Museum*. London.
- Petrie, W.M.F. (1901), *Diospolis Parva: The Cemeteries of Abadiyeh and Hu*. London.
- Petrie, W.M.F. (1920), *Prehistoric Egypt*. London.
- Plate, S.B. (2002), *Religion, Art, and Visual Culture*. New York.
- Prown, J.D. (1996), “Material/Cultural: Can the Farmer and the Cowman Still Be Friends?” in W.D. Kingery, ed., *Learning from Things: Method and Theory of Material Culture Studies*, 19–30. Washington, DC.
- Renfrew, C. and Bahn, P., eds. (2005), *Archaeology: Key Concepts*. New York.
- Richards, J. (2005), *Society and Death in Ancient Egypt: Mortuary Landscapes of the Middle Kingdom*. Cambridge.
- Richards, J. and Van Buren, M., eds., (2000), *Order, Legitimacy and Wealth in Ancient States*. Cambridge.
- Rose, J. and Zabecki, M. (2009), “The Commoners of Tell el-Amarna,” in S. Ikram and A. Dodson, eds., *Beyond the Horizon: Studies in Egyptian Art, Archaeology and History in Honour of Barry J. Kemp*, vol. 2, 408–422. Cairo.
- Schiffer, M.B. and Miller, A.R. (1999), *The Material Life of Human Beings: Artifacts, Behavior, Communication*. London.
- Stocks, D.A. (2003), *Experiments in Egyptian Archaeology: Stoneworking Technology in Ancient Egypt*. New York.
- Trigger, B., Kemp, B.-J., O'Connor, D. and Lloyd, A.-B. (1996), *Ancient Egypt: A Social History*. Cambridge.
- Vandenabeele, P., Garcia-Moreno, R., Mathis F. et al. (2009), “Multi-Disciplinary Investigation of the Tomb of Menna (TT 69), Theban Necropolis, Egypt,” *Spectrochimica. Acta A: Molecular and Biomolecular Spectroscopy* 73.3: 546–552.
- Weeks, K.R., ed. (1979), *Egyptology and the Social Sciences*. Cairo.
- Wendrich, W. (1991), *Who Is Afraid of Basketry?* Leiden.
- Wilkinson, J.G. (1878), *The Manners and Customs of the Ancient Egyptians*, vols. 1–3. London.
- Winkler, H.A. (1938–1939), *Rock Drawings of Southern Upper Egypt I-II*. London.
- Woods, A. (2010), “A Date for the Tomb of Seneb at Giza: Revisited,” in A. Woods, A. McFarlane, and S. Binder, eds., *Egyptian Culture and Society: Studies in Honour of Naguib Kanawati*, vol. 2, 301–331. Cairo.