

Time and Space in Ancient Egypt

The importance of the creation of abstraction

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Introduction

Man exists in time and space: we are constrained by these limits—if by no others. Only the written word or an artistic creation can permit a mortal to overcome these limits. Yet this victory is pyrrhic: language, art and architecture are means by which humans achieve immortality, yet the constraints demand that even immortality achieved by these means remains restricted to the limits of the horizon of mankind.

It is thus highly significant that—although we are biologically far older—our understanding of the human past abruptly changes as we cross the threshold of the invention of writing. The invention of writing accompanied the creation of urbanism and political structures. Like writing, monumental public architecture and complex art are also among the innovations of this age which are still with us, for material culture was also transformed with the appearance of the states.

Yet the written sources are assigned an almost unique role when approaching ancient thought. By contrast, one can argue—as is our intention here—that art and architecture contributed significantly to the development of conceptual thought. Following this argument means that meaning can be recognized in non-verbal forms of expression; it would also signal a cognitive change which is not ancient and biological, but recent and historical.

Regardless of perception, existence takes place in time and space, yet the perception of time and space is decisive for any understanding of being. We argue that Ancient Egypt played a dual role by creating means of expressing time and space which ultimately changed perception. Understanding this means throwing our understanding of “meaning” as expressed through verbal expression into doubt, and examining the means exploited by the Egyptians.

For several millennia after the dawn of history, the most widely recognized form of expression was verbal. With the appearance of cinema, television and advertising the image is recovering its value as means of conveying information. However, the image was never entirely discarded: from ancient murals to medieval illustrated manuscripts, imagery featured as a means of expression. Furthermore, architecture continued to play a role from before the beginning of history through to the present day.

Thus, although we tend to neglect them, assuming that “meaning” is to be sought in verbal expression actually precludes access to important avenues which give access to a culture which exploits other means. Egyptian understanding of time and space was more human influenced than ours.

Of particular interest to us here is an observation Groenewegen-Frankfort made when surveying the art forms of the Ancient Near East and the Bronze Age Mediterranean:

In trying to penetrate ... what might—for lack of a better word—be called the implicit meaning in [artistic representations of] scenes, I found that the unexpected happened: both significance and formal peculiarities proved strictly correlated as soon as they were

seen under the aspect of their space-time implications. In fact changes in the one corresponded most strikingly with changes in the other, and spatial idiosyncracies therefore suddenly became 'significant'.¹

She also stressed that there was a significant development at the beginning of the historical period in which "significant spaces" were created in art in a fashion which contrasted substantially with Palaeolithic art. Thus, mere representation and art are not simply alternative means of communication, but actually change at the same time that writing developed in the urban Near East. One of the most important changes concerns the development of an understanding of space.

Although Groenewegen-Frankfort consciously distanced herself from Krahmer,² we will argue that some of Groenewegen's observations about space can be incorporated into a system encompassing Krahmer's understanding of the static space of Egyptian art. And that this has significant philosophical implications not only for our understanding of Egyptian conceptions of space, but also of history.

We thus cover several different points. The central point is the degree to which ancient Egypt contributed to the human capacity to achieve an understanding of being. We argue that the invention and development of social institutions and public architecture contributed to a transformation of the human mind, and that writing is merely one of several decisive phenomena. Yet writing alone had substantial repercussions in academic discussions: almost eclipsing these other forms of expression.

The subsidiary points relate to the nature of "being" in ancient Egypt as expressed in art and language, where we perceive a clash in the different theoretical approaches which have dominated the study of Egyptian art.

At the centre is the issue of "understanding", grasped in terms of recognizing and expressing a "meaning". Thus, perception, expression, and content are the central issues related to "meaning". Today, it is assumed that meaning exists independent of time and space and language—in this perception, the popular and scholarly concept of finding "meaning" is the basis of human existence. Under this conception, it is assumed that meaning exists independently of humans, i.e., that it is "found".

Under the pressure of cognitive advances, human existence is increasingly understood as being biological and physical, rather than historical and conceptual. If one were to follow this latter line of reasoning to its logical end, one would find that the human adventure is not so much about the "discovery" of "meaning", but rather the creation or production of meaning: "meaning" is "invention" not "discovery". But nevertheless a process which is intrinsically biologically human, a part of our existence. We argue that this is entirely possible, but stress that significant steps in the process may not have taken place as a result of evolutionary neurological changes in the Pleistocene, but are rather historical artefacts created as a result of developments during the Bronze Age. In this sense, the biological argument about human nature is linked to cultural history, with the biological framework merely a platform upon which cultural activity erected a superstructure in recent times. We argue that one of the keys to understanding this can be found in the sources of Ancient Egypt.

One of the peculiarities of ancient Egypt is that many of the thoughts associated with that civilization are viewed as abstract, spiritual and timeless, whereas the forms of expression chosen by the Egyptians—both in art and language—were highly concrete. We argue that this is a crucial key to understanding developments, yet one that is generally overlooked—precisely

¹ Groenewegen-Frankfort, H.A., *Arrest and Movement: An Essay on Space and Time in the Representational Art of the Ancient Near East*, London 1951, pp. xxiii-xxiv.

² Krahmer, G., *Figur und Raum in der Ägyptischen und Griechisch-Archaischen Kunst* (=Hallesches Winkelmannsprogramm 28), Halle 1931

because we reduce meaning to linguistic expressions, and thus obscure developments rather than highlighting them.

It is in this sense that we stress the specifically concrete nature of Egyptian expression, and the absence of abstraction. Frustration with the incapacity of words to express thought might appear to be a constant of philosophical development, and in this sense one could suggest that the expression of Egyptian thought did not differ from our own when facing obstacles. However, there is a vast difference between the vocabularies available to a Nietzsche or a Foucault as opposed to a Ptahhotep.

In Junge's analysis of Ptahhotep, *jb* "the heart", is rendered as *Herz*, but also as *Geist*, *Sinnesart*, *Gesinnung*, *Seele*, *Gemüt* and *Vernunft*.³ Obviously, this is one way of representing Egyptian thought to the modern reader. However, it is equally obvious that three thousand years of development have expanded the vocabulary available. Furthermore, it is not clear that the abstract concepts which Junge projects into Ptahhotep actually correspond to what was in the Egyptian "mind" (for which there is no word—except *jb*). Obviously, Junge is correct in assuming that the concepts did develop, and that they must have had an origin—and that this origin cannot be far from Ptahhotep's time. However, it is not clear that these thoughts were already in the Egyptian mind.

It is apparently difficult to understand the degree to which we should be cautious about projecting abstraction into Egyptian thought, simply because we are accustomed to assume that verbal abstraction is normal—and that it is the only form of abstraction. In our world, words and images serve a purpose in conveying a message, and our world has thus inherited the basic concept of concrete images from Egypt, but it has also transformed the concrete messages into abstract forms, expressed verbally.

The scene in *Book of the Dead* Spell 125 shows the heart itself being weighed on a real scale against the feather of Maat. Anubis, one of the gods of the necropolis and the dead is shown verifying the measurements, and Thoth, the god of the bureaucratic class records the results. We refer to this as a judgement scene, but it is actually a mere matter of verification. The iconography is obviously culturally conditioned, but one needs no real introduction in order to understand it, if one understands some Egyptian.

In western iconography, the pans of the scale of Justice are empty and the goddess of Justice is responsible for prosecution, verification and execution. Yet she is blindfolded so that she could not verify if she wanted to, and under the circumstances using her sword usefully is out of the question.

Obviously, the metaphor at the heart of our western image of Justice came from Egypt, but in the Western version the message and its form have changed substantially. Each element has acquired an allegorical meaning, which can be verbally interpreted. As we understand the symbol, we do not register the incongruities in the message as it is transmitted in our societies: it is completely overshadowed by the understanding of the abstract concept of Justice. This western image can be dissected and interpreted, both historically and metaphorically—and indeed it must be for it is incomprehensible.

Although similar, the Egyptian version was quite different. Maat was the weight which automatically meant that the scales tilted; Anubis and Thoth could simply observe the results. The heart itself was being measured. Thus there is much less content to be interpreted than in the Western scene. There is no question of abstract meanings.

The usual method as applied in modern Western critical analysis is that typified by Panofsky in *Meaning in the Visual Arts*, where he traces images and allegorical expressions in the works of Dürer (and colleagues) back through the Middle Ages, Classical Greece, and finally (on occasion) to ancient Egypt. By the Middle Ages and the Renaissance, such images had become laden with meaning, and Panofsky could dissect the layers. However, once he had

³ Junge, F., *Die Lehre Ptahhoteps und die Tugenden der ägyptischen Welt* (=OBO 193), Fribourg 2003. Cf. Warburton, D., Review of Junge, *Ptahhotep, Discussions in Egyptology* 59 (2004), p. 99.

arrived in Egypt, Panofsky could not offer any such metaphorical interpretation. The Egyptian images had a significance which was immediate and clear: there were no hidden messages. The concept of abstraction was foreign to their art and language, and thus we argue that the Egyptian use of such images was utterly different from that of Western art—yet the Western images can be traced back to the Egyptian.

We argue that these concepts were brought into existence, and in recent times as a result of exchanges between societies (as in this case). Thus the heart has disappeared from the Western version of the scales of Justice, who is a specific deity with her own symbols (woman in classical garb, scales, blindfold, sword) which each require interpretation. The current writer stresses that this is part of our form of abstraction which no longer depends upon the images or the concrete elements. The verbal expression of the meaning takes precedence and the image is just a way of expressing the verbal thought. And this verbal expression has many nuances, as revealed in Junge's translations of *jb*. These concepts are distinct in our world.

To deny that the Egyptians felt differently would be absurd, as the language and the imagery confirm their way of thinking and testify to their way of expression. Our object here is to examine this, arguing that the Egyptians encoded complex thought in material form which they did not necessarily express in language. And also that they did not necessarily assign linguistic forms of expression to what we call abstraction. In fact there are additional "messages" in their art which cannot be recovered by the conventional methods of the interpretation of art, i.e., looking for a verbally expressed metaphorical meaning.

Responses to these forms of expression vary, but in general, the current writer has the impression that scholarly approaches suggest an effort to search for expressions of thought and meaning in forms familiar to us, most of them based on the assumption of a fundamentally human thought structure and the paramount use of language in expressing meaning. In this vision, "meaning" as expressed in language is immanent and inherent, and the difficulty is that of recognizing the means by which "meaning" comes to be expressed.

By contrast, the author contends that the means by which meaning came to play this role are historical and cognitive rather than biological and neural.⁴ Our point of departure in the following will thus deal simultaneously with theoretical approaches and forms of expression.

Cognition, Language, Art, and Architecture

The Egyptians integrated the imagery and architecture of an urban civilization into their writing system. When viewing these phenomena in order to grasp the underlying system of classification, Goldwasser observed the following:

Theories addressing the question of how knowledge is organized usually draw on evidence obtained from three principal sources: linguistic data acquired from local informants in non-literate societies, psychological experiments, and the study of diachronic and synchronic linguistic data in literate societies.⁵

While this is true, it does not necessarily mean that this is the correct fashion of approaching one of those civilizations which actually gave rise to the foundations of the linguistic means of classifying information. Our concern here is to approach the physical objects with the argument

⁴ For reasons which cannot be elaborated here, the author is convinced that "meaning" is a variable dependent upon human society, and that Egypt played a crucial role in creating this state of affairs. This has substantial implications for our understanding of human perception and expression. Paradoxically, in order to explore the implications of this assumption in the context of Ancient Egypt, it is not necessary to agree with the fundamental assumption.

⁵ Goldwasser, O., *Prophets, Lovers, and Giraffes* (=GOF IV 38/3), Wiesbaden 2002, p. 2.

that artefacts also contain information about systems of classification. Baines has defined this alternative quite clearly:

Art served the ordered cosmos... It defined, encapsulated and perpetuated that cosmos.⁶

Our goal here is not to explore the superficial aspects of the artistic production of Egypt, but rather the implications of the underlying principles in terms of our understanding of Egyptian thought. Our approach differs from that of Kemp & Rose, but they correctly observed that in ancient Egypt,

the Golden Section proportion ... was never recognized as such, and thus was not coded... The fluidity with which different factors mixed was aided by the way that the Egyptians moved from concept to actuality. ... [The procedure itself] is important for it reveals a mode of thinking and a process of ad hoc working that has grown unfamiliar to the modern Western and Western-influenced world.⁷

We will argue that far more than mere subconscious concepts determined the creation of Egyptian art, and that these betray thought processes complementary with a non-verbally expressed system of spatial-temporal classification. The "Western and Western-influenced" systems of thought referred to by Kemp & Rose were among the means by which verbally expressed thought eclipsed evidence of other kinds of thought.

Before approaching this method, we must refer to the corollary of Goldwasser's assumption, as expressed by the Assyriologist Bottéro who remarked of objects that their "testimony is reticent, vague, ambiguous if not fallacious", concluding that "archaeological sources do not inform so much as illustrate what we know from elsewhere" (meaning from philological sources).⁸

In fact, however, it is difficult to claim that the philological sources really provide a substantial contrast to what Bottéro claims to be the fundamental weakness of archaeological sources. In the case of Spell 17 of the *Book of the Dead*, Rößler-Köhler has demonstrated that the spell was a compendium of incompatible and contradictory interpretations of the Beyond from the very beginning.⁹ And Schenkel has argued that the commentaries in the predecessor text, Coffin Text Spell 335A, appear to be almost contemporary with the original intact text.¹⁰ Thus, the capacity to translate the text and to interpret it does not lead to any clarity about its meaning, except to highlight the fact that the Egyptians had some vague and inconsistent ideas about the Netherworld—and that they were completely conscious of the problem.

And certainly, archaeologists could claim that one could reach essentially the same conclusions from archaeological material—without recourse to texts.¹¹ Thus, at the very minimum, one would be obliged to recognize that the texts do not offer clarity—and yet the claim of the verbally based school is that this is the way in which thought is expressed; and also the means by which thought can be approached, analyzed and understood. In fact, however, Assmann has stressed that it is impossible to arrive at a uniform interpretation of Egyptian

⁶ Baines, J., 'On the Status and Purpose of Ancient Egyptian Art', *Cambridge Archaeological Journal* 4/1 (1994), p. 88.

⁷ Kemp, B. and Rose, P., 'Proportionality in Mind and Space in Ancient Egypt', *Cambridge Archaeological Journal* 1/1 (1991), p. 127.

⁸ Bottéro, J., *La Plus Vieille Religion*, Paris 1998, pp. 59-60. (My translations throughout for works not in English, or not cited in translated versions).

⁹ Rößler-Köhler, U., *Kapitel 17 des Ägyptischen Totenbuches* (=GOF IV, 10), Wiesbaden 1979, pp. 267-353.

¹⁰ Schenkel, W., 'Zur Redaktions- und Überlieferungsgeschichte des Spruchs 335 A der Sargtexte', in Westendorf, W. (ed.), *Göttinger Totenbuchstudien. Beiträge zum 17. Kapitel* (=GOF IV, 3), Wiesbaden 1975, pp. 37-79.

¹¹ Warburton, D.A., 'Literature & Architecture - Political Discourse in Ancient Egypt', in Moers, G., Behlmer, H., Demuss, K. and Widmaier, K. (eds.), *jnt dr.w. Festschrift für Friedrich Junge*, Göttingen 2006, pp. 706-707.

understanding on the basis of a textual analysis of *Book of the Dead* Spell 17, and that one should not strive to.¹²

Evidently, philologists could claim knowledge of a considerable quantity of detail (in terms of myths, divine names, etc.), but there is no way that the contradictions and inconsistencies of this philological detail are not exactly as “vague”, “ambiguous” and “fallacious” as Bottéro suggested was the weakness of archaeological evidence. Thus, one can state that the philological detail does not really have the advantages that Bottéro suggests. Even if the deities can be named, it is far from certain that we can actually grasp the “meaning”.

Significantly, however, authors continue to approach the Egyptian religion with the concept of organizing and unifying the written sources into a uniform system—and yet it is clear from CT 335A that this uniform system never existed. For the author, the implication is that both Goldwasser and Bottéro are members of a dominant school simply claiming—but not demonstrating—that “meaning” can only be approached through language. Although Goldwasser has obviously relied heavily on the system of writing rather than forms of linguistic expression, we contend that writing is dependent on language, even if language is also heavily dependent upon writing. Sources from the world of “Art & Architecture” are really quite different, and these can be approached differently, whereas it is generally the case that when viewing art, scholars tend to assume that it can be reduced to a verbal meaning.

Furthermore, we argue that this fundamental assumption effectively dominates most archaeological and art historical work, as will be found in the works of Boardman,¹³ Leroi-Gourhan,¹⁴ Gombrich,¹⁵ and Panofsky¹⁶ (etc.). The underlying approach of this school is that any work of art reflects a previously conceived verbally expressed meaning. This way of viewing art reduces it to being an alternative means of expressing thoughts which were already expressed verbally.

However, the evidence is that verbally expressed thoughts are far from clear and coherent, as we noted above in Assmann’s conclusion that BD 17 cannot be used to understand Egyptian religion. In fact, therefore, textual analysis has demonstrated that the basic premise of this school is an error. By contrast, archaeological analysis reveals that careful study can actually provide glimpses into systems of thought: thoughts which cannot be found in the texts.

Our concern here is specifically the importance of space and time, and here—despite his own observations—Assmann clearly shares this philological approach, assuming that meaning will be found by philological analysis.¹⁷ By contrast, Hornung has demonstrated that the Egyptians used form, size, measurements, location and imagery to express thoughts which probably were not expressed in the form of a conscious verbal equivalent.¹⁸ There can also be no doubt that both Krahmer¹⁹ and Groenewegen-Frankfort²⁰ were persuaded that Egyptian art gave access to Egyptian understanding of space and time in a far more wide-ranging fashion than the specific cases for which Hornung has found evidence.

However, these approaches have never been systematized. When trying to develop a methodology for understanding art as a social institution, Gell dismissed the traditional, symbolic, understanding of art, and thus his work found little sympathy among those who assumed that a linguistic analysis should allow for such content.²¹ Instead, one could argue that Gell was actually hitting at the most important, fundamental, role of art—as the key to

¹² Assmann, J., *Re und Amun* (=OBO 51), Fribourg 1983, p. 7 with note 8.

¹³ Boardman, J. *The World of Ancient Art*, London, 2006.

¹⁴ Leroi-Gourhan, A., *Les Religions des la Préhistoire*, Paris, 1964.

¹⁵ Gombrich, E., *The Story of Art*, Oxford, 1972.

¹⁶ Panofsky, E., *Meaning in the Visual Arts*, New York 1955.

¹⁷ Assmann, J., *Zeit und Ewigkeit im Alten Ägypten* (=AHAW 1975/1), Heidelberg 1975.

¹⁸ E.g., Hornung, E. *Valley of the Kings*, New York 1990, pp. 186-189.

¹⁹ Krahmer, *Figur und Raum*.

²⁰ Groenewegen-Frankfort, *Arrest and Movement*.

²¹ E.g., Coquet, M., Review of Gell, *Art and Agency*, in *L'Homme*, 157 (2001), <http://lhomme.revues.org/document5658.html>.

understanding social identity.²² However, Cooney has recently demonstrated beyond the shadow of a doubt that the aesthetic aspects of Egyptian art must be considered when trying to estimate social value.²³ Rather than taking issue with these various approaches, we will merely assume that no one will contest the concept that Egyptian art played a fundamental role in the expression of Egyptian identity—and proceed to the next level.

Regardless of one's analysis of the meaning of any given work of art, we will assume that an original Egyptian creation will be immediately recognizable as such, just as an "Egyptianizing" piece will be eternally debatable. Obviously, each in their own way, such pieces express something fundamental which is not resolved by classifying the one as "Egyptian(?)" and other as "Levantine(?)". There are nuances which are lost to us, some of which may have been formulated in verbal thought and since lost—but also some elements which may never have been verbally expressed.

Our argument here is that thoughts may not have been expressed verbally until after the creation of the physical artefacts which inspired them, i.e. that thought requires stimulation (as is obviously the case with modern academic debate). Obviously, however, the creation of any work of art depends upon a complex mental interaction whereby compromises must be made in reducing time and space to a material expression. However, this mental process can also lead the artist to overcoming the constraints of time and space. This is accomplished by creating a work which endures on its own (e.g., a simple figurine), one which is copied, or indeed by creating a work which comes to represent an era (such as the pyramid of Cheops) or a world (such as the statues of Khafren).

Although we are accustomed to innovative original creations, most art in Antiquity was representative, and thus depended upon a capacity to reduce something to an essence which was then preserved in the form of the representation. Whether sculpture, relief or architecture, the procedure depended upon a process of mental transformation, whereby a real (or conceptual) thing was rendered concrete. Peculiarly, however, none of these processes involved requires verbal expression, as the entire process from conception & execution to exhibition & survival does not rely on verbal thought. And yet the key to the ultimate understanding of "meaning" as grasped by humans—that is, immortality—lies precisely in this process.

Creation of this type represents a capacity to express time and space in art without recourse to verbal expression. And analysis of this aspect can enable us to follow conceptual processes. We argue that the search for a superficial interpretation of the "meaning" of an object bears no relationship to the fundamental message which it conveys about world view. In fact, to some degree, this search is erroneous, as the medium imposes the problem of "meaning" on us. We understand this as perception, whereas the artist was working on the level of expression, and combining several different thoughts into a single creation. By definition, art is provocative and ambivalent and the idea that a meaning can be sought in the artwork itself may be mistaken. However, the fundamental and decisive cognitive processes which determined the creation of any given piece of art will betray the thoughts of the civilization—and in a fashion which is at once unequivocal, historical and not verbally expressed.

Virtually all complex art dates to the period after the invention of states and writing. Therefore it is arguably historical—and we would argue that it is erroneous to suggest that the basic thoughts as expressed in terms of perception and expression were present before the transformation of human society; and the absence of complex art represents a strong argument in this case. Thus, these societies gave birth to the context in which thought could leap to another level, rendering abstract thought, as we understand it, possible. Significantly, although neurologically possible, thought of this kind is not necessarily biologically innate. And, fundamental thoughts were not reproduced in writing or language. Understood thus, these thoughts provide access to a world view.

²² Gell, A., *Art & Agency. An Anthropological Theory*, Oxford 1998.

²³ Cooney, K. M., *The Cost of Death*, (=EU 22), Leiden 2007, p. 6.

Time & Space in Art & Language

There are a number of Egyptian words which define time in a specific fashion (e.g., *ḥꜥ*, *rnp.t*, *rk*, *hrw*, *sp*, *3.t*, *grh*, *tr*) and a few which define time more generally or conceptually (e.g., *nḥh*, *h3w*, *d.t*). The same applies to space (e.g., *s.t*, *sp.t*, *njw.t*, *h3s.wt*, *t3*, *t33*). However, it has been pointed out that *d.t* takes us into the time-space continuum, uniting solar cycles with geography. And Hornung has shown that this appears in art, in a fashion which is never expressed verbally:

This extreme circumference of the existent, to which the Egyptians give the visual form of the "curled snake (*mḥn*)," is both spatial and temporal. The snake curled back on itself encompasses a four-dimensional world that has an end—which the spherical models of modern physics also present as turned back on itself; the Ouroboros seems to be the only visual symbol that shows this turning back on itself.²⁴

This is a relatively simple and straight forward case of an artistic representation which expresses a thought which could be expressed verbally and is recognizable to us.

However, the principles underlying the creation of a work of art can be interpreted in the same fashion. When dealing with representations on taut surfaces (flat, cylindrical, globular), Groenewegen-Frankfort argued that the "relationship between two objects creates a significant void". This space creates a context for movement. At the same time, however, she also noted that

... For there is no way of transferring the contour of the human form, especially in movement, to a flat surface in which the problem of depth does not become acute.²⁵

To skip forward, we will refer to one single example which must suffice for the understanding of the problem in ancient Egyptian art. Referring to the girl in the the tomb of Rekhmire, Groenewegen-Frankfort notes:

In fact, when once and once only in the historical development of several millennia the three-quarter back view of a serving girl appears in a Theban tomb with the proportions of perfect functional rendering..., the effect is positively startling. She appears a strange disturbing phenomenon in a spatial world which, for better or worse, is alien to ours.²⁶

In another reference to this same girl, she says

In this otherwise smooth scene, however, the *trois quarts* back view of one of the girls ... is very startling indeed and seems quite incongruous; seen from a definite angle, she has—in contrast with all other figures—'corporeality', appears in fact in space. It is as if the artist was frightened by his own boldness, for he drew the feet adhering to the groundline in the traditional, and in this case absurd, old way.²⁷

This approach represents the usual interpretation: Egyptian understanding of space was quite different from ours; Schäfer resolved the complexities by drawing on children's art.²⁸ However, a contemporary of Schäfer's took a very different line:

²⁴ Hornung, E., *Conceptions of God in Ancient Egypt*, Ithaca 1993, pp. 178-179.

²⁵ Groenewegen-Frankfort, *Arrest and Movement*, p. 6.

²⁶ Groenewegen-Frankfort, *Arrest and Movement*, p. 9.

²⁷ Groenewegen-Frankfort, *Arrest and Movement*, p. 93.

²⁸ Schäfer, H. *Principles of Egyptian Art*, Oxford 1986.

In Egypt—where perspective was carefully observed as demonstrated by the occasional foreshortened figures—this could have led to the discovery of perspective as a form of artistic expression ... However these few attempts, which led nowhere and were thus consigned to oblivion, prove that this form of representation did not appeal to the Egyptians and that for them it was little more than a curiosity.²⁹

The figurative ostraca from Deir el-Medineh make it certain that Krahmer's observation was correct, and that the failure to develop perspective was not a matter of a terror of the unknown, but rather a lack of interest. We argue that Krahmer was on the right track, and that we can usefully pursue the argument he began in the 1920's.

Krahmer's system was based on the assumption that the orthogonality of Egyptian art—both plastic and relief—must be understood in terms of a specific understanding of space. Krahmer compared our "Classical, perspective"-influenced understanding of space, which he termed "dynamic", with the "static space" of the Egyptians.³⁰ In his version, depth was effectively non-existent in Egyptian art, and one has the unnerving experience of noting that the Egyptians played with this lack of depth (as with the single shawl wrapped around three jackals, or the *ankh*-sign hanging off a mountain, both in TT 359).³¹

Rather than arguing that the Egyptians were "frightened" of perspective, we argue that we should be wary of imposing our understanding of time and space on them—and cautious in assuming that Egypt was merely a stage on the way to discovering the way "things should be done". Thus, rather than drawing back, we follow Krahmer.

Krahmer distinguishes a hypotactic (typically "Classical, perspective") form of art where each member of the human body is subordinated to the movement of the others, from the fundamentally different paratactic form (typically Egyptian) where each member is depicted as an ideal independent of others. For Krahmer, each of the systems must be understood in terms of dynamic and static space: hypotactic "Classical, perspective" art relies upon dynamic space; paratactic Egyptian art does not have depth: it understands the dimensions in what Krahmer terms "static space". Krahmer concludes:

After these analyses it becomes completely clear that ... there is no difference between the "frontal view" in plastic and the "twisted view" of the reliefs, and that it is only because we conceive space as a dynamic unity that there appears to be a contrast... Depth plays a completely different role in Egyptian art, as indeed in all pre-perspective artistic conceptions.³²

For Krahmer therefore, the cubic form which typifies so many Egyptian statues was not a cage within which the figure was imprisoned. Instead, each of the planes defining the sides, base, top and bottom of the statue were merely segments of the dimensions which continued infinitely in all directions, crossing each other perpendicularly. For Krahmer, the tension of the dimensions was the glue which held the various parts of Egyptian statues together. In fact, for Krahmer, a "three-dimensional" hypotactic Greek statue was not three-dimensional at all, but rather dimensionless; the Egyptian paratactic version was absolutely three dimensional in the sense that it came into existence where the dimensions met, and exploited the clash of the dimensions in static space to achieve perfection, in the balance between the dimensions.

²⁹ Krahmer, *Figur und Raum*, p. 64.

³⁰ The phrase "Classical, perspective" is a compromise here, used to designate those perspective styles appearing from the fifth-century onwards in Greece, and henceforth elsewhere. Neither "Greek" nor "Pre-Perspective" is adequate since obviously Archaic Greek art is still "Greek" and "pre-perspective" is a misnomer in light of the Egyptian evidence.

³¹ E.g., Hodel-Hoernes, S., *Life and Death in Ancient Egypt*, Ithaca 2000, pp. 272-273.

³² Krahmer, *Figur und Raum*, p. 65.

Krahmer's static space is thus explosive, rather than passive, like "Classical, perspective" space. This means that Egyptian space has a character which differs fundamentally from our own. When transferred from the art historical level to the philological and historical level, this understanding would imply that the concept of *d.t* being a form of inert linear time or space must be abandoned. Including temporal depth—of which the Egyptians were fully conscious—among the dimensions of this kind would render Egyptian thought dynamic. Firstly, the linear character of time would be transformed. Secondly, the role of the human in creating history is also given priority. In this sense, the concept of the Egyptians having been conscious of the necessity of establishing and maintaining Maat becomes a question of the imposition of human will on the universe; history becomes a human endeavour.

The three dimensions visible in art take on a different importance; furthermore, they are combined with temporal depth to create a fourth dimension. This fourth dimension would be different from our own since depth and space would play a lesser role in the three dimensions of static space. It would mean including time as an integral part of the space-time continuum—which has hitherto eluded western science. Krahmer's view of art thus offers a comprehensive understanding of the Egyptian world view, but expressed in a fashion which is not visible in the texts or the language.

In spatial depth, however, there is one point where the Egyptian image of depth did not differ from our own. Groenewegen-Frankfort noted:

Only the colour blue will, for obvious reasons, suggest pure depth.³³

Thus, one can use a colour to depict spatial depth, and many of those who have seen it will have a vivid memory of the sky-blue background of the stele at the back of the tomb of Sirenput.³⁴ The light blue background of the stele gives it the impression of being a window—even though it is at the deepest part of a rock cut tomb. Obviously, we perceive depth here. This is important because: firstly, we noted that Krahmer's system basically assumed that the Egyptians did not assign spatial depth a crucial role, and secondly, because of a linguistic element, as expressed by Baines:

...blue plays no part in color symbolism in texts³⁵ (Baines 1985: 283)

Baines assumed that the Egyptian word *w3d* covered green and blue, and that lapis lazuli, *hsbd*, was not an abstract colour term. Baines argued that ancient Egyptian corresponded to an early evolutionary stage of a model proposed by Berlin & Kay,³⁶ in which the Egyptian language had only four colour terms: black (*km*), white (*hḏ*), red (*dšr*) and green-blue (*w3d*). It is evident that by dismissing *hsbd* and assigning *w3d* to the green-blue spectrum Baines had denied that there was an Egyptian word for blue. Thus his observation about the absence of symbolic blue meanings in texts was not an observation or a conclusion but purely circular logic.

However, the Egyptian term *w3d* was not green-blue, but actually green.³⁷ This means that the blue range was in fact unoccupied, and thus it is logical to adopt the stance of those scholars who have proposed that lapis lazuli occupied this part of the spectrum. Taking *hsbd* as a word for blue, Quirke argues that the theoretical structure upon which Baines relied was

³³ Groenewegen-Frankfort, *Arrest and Movement*, p. 5.

³⁴ Lange, K. & Hirmer, M. *Egypt*, London 1968, pl. XIII

³⁵ Baines, J., 'Color Terminology and Color Classification: Ancient Egyptian Color Terminology and Polychromy', *American Anthropologist* 87 (1985), p. 283.

³⁶ Berlin, B. and Kay, P., *Basic Color Terms: Their Universality and Evolution*, Berkeley 1969.

³⁷ Schenkel, W. 'Color terms in ancient Egyptian and Coptic', in MacLaury, R., Paramei, G. V., and Dedrick, D. (eds.), *Anthropology of Color: Interdisciplinary Multilevel Modeling*, Amsterdam, 2007, p. 226.

probably not applicable to Egyptian.³⁸ In fact, the use of lapis lazuli and blue pigments in Egyptian art and literature renders it impossible to maintain Baines's view.³⁹ Thus, blue must be recognized in the context of spatial and conceptual understanding—but a blue related to a specific material, and not an abstract blue.

This particular feature is of key importance for our argument since the scheme developed by Berlin & Kay recognized the Greek word for blue (*kyaneos*) and the Italian word for blue (*azzurro*) as “abstract colour terms” whereby both they and Baines denied that Egyptian *ḥsbḏ* could serve as an abstract word since it was concrete lapis lazuli (and the same treatment is proposed for the Akkadian word as well). However, like the French *azur* and the English *azure*, the Italian *azzurro* is derived from the Persian word for lapis lazuli (*lazuward*),⁴⁰ as the Greek is originally derived from the Akkadian word for the same stone (*uqnu*).⁴¹ Thus, the words are not the product of an evolution in either of these languages, and they only became abstract when exported beyond the region where the material was common; only as loan words did they become abstract.⁴²

Thus we can see that what later became abstract terms for colours were actually related to physical materials (as is indisputably the case for *ḥd*, “silver” / “white” in any case) in some languages and only by exchange did they become abstract. We argue that this did not really take place until the Iron Age or perhaps not even until the Middle Ages in Europe. It certainly does not seem to be present in the languages of the Bronze Age. At the same time, however, the use of blue in certain contexts in art, such as the tomb at Aswan, and the concept of the *sh.t mfk3.t*, the heavenly “field of turquoise”, suggests that the Egyptians were fully conscious of the value of blue for expressing abstract spatial depth. Remarkable is that they were able to do this although (a) they had no word for blue, and although (b) their linguistic categories did not include an abstract word for space, and although (c) their artistic system did not rely on spatial rendering as we understand it.

Conclusions

Linear, static space is the context for historical activity, yet our historical horizon cannot reach beyond the invention of writing. Rather than appreciating this limit as applicable to human vanity, it has been assumed that it also applies to the understanding of meaning. The limits of verbal expression are thus imposed on meaning in a fashion which allows scholars to assume that meaning is invariably encoded in language. They contend that without written sources we lack access to meaning. This allows them to assume that complex thought was simply not recorded—rather than allowing that the urban civilisations of the Ancient Near East created the conditions which allowed it to come into existence.

In this discussion, we have tried to argue that the ancient Egyptian understanding of time and space was visible in their art, but not expressed in language; and also suggested that Egyptological approaches have obscured these processes.

We argue that social developments and art are generally disregarded in the analysis of thought, and understanding is assigned to language. At the same time, however—and this is our

³⁸ Quirke, S., ‘Color Vocabularies in Ancient Egyptian’, in Davies, W.V. (ed.), *Color and Painting in Ancient Egypt*, London, 2001, pp. 186-192.

³⁹ For more detailed discussions, cf. Warburton, D. ‘Basic color term evolution in light of ancient evidence from the Near East’, in MacLaury, R., Paramei, G. V., and Dedrick, D. (eds.), *Anthropology of Color: Interdisciplinary Multilevel Modeling*, Amsterdam, 2007, pp. 229-246; Warburton, D., ‘Colourful Meaning: Terminology, Abstraction, and the Near Eastern Bronze Age’, in Johannsen, N., Jessen, M. & Jensen, H. J. (eds.), *Cross-sections through culture, cognition and materiality*, Aarhus, forthcoming.

⁴⁰ *Le nouveau Petit Robert de la langue française*, Paris 2007, p. 202.

⁴¹ Von Soden, W., *Akkadisches Handwörterbuch*, Wiesbaden 1981, III: 1426.

⁴² For this, see the literature in note 39, *supra*.

central argument—it is paradoxically assumed that this understanding can be projected back in time, and assigned to a biological paradigm, which extends back to before the dawn of history. The task of the archaeologist is merely to recognize the steps. Our argument here is that in this fashion, we can never appreciate the history of the creation of abstraction. Abstract space and thought are historical artefacts, and Egypt played a crucial role in creating them.

Therefore, our first point is that to understand the Egyptian system of classification, we must include their art and architecture, quite aside from their linguistic categories. Among features distinguishing Egyptian art and thought from Greek are:

Egypt	Greece
Artistic view as paratactic expression	Artistic view as perspective, hypotactic perception
Construction as extension	Construction as renewal
Space is explosive, static	Space as depth for dynamic human activity
Time is linear spatial, human future to be made in future	Time as human, but golden age in divine past

This system is not a mere system of classificatory distinctions: the distinctions allow insights into a foreign way of thought. There are differences in the art which betray contrasting means of temporal and spatial understanding.

But invisible here is the (far more important) fact that the verbal discourse of Ancient Greece also introduced the discussion of concepts which were never discussed in the Ancient Orient. Hitherto, it has been assumed that this reflected a weakness in pre-Greek thought. Now, however, the discovery of Babylonian mathematical sciences has opened the way to a science which was expressed in terms of results rather than discussion.⁴³ It has been alleged that Egyptian science was less advanced than the Babylonian, but Krauss's synthesis of the earliest Egyptian astronomical thought renders this impossible.⁴⁴ Significantly, these scientific thoughts were not expressed in the form of discourse.

In the same way, the complex thoughts visible in the artistic creations of Ancient Egypt were never expressed verbally: Greek practice represented an extraordinary leap in comparison to the methodology of the Ancient Near East. However, this means neither that the Egyptians did not cultivate such thoughts, nor that those expressed verbally by the Greeks are representative of ordinary forms of human thought which were merely unrecorded before the invention of writing.

Significantly, the Egyptians did "develop an interest in time and motion", although Kemp once suggested that they did not.⁴⁵ However, they approached the matter differently. The turquoise trees of chap. 17 of the *Book of the Dead* and the blue tree of TT 359 not only reveal that Egyptian trees were not invariably green (despite protests to the contrary, e.g., Wolf),⁴⁶ but also confirm that such exceptions give access to how the Egyptians did approach space (which is the precondition for approaching time and motion).

We must draw on Egyptian evidence to develop theoretical structures compatible with the results of recent scholarship, rather than trying to draw on existing theory and applying it to Ancient Egypt. This means approaching the material itself, both linguistic and architectural.

We contend that the Egyptian artistic forms were the essential precondition for the emergence of abstract verbal thought. Viewing Egyptian means of expression in art and

⁴³ Cf., e.g., Swerdlow, N. M., *The Babylonian Theory of the Planets*, Princeton, 1998.

⁴⁴ Krauss, R., *Astronomische Konzepte und Jenseitsvorstellungen in den Pyramidentexten*, Wiesbaden, 1997.

⁴⁵ Kemp, B. J., *Ancient Egypt*, London 1989, p. 4.

⁴⁶ Wolf, W., *Die Kunst Ägyptens*, Stuttgart, 1957, p. 68.

architecture from this standpoint means that we must abandon relying almost exclusively on the linguistic approach if we are really to understand Egyptian thought. Many linguistically expressed concepts, such as time and space, depend upon a foundation. We argue that these ideas depend upon a concrete form of expression in order for the linguistic form to appear. Thus, one cannot project the verbally known form of meaning back to an age before the creation of the art which made it possible for the conceptual systems to appear.

Defining the categories of what we seek means that we will find what we are looking for. To avoid confusion we must understand what happened in ancient Greece—but also what the Egyptians did. Only thus can we appreciate how the foundations for the transformation of human thought were established in Egypt.

Thus, we argue that by assuming abstraction as a condition and principle, we cannot find our concepts in Egypt—at least not without losing Egypt.

Abstract

Regardless of perception, existence takes place in time and space, yet the perception of time and space is decisive for any understanding of being. Ancient Egypt played a dual role by creating means of expressing time and space which ultimately changed perception. Understanding this means throwing our understanding of “meaning” as expressed through verbal expression into doubt, and examining the means exploited by the Egyptians. For several millennia after the dawn of history, the most widely recognized form of expression was verbal. With the appearance of cinema, television and advertising the image is recovering its value as means of conveying information. However, the image was never entirely discarded: from ancient murals to medieval illustrated manuscripts imagery featured as a means of expression. Furthermore, architecture continued to play a role from before the beginning of history through to the present day. Thus, although we tend to neglect them, assuming that “meaning” is to be sought in verbal expression actually precludes access to important avenues which give access to a culture which exploits other means. Egyptian understanding of time and space was more human influenced than ours.