



RESEARCH ARTICLE

## “What do Egyptian gods look like?”

### Heuristics and visual perception in the interpretation of Egyptian art and religion

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#### Abstract

It is often stated that representations of Egyptian deities, such as the animal-headed gods, are better understood as ‘ideograms’—such images do not reflect the ‘true’ appearance of divine figures, which are ultimately hidden. This article explores how this scholarly interpretation can be attributed to heuristics and perceptual differences, by drawing upon cognitive research on religion and visual perception. While the notion that Egyptian gods possessed hidden ‘true forms’ holds appeal to an analytical approach to religion, such a viewpoint is unlikely to reflect the full extent of religious experience, which readily accommodates multiple theological concepts. Meanwhile, the resemblance of certain deities to ‘ideograms’ can be ascribed to the modern viewer’s familiarity with point-projection images, as well as a tendency to segregate Egyptian images into individual parts. Such sentiments are unlikely to have been shared by the ancient viewer.

**Keywords:** Egyptian art, Egyptian religion, heuristics, visual perception

كيف تبدو آلهة مصر؟ التصاور المرئية لفهم الفن والديانة المصرية

الملخص

يتم وصف تمثيلات الآلهة المصرية، مثل الآلهة ذات الرؤوس الحيوانية، في كثير من الأحيان بأنها "علامات تصورية"، حيث لا تعكس هذه الصور الهيئة "الحقيقية" للشخصيات الإلهية، التي تكون مخفية. يستكشف هذا المقال كيف يمكن لهذا التفسير العلمي المساهمة في فهم التصاور المرئية والاختلافات التصورية، من خلال الاستفادة من الأبحاث حول الدين والتصوير المرئي. على الرغم من أن فكرة وجود "هياكل حقيقية" للآلهة المصرية قد تبدو مقبولة من منظور تحليلي للمفاهيم الدينية، إلا أن هذا الرؤية قد لا تعكس تماماً تجربة الدين بشكل كامل، التي تتسع بسهولة لمفاهيم لاهوتية متعددة. وفي الوقت نفسه، يمكن أن يرجع التشابه بين بعض الآلهة و "العلامات التصورية" إلى ميول الرأي الحديث نحو الصور الرمزية، بالإضافة إلى ميله نحو فصل الصور المصرية إلى أجزاء فردية. ولا يبدو أن مثل هذه المشاعر كانت مشتركة في وقت الرأي القديم.

الكلمات الدالة: الفن المصري، الديانة المصرية، التصاور المرئية، الإدراك البصري

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## 1 Introduction

This article explores the heuristics often employed in the interpretation of ancient Egyptian images and beliefs. Its starting points are a couple of interpretations relating to the appearance of Egyptian gods, which I believe highlight certain predilections in scholarly analysis. For this reason, the discussion will derive substantially from cognitive research on religion and visual perception. However, by pursuing this line of inquiry, many aspects and nuances of ancient Egyptian religion and pictorial representation can only be treated in a cursory manner. I should add that this paper is not intended to be a study on the appearance of Egyptian gods, hence the ancient evidence discussed here will be limited to several illustrative examples.

To the modern viewer, the quintessential image of Egyptian religion is perhaps that of the composite gods, such as those that combine a human body with the head of an animal. For some scholars, these representations are better understood as ‘icons’ that are produced through the combination of symbolic features (HORNUNG, 1982: 113–7; TRAUNECKER, 2001: 46). A corollary to this view is that these images do not reflect how the ancient Egyptians would have envisioned these gods in their mind’s eye. One of the earliest proponents of this view was Henri Frankfort:

I suspect that the Egyptians did not intend their hybrid designs as renderings of an imagined reality at all and that we should not take the animal-headed gods at their face value. These designs were probably pictograms, not portraits. (FRANKFORT, 1948: 12)

Frankfort’s view has since been echoed by other scholars, many of whom understood such images as allusions to specific qualities of the gods, rather than a reflection of their appearances (HORNUNG, 1982: 11; SILVERMAN, 1991: 16–7; TOBIN, 1988: 173; TRAUNECKER, 2001: 45–6, 56). In his influential treatment of the subject, Erik Hornung asserted that the ancient Egyptians themselves were equally aware of this notion:

According to the texts the true form is “hidden” and “mysterious”; the Coffin Texts tell us that only the deceased may know the true form of a god (CT VI, 69c, 72d). No thinking Egyptian would have imagined that the true form of Amun was a man with a ram’s head. (HORNUNG, 1982: 124–5)

In addition, HORNUNG (1982: 113–8) pointed to a number of ‘marginal cases’ that underline why depictions of Egyptian gods should be viewed as ‘ideograms’. For the purpose of this article, we will focus on two specific examples: the composite form of Khepri, whose head is represented by a scarab beetle (Figure 1); and Selkis, who is depicted as a woman with a scorpion on her head (Figure 2).<sup>1</sup>

Firstly, it must be acknowledged that Frankfort and Hornung’s interpretations can be disputed based on elements in the ancient Egyptian evidence. For instance, one could question if the ‘true form’ of gods described in CT VI, 69c, 72d<sup>2</sup> relates to visual appearance in the modern sense, as it could possibly refer to a cult image. More fundamentally, these scholarly views assume that Egyptian images had a ‘representationalist’ relationship to the depicted entity, a notion that is largely based on modern worldview (NYORD, 2020b: 2–3). In the ancient Egyptian context, however, images are perhaps better understood as ‘presence’, whereby an image can be regarded as the very manifestation of what it depicts (NYORD, 2020b: 1–6, 9–28). The importance of this ontological consideration cannot be overstated—in such a framework, an image can be viewed as the very actualization of a deity, thus the search for its ‘true form’ becomes somewhat of a moot point.

<sup>1</sup>As SPIESER (2001) pointed out, the iconography of Selkis involves elements from both the scorpion and the water scorpion (*Nepa*). For discussions on Egyptian representations of scorpions, *Nepa*, as well as scorpion deities, see VERNUS and YOYOTTE (2005: 449–55), VERNUS (1998: 35) and STOOFF (2002). For discussions on scarabs and Khepri, see VERNUS and YOYOTTE (2005: 441–8) and MINAS-NERPEL (2006). For the tomb of Nefertari (QV 66), see McDONALD (1996).

<sup>2</sup>DE BUCK (1956). For translations, see FAULKNER (1977: 133–4). See also NYORD (2020a), who questioned whether funerary texts should be understood as literal descriptions of the afterlife.



Fig. 1: Depiction of Khepri from the Tomb of Nefertari (QV 66). Photo: Guillermo Aldana. © J. Paul Getty Trust, 1992. Used with permission. *Image cropped.*

More relevant to the aims of this article, however, is that the cited interpretations allow us to probe the heuristics involved in their formation. If we regard depictions of Egyptian gods as ‘ideograms’ that do not reflect their true form, we are faced with several paradoxes. For instance, if all divine representations are ideograms, why do scholars often agree that certain examples (such as those in Figure 1 and Figure 2) are ‘more ideographic’ than others (e.g. [HORNUNG](#), 1982: 117 and [NYORD](#), 2013: 151)? Furthermore, while there are clear references to the hiddenness of deities,<sup>3</sup> there is also an abundance of pictorial and written evidence alluding to their physical appearances.<sup>4</sup> If we adopt a ‘multiplicity of approaches’<sup>5</sup> to Egyptian religion, one could argue that these two sets of evidence are not necessarily contradictory—the hidden quality of gods should not invalidate their tangible manifestations.<sup>6</sup>

<sup>3</sup>See for example [ASSMANN](#) (1995: 136–55) for the hiddenness and divine transcendence of Amun.

<sup>4</sup>See for example [ROTH](#) (2006: 26), who demonstrates how Egyptian myths tend to present divine figures as having human-like behaviour and bodily features.

<sup>5</sup>This term, which originated in an essay by [FRANKFORT](#) and [FRANKFORT](#) (1946: 16), is commonly used to describe the flexibility of Egyptian beliefs, which often accommodated elements that are seemingly contradictory. For instance, the actors involved in a particular mythical episode are often interchangeable, and could be altered to fit the ritual context in which they are evoked ([GOEBS](#), 2002). In the Pyramid Texts, for example, the divine figure that delivers the Eye of Horus to the deceased may be variously named as Thoth, Horus, or Geb ([GOEBS](#), 2002).

<sup>6</sup>In pursuing this line of questioning, I am, admittedly, omitting much of the discussion relating to concepts such as the *b*, *hprw*, and the transcendence of Egyptian gods. See for example [ASSMANN](#) (1995: 133–55), [ASSMANN](#) (2001: 6–13, 40–7), [MEEKS](#) and [FAVARD-MEEKS](#) (1997: 53–63) and [HORNUNG](#) (1994).



Fig. 2: Depiction of Selkis from the Tomb of Nefertari (QV 66). Photo: Guillermo Aldana. © J. Paul Getty Trust, 1992. Used with permission. *Image cropped.*

This article aims to address these questions in sequence. In the first section, I examine if there is a cognitive explanation as to why a strict interpretation of the hiddenness of Egyptian gods may be favoured in scholarly analysis. The second section explores what makes certain representations, such as the composite form of Khepri, appear more ‘ideographic’ to the modern eye.

## 2 The ‘true form’ of Egyptian gods

The notion that god is ultimately formless is one shared by many modern belief systems, including the major scriptural religions. In spite of this, cognitive research<sup>7</sup> suggests that people tend to have more than one concept of god, and that these concepts often contradict one another. One of the most influential studies in this domain was conducted by **BARRETT** and **KEIL** (1996). The experiment, which involved American university students of various faiths, consisted of a direct-response questionnaire and a narrative comprehension test.

In the questionnaire, participants answered questions regarding their conception of god; such as whether god is all-knowing, omnipresent, and can conduct multiple activities simultaneously. Subsequently, in the narrative comprehension test, the participants listened to short stories of about 100 words each before answering ‘yes’ or ‘no’ to a series of recall questions. Some of these questions were designed to reveal implicit concepts of god. For instance, one item read ‘God had just finished answering another prayer when God helped the boy’. This detail was not included in the story, but was included to serve as comparison with the participants’ answer in the direct-response questionnaire (i.e. the omnipresence of god).

The results indicate that participants often gave contradictory answers in the two sections. In the questionnaire, most participants provided theologically-correct responses of god as being non-anthropomorphic, omnipresent, and not subjected to physical constraints. Conversely, in the narrative comprehension test, participants often assigned human attributes and physical constraints to god’s actions, even though such details were not part of the stories given to them. The researchers concluded that people seem to have multiple

<sup>7</sup>For a brief overview of recent developments in the cognitive science of religion, see **PYYSIÄINEN** (2012).

concepts of god depending on contexts, and these concepts can be fundamentally incompatible.<sup>8</sup>

To assess the cross-cultural validity of these findings, the experiment was replicated with Hindu subjects in northern India (BARRETT, 1998). This population was selected because even though devotional Hinduism regard the Supreme Being (Brahman) as formless and non-anthropomorphic, certain divine beings (such as Krishna, Vishnu and Siva) are regularly depicted in human form. Here, similarly, the results indicate that participants tended to have multiple concepts of each god. The experimenters had also assumed that the degree of anthropomorphism could be lower for Brahman, the formless god. The results, however, indicate that Brahman is anthropomorphised to a similar degree as deities that are regularly depicted in human form.

Surprisingly, familiarity with religious concepts seems to correlate with anthropomorphic conceptions of god. In studies conducted on Finnish adults and American college undergraduates, researchers found that the more religious the participants, the more likely they were to attribute physiological properties such as ‘has bones’ or ‘has a height that can be measured in centimeters’ to god (SHTULMAN & LINDEMAN, 2015: 31).<sup>9</sup> A similar correlation was also noted in other studies (MOREWEDGE & CLEAR, 2008; SHTULMAN, 2010).<sup>10</sup>

These disparate concepts of god can be explained through dual-process theories of cognition, which distinguishes two types of cognitive processing: (i) an implicit and intuitive mode of thinking, and (ii) an explicit and deliberative mode of thinking.<sup>11</sup> More specifically, anthropomorphic concepts of divine beings reflect intuitive processing, whereas theologically-correct notions of god are a result of deliberative thinking.<sup>12</sup> Such dissonances in cognitive processing are not limited to the religious realm. In everyday life, we may possess a scientific understanding of a phenomenon (‘the earth revolves around the sun’), yet process the same phenomenon using folk accounts (‘the sun is moving from east to west’) (BARRETT, 1998: 617). These incongruities are merely mediated by a ‘myth of objectivism’, which provides a sense of order and coherence to our experiences (LAKOFF & JOHNSON, 1980: 185–8).

Deliberative processing may explain why scholarly studies tend to favour a narrow interpretation of the ‘true form’ of Egyptian gods, in that their tangible representations and their hidden quality cannot be simultaneously valid. Such an interpretation, I would argue, appeals to an analytical mode of thinking that seeks organization and coherence. Moreover, if each deity possessed an ultimate, hidden form, it would provide a semblance of order to the representations of Egyptian deities, which can often appear erratic and self-contradictory. This essentialist view, however, is unlikely to reflect the full extent of one’s religious experience. Indeed, when posed with the question ‘what do Egyptian gods look like?’, a scholar may instinctively picture ram-headed men and bovine-headed women, while at the same time believing that the ‘true forms’ of these deities are hidden and unknown.

<sup>8</sup>One of the main criticisms of this study concerns the language used in the narrative comprehension tests. Scholars such as SHTULMAN (2008: 1125) argued that terms such as ‘watching’, ‘listening’, and ‘being pleased’ implied an intentional agent, and served as cues to anthropomorphize god. Indeed, even when the experimenters replaced god with a supercomputer named ‘Uncomp’, the participants anthropomorphized the supercomputer roughly 40% of the time (BARRETT & KEIL, 1996: 230–1). See SHTULMAN and LINDEMAN (2015) for an extensive evaluation of these findings, as well as an overview of similar studies. For comments on the possible link between narrative and anthropomorphism, see McCAULEY (2000: 77–8) and WESTH (2013).

<sup>9</sup>Note, however, that the same participants were also more likely to attribute psychological rather than physiological concepts to god. For instance, god is often conceptualised as an agent able to exert force without possessing the material properties of a person (SHTULMAN & LINDEMAN, 2015: 32).

<sup>10</sup>However, there is also evidence contradictory to this: a study on adherents of Gauḍīya Vaiṣṇavism suggests that increased religious engagement leads to a decreased tendency to attribute anthropomorphic properties (CHILCOTT & PALOUTZIAN, 2016).

<sup>11</sup>For overviews of dual-processing models of human cognition, see EVANS (2008) and EVANS and STANOVICH (2013). It has been argued that this balance between explicit (i.e. theological) and implicit (intuitive, and often anthropomorphic) processing is central to the success and longevity of religious systems (TREMILIN, 2005).

<sup>12</sup>This implicit tendency to anthropomorphize divine beings has been interpreted in various ways. GUTHRIE (1993: 41, 177–8) believes that anthropomorphism is essential to religion, the result of a ‘perceptual strategy’ to interpret one’s environment as products of human agency. See also Boyer’s ontological explanation, which suggests that gods are most intuitively identified as human beings with unusual features (BOYER, 1994).

Indeed, Barrett’s summation of modern religious conceptions is reminiscent of Egyptian religion:

Theologically, God might be represented as either a list of decontextualized properties like omniscient, omnipotent, loving, etc., or be represented as a set of conditional attributes: If the context is A, God is W and X; if the context is B, God has properties Y and Z. In either case, a robust, developed concept of God is not available (BARRETT, 1998: 617).<sup>13</sup>

### 3 Systems of representations

In this article, terms such as ‘pictograms’ and ‘ideograms’ have been used to denote symbolic relationships that are not based on resemblance (i.e. Frankfort’s ‘pictograms, not portrait’).<sup>14</sup> However, it must be noted that there is no salient distinction between these terms and what is often understood as ‘images’ (ARNHEIM, 1974: 164). The semiotician Charles MORRIS (1971: 273) has pointed out that iconicity is simply a ‘matter of degree’.<sup>15</sup> Such judgments also tend to be culturally mediated—in scholarly discourse, for example, Western art is typically viewed as objective and logical, whereas non-Western art is often characterised as symbolic (BAHRANI, 2003: 90).

What does it mean when we characterise Khepri (Figure 1) as being ‘ideogram-like’? One way in which this has been articulated, for instance, is that such a representation is difficult to imagine in three-dimensional form (NYORD, 2013: 151). To this author, such a description makes intuitive sense—although it may be possible to imagine a beetle-headed human being, such an exercise appears more strenuous than to imagine a falcon-headed human being, or other depictions found in two-dimensional Egyptian art, such as offering tables and sacred barques.

This sentiment forms a good point of departure for our discussion. First of all, it should be noted that our perceptual ability to translate two-dimensional images into three-dimensional form is an acquired skill (DEREGOWSKI, 1984: 3–6).<sup>16</sup> This perceptual mechanism is not infallible, nor is it uniform across culture. For instance, susceptibility to optical illusions such as the Müller-Lyer illusion can differ based on one’s cultural background (DEREGOWSKI, 1989: 70).

One of the earliest systematic investigations on cross-cultural picture perception was conducted by the psychologist William HUDSON (1960). The study involved South Africans of various literacy levels, all of whom were shown line drawings of a ‘hunting scene’ consisting of a hunter, an elephant, and an antelope (Figure 3). Participants were then asked which animal is (i) nearer to the hunter; and (ii) being aimed at by the hunter.

The majority of the school-attending participants selected the antelope as the answer to both questions. On the other hand, illiterate participants tend to select the elephant as the hunter’s target, and regarded it as the animal nearer to the hunter. In other words, this group did not take the converging lines and relative sizes of the animals as depth cues, and perceived the image two-dimensionally.<sup>17</sup> They were ‘2D respondents’.

<sup>13</sup>The following quote by BOYER (2003: 119) is also relevant: ‘People’s explicitly held, consciously accessible beliefs, as in other domains of cognition, only represent a fragment of the relevant processes...[hence] theologies, explicit dogmas, scholarly interpretations of religion cannot be taken as a reliable description of either the contents or the causes of people’s beliefs.’ See also BAUER (2021)’s work on ambiguity in Islam.

<sup>14</sup>For a discussion on the use of these terms in Egyptology, see ANGENOT (2015: 105–7).

<sup>15</sup>For a brief overview on the definition of iconicity, see CHANDLER (2017: 47–50).

<sup>16</sup>Our persistent ability to see robust three-dimensional objects from flat images, as the philosopher Flint SCHIER (1986: 43) remarked, is little short of ‘a form of madness’.

<sup>17</sup>For an evaluation of HUDSON (1960)’s study, see JAHODA and MCGURK (1974) and DEREGOWSKI (1989: 63–4). Hudson’s work has been followed by numerous studies on cross-cultural perception, including DEREGOWSKI (1969), DEREGOWSKI (1980: 130–2), JAHODA and MCGURK (1974) and PERKINS and DEREGOWSKI (1982). For a summary of replications and variations of Hudson’s study, see HAGEN and JONES (1978: 187–9).

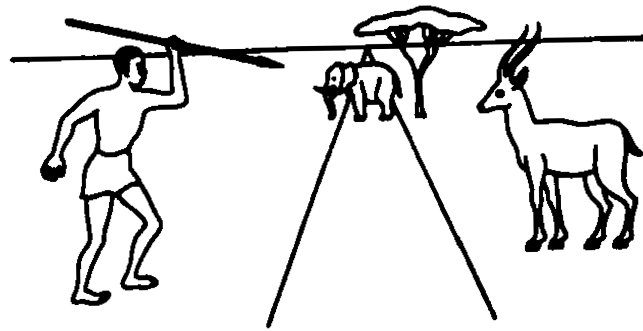


Fig. 3: One of the hunting scenes used in HUDSON (1960)’s study. Image © Taylor & Francis. All rights reserved. Reprinted by permission of Informa UK Limited, trading as Taylor & Francis Group, www.tandfonline.com.

It should be noted that the depth cues employed in Hudson’s line drawings are often not geometrically correct; they are merely an approximation of conventional depth cues in Western pictorial representations (HAGEN & JONES, 1978: 183). Our familiarity with these conventions can often be conflated with the accuracy of an image.<sup>18</sup> For instance, the image in Figure 4 is widely regarded as a ‘correct’ representation of a cube, even though such a depiction is impossible from the viewpoint of linear perspective (ARNHEIM, 1974: 266–7). At times, these familiar depth cues can lead to visual confusion, as demonstrated by ‘impossible objects’ such as the Penrose steps.

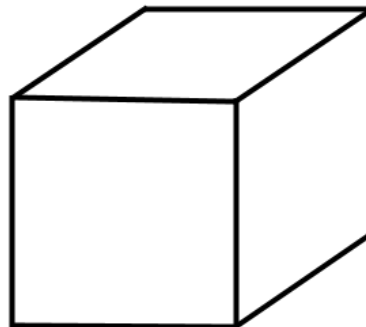


Fig. 4: This image is commonly perceived as an accurate representation of a cube, although it is incorrect from the viewpoint of linear perspective. Following ARNHEIM (1974: 266–7).

The production of 2D images necessitates pictorial information to be abbreviated, and this is typically addressed using artistic conventions (VAN DE VIJVER & POORTINGA, 1989: 95–6). These conventions can differ greatly across culture—viewers accustomed with East Asian art may find the perspective employed in Western art distorted, and vice versa (DEREGOWSKI, 1989: 72).<sup>19</sup> Indeed, linear perspective entails distortions which could appear unrealistic to the unfamiliar observer (ARNHEIM, 1974: 113–5).<sup>20</sup> The philosopher Nelson

<sup>18</sup>Umberto ECO (1976: 205) remarked that once we become accustomed with a particular system of representation, ‘the iconic representation, however stylized it may be, appears to be more true than the real experience’.

<sup>19</sup>Such perceptual differences have consequences beyond the realms of the visual arts. For instance, DE BRUÏNE et al. (2018) suggest that these factors should be heeded in asylum procedures and international criminal settings, which often rely on the identification of 2D images.

<sup>20</sup>Various accounts indicate that aesthetic styles now viewed as ‘realistic’ were often a source of confusion when they first emerged. For example, Umberto ECO (1976: 254) reported that early viewers of Impressionist art often had problem recognizing the subjects

**GOODMAN** (1968: 37–8) asserts that realism is simply a ‘matter of habit’, determined mainly by the system of representation that one is accustomed to.<sup>21</sup>

Likewise, Egyptian art only appears ‘unnatural’ when judged under a different visual standard (**ARNHEIM**, 1974: 113).<sup>22</sup> Our difficulties in translating certain images into three-dimensional form, therefore, are unlikely to have been shared by the ancient viewer. Like the participants who selected the elephant in Hudson’s test, we become ‘2D respondents’ when we misread the perceptual cues in Egyptian representations.

#### 4 Whose ideogram?

In life, when an object is first encountered, a common response is to move one’s head and feet to get a better grasp of its shape and dimensions from various viewpoints. The aspective view<sup>23</sup> of Egyptian art provides a fair approximation of such an impression, and represents quite an effective method of depicting objects. Even for viewers accustomed to linear perspective, the visual dissonance caused by aspective images can typically be resolved. For instance, few modern observers would have trouble comprehending the garden scene in Figure 5, even though it represents a dramatic departure from point-projection images.<sup>24</sup> Likewise, when a tomb owner is represented with one eye in full view, we do not infer that he has laterally placed eyes. In these instances, our familiarity with gardens and the human anatomy meant that the visual dissonance is easily reconciled.

When an unfamiliar referent is involved, however, such reconciliations become problematic. For instance, certain daily life objects depicted in tomb scenes remain incomprehensible, simply because no analogous item have been recovered archaeologically (**SCHÄFER**, 1974: 142–7). Likewise, animal-headed deities do not possess real-world referents in their composite forms.<sup>25</sup> It is telling that representations that are often described as ‘ideographic’ (such as Khepri in Figure 1) are typically underrepresented in three-dimensional form.<sup>26</sup> This perhaps precludes the ‘familiarity factor’ that modern viewers afford to deities such as Horus and Sekhmet, which are commonly found in the form of statues or figurines.<sup>27</sup>

Our expectation of familiar sizes also affects our reception of these images.<sup>28</sup> In most depictions of animal-

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represented. Modern societies often regard photographs as objective reproductions of reality, but they are nevertheless flattened, decontextualised, and rescaled (**CHANDLER**, 2017: 210). As a result, viewers encountering photography for the first time often have difficulties interpreting the images (**SERPELL & DEREGOWSKI**, 1980: 157–9; **FORGE**, 1970; **GOMBRICH**, 1982: 273). See also Baxandall’s analysis on the ‘period eye’ (**BAXANDALL**, 1988: 29–108).

<sup>21</sup>See also **HAGEN** and **JONES** (1978: 172–3).

<sup>22</sup>Drawing upon early studies in perceptual psychology, **SCHÄFER** (1974: 87–9) surmised that the ancient Egyptians would have perceived these images quite differently from the modern observer. For an overview of studies on the reception and perception of Egyptian art, see **VERBOVSEK** (2015).

<sup>23</sup>The term ‘aspective’ was introduced by **BRUNNER-TRAUT** (1974: 421–46), and is associated with Schäfer’s *geradvorstellig* (**SCHÄFER**, 1974). Despite the common use of the term ‘aspective’ in Egyptological discussion, Brunner-Traut’s broader interpretations on race and culture are problematic. For evaluations of Schäfer and Brunner-Traut’s works, see **BAINES** (2007: 207–35); **NYORD** (2013: 140–3); **PEUCKERT** (2017).

<sup>24</sup>For similar examples, see **SCHÄFER** (1974: 247–50).

<sup>25</sup>The conundrum of how we ‘recognise’ mythical creatures has been addressed by philosophers such as **SCHIER** (1986: 109–14).

<sup>26</sup>In two-dimensional contexts, it is likely that Khepri was only depicted in composite form in scenes that involve other composite figures. In three-dimensional depictions, where such issues of standardisation were unlikely to be present, Khepri is typically represented in its zoomorphic form. See also **MINAS-NERPEL** (2006: 471–473). A well-known depiction of Selkis in three-dimensional form is found on the canopic shrine of Tutankhamun (Cairo JE 60686), but similar examples appear to be rare.

<sup>27</sup>**DEREGOWSKI** (1984: 20) and **DEREGOWSKI** (1989: 52–4) noted that 2D images with no direct illusion of space (such as the silhouette of an elephant) could be perceived as three-dimensional due to one’s familiarity with the object. cf. **CARON-PARGUE** (1989) for a brief assessment of this concept. Note also that unlike two-dimensional images, cross-cultural differences in the perception of three-dimensional objects appear to be relatively minimal (**DEREGOWSKI**, 1989: 112).

<sup>28</sup>On the familiar-size cue, see **DEREGOWSKI** (1984: 25–8). On size constancy, see **BÖRING** (1940); **ROSS** and **PLUG** (1998). See also research on ‘familiar distances’, which suggests that larger objects tend to be remembered or imagined at greater distance than smaller objects (**HUBBARD** et al., 1989).





Fig. 5: Garden scene from the Tomb of Nebamun (British Museum, EA 37983) © The Trustees of the British Museum. Shared under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) license.

headed gods, the animal heads tend to be relatively proportional to the human bodies they are attached to. The scorpion of Selkis and the scarab beetle of Khepri, however, are both enlarged by order of magnitude.<sup>29</sup> In the world of point-projection, such discrepancies in familiar sizes are typically the result of foreshortening. When we perceive a photograph of the Leaning Tower of Pisa being ‘held up’ by a visitor, it is soon recognized that the sizes of the building and the human figure represent a depth cue—the two entities are, in fact, not in contact with one another. A similar resolution is not viable in the case of Khepri, which is intended to represent a continuous figure.

In addition, the scorpion<sup>30</sup> and scarab beetle in Figure 1 and Figure 2 are both depicted on a top-down view. While this is perfectly reasonable in the Egyptian standard of depiction, it may be a source of visual dissonance to viewers who are accustomed to point-projection images.

Such examples are a reminder that our perception of Egyptian art is akin to a one-eyed view into an Ames room,<sup>31</sup> where the perceptual cues familiar to us cease to be reliable. In the industrialized West, these perceptual cues are largely shaped by film, photography, and point-projection art, which are regarded as objective forms of pictorial production. In other words, we expect ‘true’ images to exhibit a number of attributes, including linear perspective, foreshortening, and a filled background.

In our modern world, a category of images that consistently defies these conventions are ideograms. The examples are numerous—while the road sign for a traffic light ahead is depicted on a frontal view, a speed

<sup>29</sup>Even though the use of different scales on the same scene is common in Egyptian art, the use of different scales on the same figure is relatively rare.

<sup>30</sup>More precisely, the body of the scorpion/*Nepa* is depicted top down, with its tail depicted in profile.

<sup>31</sup>An Ames room is designed to be viewed with one eye through a peephole, producing the optical illusion whereby a person standing in one corner of the room appears much larger than someone standing in the other corner.

bump is depicted as a cross section. In emoji, another modern ideographic system, a beetle may be depicted on a top-down view and a ram from a side view, with both species rendered at a similar size. While parts of Khepri and Selkis may evoke ideographic systems of our modern world, such depictions are well within the remits of Egyptian images, as they capture the essential aspects of beetles and scorpions.<sup>32</sup> Indeed, to not depict them in this manner would be to violate the rules of Egyptian representations.

## 5 Good gods with bad Gestalt

Most composite deities from ancient Egypt are depicted with an animal’s head combined with a human body.<sup>33</sup> The composite form of Khepri strays away from this formula, as the body of a human is combined with an organism almost in its entirety.<sup>34</sup> While this makes Khepri somewhat of an anomaly,<sup>35</sup> it does not explain why such an image should appear more ‘ideographic’ to the modern eye. Moreover, in the realm of supernatural beings, there is no clear reason why it should be any less convincing than other animal-headed deities. The difference, however, could lie in the way we perceive Khepri’s figure.

Gestalt psychology offers several theories on perceptual organization, including how entities are segregated in our visual field (perceptual grouping).<sup>36</sup> For example, the principle of continuity explains why the image in Figure 6 is commonly viewed as two lines rather than four. This, along with the other grouping principles are linked to the overarching concept of *Prägnanz*, which is often referred to as the principle of ‘good Gestalt’.<sup>37</sup>

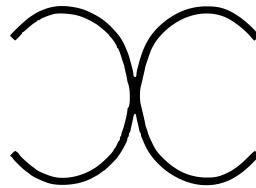


Fig. 6: This image is typically viewed as two lines rather than four. Following [WAGEMANS et al. \(2012: 1180\)](#).

The law of *Prägnanz* is vaguely defined. For instance, the psychologist Kurt [KOFFKA](#) (1935: 110) summarised that “psychological organization will always be as ‘good’ as the prevailing conditions allow.” In other words, images tend to be perceived based on the simplest way they can be organized and understood

<sup>32</sup>In addition to capturing their characteristic aspects, this perspective also reflects how these organisms are typically seen in everyday life. This general pattern is also identifiable in the hieroglyphic repertoire, where a top-down view is employed for the scarab beetle (Gardiner L1), scorpion (L7), and the lizard (I1), reflecting the perspective from which these species are typically observed in the natural world. Meanwhile, species which are more regularly seen on eye-level—such as the bee (L2) and the locust (L4)—are typically rendered from a profile view.

<sup>33</sup>Indeed, this formula of representing composite beings is not unique to ancient Egypt. See for example the theory of minimally counterintuitive concepts ([BOYER](#), 2003: 119–20; [WENGROW](#), 2015: 19–24).

<sup>34</sup>Strictly speaking, the scarab beetle that formed Khepri’s head (Figure 1) is missing two hind legs, although this is probably not apparent on first look. Other examples of the composite form of Khepri can be found in [MINAS-NERPEL](#) (2006: 129–52).

<sup>35</sup>Similar examples include the tortoise and fish, which, as [VERNUS](#) and [YOYOTTE](#) (2005: 442) pointed out, ‘*on substitue l’animal entier à sa tête jugée insuffisamment caractéristique*’. Notably, even though composite beings are attested in various cultures, examples that combine the human figure with insects (or any other invertebrates) tend to be rare. In Mesopotamia, for instance, hybrid creatures tend to involve body parts of quadrupeds, whereas that of insect and fish are relatively uncommon ([MAIDEN](#), 2020: 167). A number of examples, however, can be found in ancient Mesoamerican art (e.g. [MAZARIEGOS](#), 2010).

<sup>36</sup>[WAGEMANS et al. \(2012\)](#) provides an overview of Gestalt psychology and perceptual grouping, along with recent advancements. Even though some of the Gestalt laws appear to be innate to the brain, visual experiences also play a role in the development of visual organisation. See [WAGEMANS et al. \(2012: 1193–4\)](#) for a brief overview.

<sup>37</sup>[WERTHEIMER](#) (1938: 83) believed that this notion is self-explanatory, “In designing a pattern, for example, one has a feeling how successive parts should follow one another; one knows what a ‘good’ continuation is, how ‘inner coherence’ is to be achieved, etc.; one recognizes a resultant ‘good Gestalt’ simply by its own ‘inner necessity’.”

(ARNHEIM, 1974: 53–74). Therefore, a well-organized figure will tend to complete itself, and is viewed as a whole even though it is mutilated, e.g. Figure 7. Conversely, the image in Figure 8 would tend to cause difficulty to the viewer, even though it forms a continuous mass. This visual tension is only eased when the figure is viewed as the combination of a rectangle and a triangle (ARNHEIM, 1974: 70).

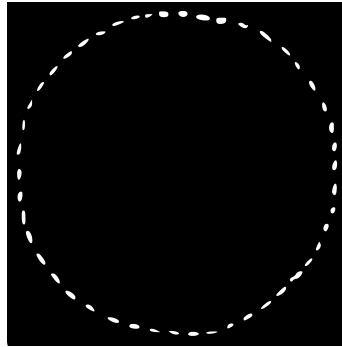


Fig. 7: An image such as this is typically viewed as a circle. Following ARNHEIM (1974: 70).

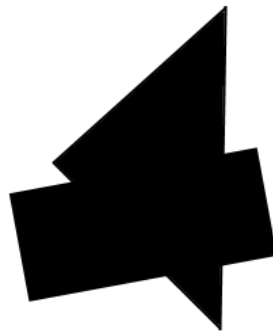


Fig. 8: This figure is most easily perceived as the combination of two entities. Following ARNHEIM (1974: 70).

This principle may illustrate why certain Egyptian deities are typically viewed as continuous figures that are ‘image-like’, whereas others resemble a combination of signs. Khepri is a figure with ‘bad’ Gestalt *par excellence*, because it violates the modern viewer’s expectations of perspective and familiar sizes, and its head forms a closed figure (Figure 1). Thus, much like the triangle in Figure 8, Khepri’s head is more likely to be viewed as an independent entity, rather than part of a continuous whole. Indeed, for most observers, the beetle’s figure completes itself even though it is, in fact, missing its two hind legs.

For the same reasons, the scorpion of Selkis is more easily viewed as a closed entity that is independent from the figure of the goddess. It is worth noting that Egyptian headdresses that appear more conventional to the modern eye, such as the red crown and double feather crown, can likewise function as hieroglyphic signs. However, a deity wearing a double feather crown is unlikely to be regarded as ‘ideographic’, perhaps because such a combination appear more reasonable to the modern gaze—together, they form a coherent figure with good Gestalt. Bad Gestalt, on the other hand, encourages the segregation of a figure into its constituent parts.



Fig. 9: A wooden figure of a turtle-headed demon, likely from the tomb of Horemheb (KV 57) (British Museum EA 50704) © The Trustees of the British Museum. Shared under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) license.

Of course, our propensity to segregate these images is not solely attributed to perceptual factors. Scholarly studies tend to approach Egyptian images as ‘iconography’ that requires parsing and analysis,<sup>38</sup> while Egyptological training has traditionally placed emphasis on the written language (RIGGS, 2017: 294; FITZENER, 2017). The confluence of these factors has created somewhat of a Maslow’s hammer in the study of Egyptian art.<sup>39</sup> Here, it is worth stressing that an image should not be viewed as any less pictorial just because it includes elements that resemble hieroglyphic signs. This sentiment is based largely on the traditional Western notion that images and writing are fundamentally antithetical: images are mimetic and objective; whereas writing is predicated on phonetic alphabets that are wholly dependent on conventions (BAHRANI, 2003: 89). Such a premise is incompatible with ancient Egyptian culture, where the writing system is inherently pictorial.

In fact, the three-dimensional equivalent of such figures can induce quite a different effect on the modern eye. Perhaps a relevant example are turtle-headed demons, whose two-dimensional depictions tends to adhere to the same formula as the composite form of Khepri.<sup>40</sup> Unlike the composite form of Khepri, however, turtle-headed demons have been attested in the round (Figure 9).<sup>41</sup> Far from appearing ‘ideographic’, such figurines tend to produce a vivid and compelling impression on the modern viewer: they have been described as ‘frightening creation[s]’, as well as ‘eerily menacing’ (FISCHER, 1968: 11; RUSSMANN, 2001: 160).

## 6 Conclusions

The search for the ‘true form’ of Egyptian gods satisfies the human tendency to find order and organization amidst complexities. Such a framework, however, is hardly compatible with the multiplicity of approaches that permeate religious beliefs. It is often claimed that the ancient Egyptian mind is wholly unlike the logical

<sup>38</sup>See also ASSMANN (2005: 30)’s discussion of the ‘embalming’ gaze of the ancient Egyptians.

<sup>39</sup>This term refers to a well-known remark by the psychologist Abraham MASLOW (1966: x–xi, 15–6): “If the only tool you have is a hammer, it is tempting to treat everything as if it were a nail”.

<sup>40</sup>In two-dimensional media, turtle-headed demons are typically depicted as a human figure with its head replaced with the top-down depiction of a turtle. See examples in PANTALACCI (1983).

<sup>41</sup>A similar example is British Museum EA 61416. I am grateful to the anonymous reviewer for pointing me to these examples.

and analytic mentality of modern societies,<sup>42</sup> but this is perhaps an overstatement. Our tolerance for inconsistencies is merely masked by a ‘myth of objectivism’, and this capacity can be further stretched on matters of religious significance. Adherents of scriptural religions are often aware of the contradictions within the respective canonical texts, to say nothing about their conflict with the empirical world. With faith and familiarity, however, most incongruities are easily resolved. In the words of Blaise PASCAL (1904: 304), ‘*La foi embrasse plusieurs vérités qui semblent se contredire*.’

Similarly, every image we encounter presents an array of ambiguities, but we are liable to interpret them in one way and exclude other possibilities. In a drawing of a man with a half-shaded face, for instance, the figure could be interpreted as an individual standing in profile, or as a supernatural being with only half a face (GOMBRICH, 2000: 268–9). Most Western viewers would hardly consider the latter interpretation, even though such a reading is possible. However, for someone who is unaccustomed to point-projection images, and whose belief system revolves around spirits and monstrous creatures, a half-faced being could appear to be the only plausible interpretation (GOMBRICH, 2000: 268–9).

Our perception of Egyptian representations is little different; in most instances, as soon as we encounter an image, all possible readings have been whittled down to one. When we observe a relief of Ramesses II smiting his enemies, we do not regard the pharaoh as being twice as large as the typical Nubian. We perceive men with both feet depicted from the inside, and hardly entertain the possibility of men with two left feet. With enough familiarity with Egyptian texts, it becomes possible to see an image as an assortment of hieroglyphic signs, even to the degree where such a viewpoint becomes impossible to unsee. That our perception can be altered by knowledge and experience is also a reminder of its limitations—we approach these images with presumptions that differ vastly from those of the ancient Egyptians, and this dissonance widens in the case of divine representations. Inherently, we lack the capacity to approach these images with unreflecting faith, like the privileged few who encountered them in ancient times: of all the factors that separate our perception from that of the ancient Egyptians, none is perhaps more profound.

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<sup>42</sup> ASSMANN (1989: 57), for example, suggests that ‘It might even be argued that in view of their notorious ‘multiplicity of approaches’ the ancient Egyptians were quite unable to experience conflict and cognitive dissonance.’ See also the ‘mythopoeic thought’ of ancient societies posited by Henri and Henriette Frankfort (FRANKFORT & FRANKFORT, 1946: 10–26), who nevertheless warned that the apparent inconsistencies of Egyptian beliefs are perhaps overstated: ‘After all, religious values are not reducible to rationalistic formulas’ (FRANKFORT & FRANKFORT, 1946: 19).

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