
ḥwn ntry, iwꜥw nḥḥ: Some ‘Astronomical’ Hieroglyphs and their Cosmographic and Calligraphic Significance

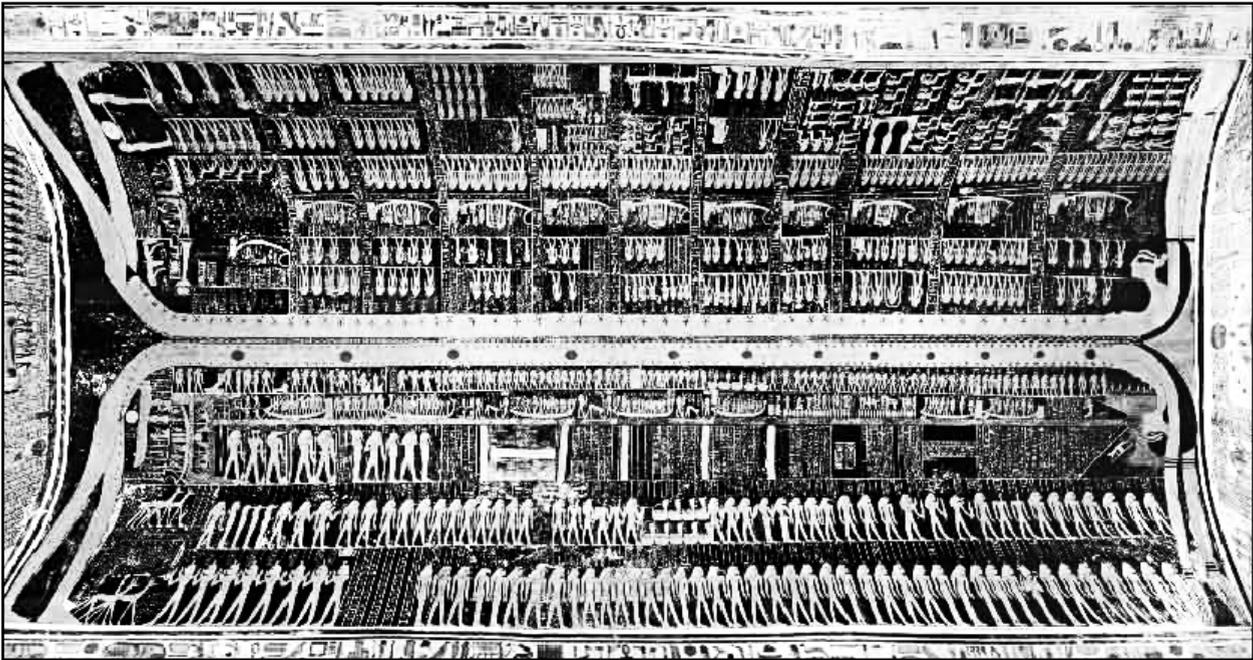
Amanda–Alice Maravelia

In the course of time the ancient Egyptian Hieroglyphic Writing was substantially transformed, as is the case for every other scripture, due to various socio–cultural and linguistic reasons. Eventually new signs came into use or were devised, based on more ancient archetypes, whose very conception was an outcome of the immediate ambience of the Egyptians. Some of them feature a clear cosmovisional meaning and their symbolism is related to either astronomical or cosmographic notions. As each hieroglyph (*phonograms*, but mainly *semograms* and *taxograms*) was the carrier of some appropriate semantics, similar was also the case for these ‘cosmovisional’ hieroglyphs. In this article an attempt is made to study their evolution and significance, starting from a certain group of signs (namely C199–C204, C296–C297 & C314) (cf. GRIMAL *et al.*, ¹1993: 1C–6; GRIMAL *et al.*, ²2000: 1C–4, 1C–5, 2C–8). The example of these hieroglyphs [especially of that depicting Nūt with a scarab (*ḥprꜣ*), personification of the newly born morning Sun, and/or a divine baby/youth (*ḥwn ntry*) between her and the earth, carrying also a certain solar symbolism (cf. *BM* 552, VIII, pl. xxvii)], are examined and their astronomical and cosmographic semantics are studied. Although these were signs mainly used at a later period, they do incorporate several notions that date since many centuries earlier. Some remarks on their æsthetic appearance and their subsequent calligraphic function are also given. We conclude

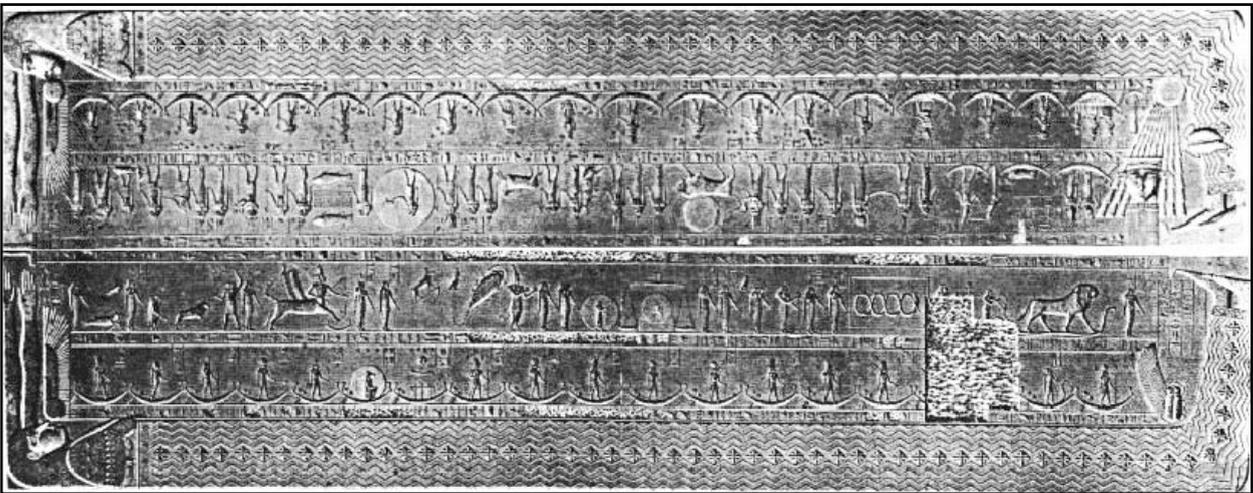
that these signs, their form and their meaning being always deeply interlaced, present us with vivid paradigms of how important astronomical and cosmovisional notions (that are also discussed here) can be communicated through the vehicle of rebus and symbolic writing, although in a pre–scientific level.

I. Introduction

Our scope in this paper is to discuss the astronomical and cosmographic semantics of certain hieroglyphic signs that depict the sky–goddess Nūt: namely the signs¹ C199–C204, C296–C297 and C314 are examined in their archæological, astronomical and also calligraphic context.² Nūt³ was the daughter of goddess Tefnūt and of god Shū. Ancient Egyptians visualized her mainly as human in form (see Figs. 1–2), but she was also depicted as a divine bovine, namely a heavenly cow,⁴ or even as a bee wielding great power over the gods.⁵ Nūt is more frequently depicted as a young goddess arching her body over the Earth (represented by the recumbent god Geb), separated from him by Shū. Although the Egyptian iconographical customs were representing Nūt stretching her body over the Earth, her arms and legs being depicted tightly together, the actual conception of her is that both her fingers and toes touch the four cardinal points on the horizon, thus conceptualizing the *four pillars of heaven*⁶ (*shnwt nt pt 4*). The mythological separation⁷ of Nūt and Geb by Shū, alluding to the appearance of more ordered cosmic structures, after the creation of the planetary system (cosmogony and



(Fig. 1) Depiction of Nūt on the astronomical ceiling of the tomb of Ramesses VI (KV9, c. 1151-1143 BCE). The goddess is arching her body for the daily (lower register) and the nightly hours (upper register), where the *Books of Day and Night* are also respectively shown.



(Fig. 2) Depiction of Nūt on the astronomical ceiling in the temple of Hathor at Dendara (c. 50 BCE), together with a rectangular zodiac. The sky-goddess devours the Sun with her mouth every evening and gives again birth to him in the next morning from her uterus, in a perpetual cycle.

relative myths), is the probable source of the Hellenic interpretation⁸ of the painful delivery of her divine babies. It was probably from the Egyptian idea that Nūt swallowed the solar god and his entourage, in order to give them birth again next dawn, the notion

arose that Geb became upset with his wife, for having eaten her children. In the cenotaph of Pharaoh Sety I at Abydos⁹ Nūt's swallowing of celestial deities was likened to a sow devouring her piglets. Nūt is a universal goddess, the equivalent of Isis, as a *post*

mortem mater lactans; and of Hathor in her cosmic hypostasis,¹⁰ as directly related to the solar god [for the latter was his daughter (*filia solis*)]. She keeps the malevolent chaotic forces from breaking through the sky and devouring the world, thus contributing towards the celestial harmony and helping Ma'at in her cosmic role. Her body is the firmament, the celestial vault, the sky and the Galaxy.¹¹ It divides the Cosmos, created in the very beginning (*zp tpy*) by Rē'–Atoum according to his rules of universal harmony, from the amorphous, achromatic, dark and infinite primeval matter, the merging with which should be tantamount to non–existence and catastrophe. It also divides the visible from the invisible celestial hemisphere, the high from the low.

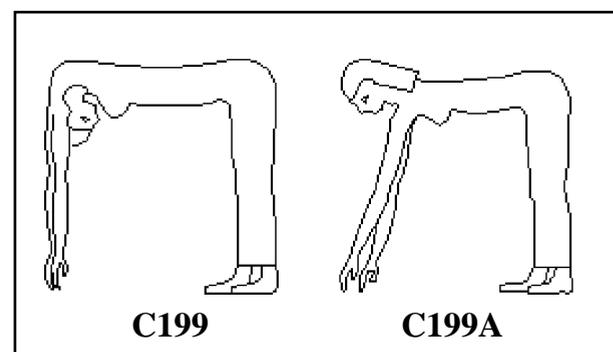
How Nūt was maintaining this equilibrium was not examined by the Egyptians, who were always remaining on symbolic and allegorical explanations of the cosmic essence, and who considered this as a divine unfathomable and incomprehensible fact, summed up by the epithet *mysterious/secret* (*št3yt*) attributed to their sky–goddess.¹² In the following we are going to discuss several traits of Nūt in relation to the hieroglyphic signs depicting her, that simply and clearly show her properties as the personification of the *celestial above* (*hryt, pzd*), as well as her connection to various celestial phenomena.

II. The 'Cosmovisional' Hieroglyphs C199-C204, C296-C297 & C314 in their Archaeological, Astronomical and Calligraphic Context

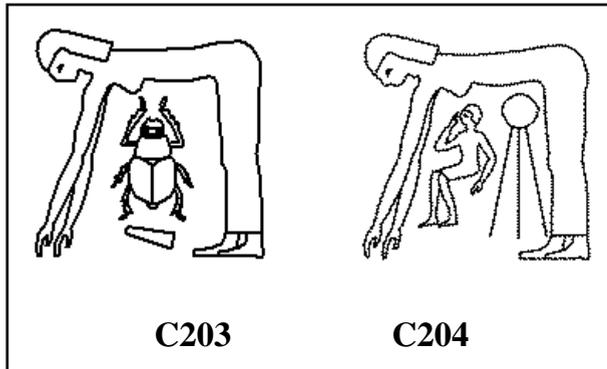
We are going to study the hieroglyphic signs C199, C199A, C200, C201, C202, C203, C204, C296, C297 and C314 (see Fig. 3-7), divided in five convenient groups for reasons of taxonomy. Let us point out that these groups present some common and some uncommon characteristics between themselves,

as well as between the two signs included in each, and are used here only for reasons of classification and ease. A detailed discussion of the characteristics of each and every one of them will be given together with rich commentaries on their astronomical and cosmovisional significance. Finally, their archaeological context will be also discussed, as well as some of their calligraphic semantics.

1. *In the first group* (see Fig. 3) Nūt is depicted in her typical position, arching over the earth and representing the celestial vault.¹³ In both of them she wears a long dress that follows the curves of her body (with undefined upper limits), a simple head–cover [a wig (?), better defined in the case of C199A], and her breasts are visible. In both of them she appears barefoot, her thighs and legs are parallel and close to each other, and her arms, forearms and hands (with thumb separated from the other four fingers) pointing downwards almost parallel to each other. While in the case of C199 the arms, forearms and hands are stretched out in an unnatural way, over the shoulders of the goddess, being non physically presented as virtual extensions of the hinder part of her body (that forms an almost perfect Hellenic letter Π) and being vertical to the ground, in the case of C199A the arms, forearms and hands are extended downwards normally, while they form an acute angle with the ground, also appearing as apparently diverging somehow from each other, the left being shown more

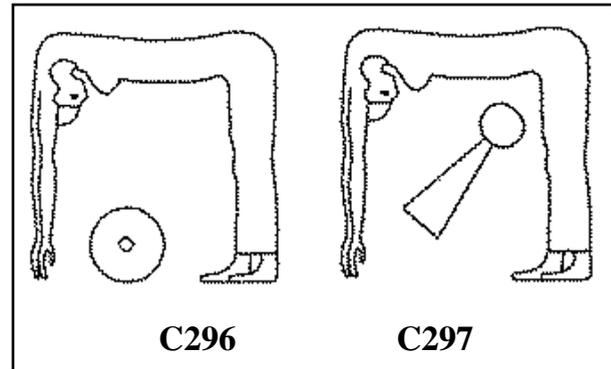


(Fig. 3) The hieroglyphic signs C199 and C199A.



(Fig. 5) The hieroglyphic signs C203 and C204.

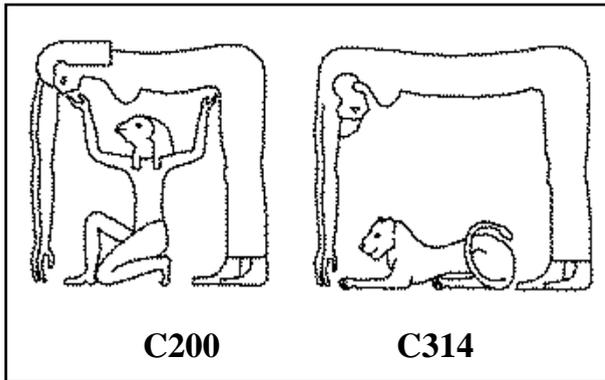
hence is eternal), and who also comes out of Nūt and circulates on her celestial body (see Fig. 1 & 2). Although purely speculative, we do point out the virtual resemblance of this composite hieroglyph to the writing of the word for (*static*) eternity: $\text{𓆎} dt$.³¹ In this instance, the sign for the earth (N16) is also written at the lower level. The daily repetition of the Sun's rebirth is something that happens always the same, in an eternal perpetuity, without interruption. In the case of C204 two 'long' hieroglyphs stand side by side between the goddess and the earth, occupying almost all the space in between. To the left, closer to the arms and forearms of the goddess the sign for the (solar) baby is depicted with right thumb in mouth (A17; cf. also N136). To the right, closer to the thighs and legs of Nūt, the sign of the solar disc with three long emitted rays pointing downwards to the ground (N8: 𓆎 ; cf. also the N8 group of signs, namely N56: 𓆎 , N116 𓆎 : and N123: 𓆎) is shown. The symbolism of this composite sign alludes to the solar rays illuminating the earth and the humans; it also consists of a cosmovision allegory for the daily rebirth and hence everlasting youthfulness of the solar baby, who is indeed the *divine stripling and heir of eternity*. This is a very important point, which will be discussed further on in the next section of this article. The hieroglyphic sign C203 is found in several instances in the temple of Hathor at Dendara



(Fig. 6) The hieroglyphic signs C296 and C297.

with the value of *pt*.³² Additionally, in other cases in the same temple complex we find the hieroglyphic sign C204 as a *phonogram* with the phonetic value *p*, deriving from *pt*.³³

4. *The hieroglyphs of this group* (see Fig. 6) are both similar to C199, but they are more composite, since they show additional signs. In the case of C296 a solar disc (N5) is depicted touching the ground (hence the horizon) between the forearms/palms and the legs/feet of the sky-goddess. The semantics may allude to the Sun setting at the horizon and then again rising the next day from the horizon (considered as the double gate to the Netherworld and to the sky; a symbolism that also alludes to the double-lion horizon god Aker/*3kr*).³⁴ Although purely conjectural, we do denote the virtual resemblance of this composite sign with the abbreviated writing of the word for (*dynamic*) eternity: $\text{𓆎} \text{𓆎} nhh$.³⁵ Eternity is directly related to time and its eternal flow, which is also dynamic, hence it should be indirectly related to the measurement of time that is connected to astronomical phenomena (like the daily apparent motion of the Sun, the perception of night and day, the phases of the Moon, & c.). In the case of C297 the hieroglyphic sign with solar disc and a bundle of rays (N8B: 𓆎 ; cf. also N7: 𓆎 , denoting the passage of time, and the other signs of the N8 group³⁶) is depicted between the arched body of the goddess and the ground. It is to be noted that the solar disc



(Fig. 7) The hieroglyphic signs C200 and C314.

(depicted near the uterus of Nūt) has no characteristic point in its centre and that the solar beams are united and pointing diagonally towards her palms, and hence the ground. The symbolism of this sign, reminding the Dendara imagery, is concerned with the daily (re-)birth of the solar disc that illuminates the earth with its rays. A characteristic passage from the *Book of the Dead* (*Hymn to the Solar God Rē*, from the papyrus of Any) shows the following text:³⁷ ‘*ntrw m h^cw, m33.n.zn R^c m h^cf, stwt.f hr b^ch t3w*’ (= *The gods are in jubilation, [when] they see Rē, [while] he appears in glory [and when] his rays inundate [all the] countries*). This virtual luminous inundation of the solar rays is explicitly shown by the hieroglyphic sign C297 (see Fig. 11 & 12) and consists of an archetypal idea of the Egyptians, according to which the Sun illumines everything under the sky and the sky itself. The hieroglyphic sign C296 is found in one instance in Edfou³⁸ with the same phonetic value as *pt*.³⁹ On the other hand, the hieroglyphic sign C297 is met in Dendara⁴⁰ with the phonetic value *mnt*⁴¹ (see Fig. 11 & 12).

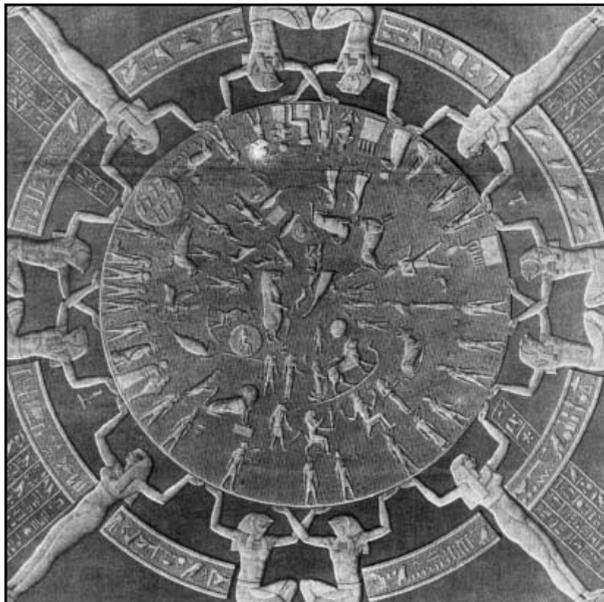
5. *The last group of hieroglyphs* (see Fig. 7) has some common but also some uncommon points in relation to the previous groups of signs. In any case both of them show anthropomorphic and zoomorphic divinities between Nūt and the ground. In the case of C200 there is a certain peculiarity in the depiction



(Fig. 8) Symbolic representation of the solar god as a divine infant encircled by the *ouroboros*, standing on the double-lion horizon god Aker. Two hands are protecting the solar youth. The *ouroboros* symbolizes the regenerating power of non-existence of the void (vacuum) encircling the Cosmos (see HORNUNG, ²1996: 164, 271). From the funerary papyrus of Hor-ouben (*Hr-wbn*) at the Egyptian Museum in Cairo (XXI Dynasty).

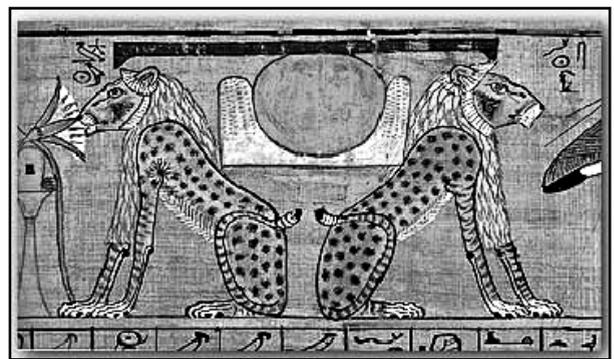
of the arms, forearms and palms of the goddess, which are parallel to each other and also resemble the C199 pattern, but they seem to start from her forehead and upper part of her head, thus showing an unnatural way of representation (cf. Fig. 2). Of course it is possible that the arms were unnaturally transposed, in order to gain space for the depiction of Horus under the vaulted body of Nūt. Indeed, it seems as if they are hanging down to the ground, not starting from the shoulders as is usually the case, hence this sign is rather *sui generis*. Actually, this composite sign shows the falcon-headed Horus (cf. also G5: the divine falcon;⁴² cf. also C11 & C78: the divinity of eternity; C40: the falcon-headed spirits of Nekhen; C257: a hawk-headed deity standing in

adoration). He kneels with his left knee on the earth (where his left leg and foot are also based), having his right thigh benched towards up and standing with his right leg and foot (shown vertically relatively to the ground). With both arms opened and parallel to the ground, and with forearms upraised, he supports the sky–goddess; he approaches his right palm near her mouth (the cosmographic point, where the Sun was devoured by her each evening), while he approaches his left palm near the uterus of the goddess (the cosmographic point where the Sun was born every morning). The symbolism here is a cosmic metaphor: Horus, a sky–god as well as the son and husband of Hathor/Nūt (according to the Dendara theology [see Fig. 9]) acts like showing to the spectators the principal points of the Sun’s daily birth and virtual death, found on the body of the sky–goddess. In the case of C314 there is a resemblance to C199 as to the way of the depiction of the body of the arched sky–goddess; though, her body is represented longer,



(Fig. 9) The circular zodiac from the temple of Hathor at Dendara (original kept at Musée du Louvre). Pairs of falcon–headed Horuses are supporting the heavenly sphere, in an Atlas–like manner, together with Isis–Hathor. The most important asterisms and decans, together with the zodiacal constellations are also depicted (c. 50 BCE) [see also *Dendara X*², 1997: pl. X-60].

maybe for reasons of aesthetic convenience, in order that there is enough space for the animal drawn between her forearms/palms and legs/feet. Actually this animal is a recumbent lion with twisted tail that rests on the ground (E23; cf. also E23A),⁴³ thus evoking the double lion Aker, god of the horizon and guardian to the gates of the Netherworld [see Fig. 8, 10]. Here only the lion facing left (towards the mouth of the sky–goddess), hence towards West is depicted. This is either due to the lack of space, or (possibly) to the effect that it denotes a cosmic metaphor full of optimism and hope: the daily resurrection of the Sun from the Netherworld and his eternal exit from the horizon, in order to illumine the sky and the humans upon the Earth, always precedes the sun–rise, just as before every sunrise there is always a sunset at the West. Alternatively, it could symbolize the diurnal trip of the Sun from East to West. Actually, there is a very ancient hieroglyph (already attested in the *PT*⁴⁴, namely N15: ☉). We think that this very hieroglyph⁴⁵ defines the *Netherworld* (*Dw3t*) as the enclosure *par excellence*, the extra–spatial and probably extra–temporal *locus* where even the stars are confined during their periods of invisibility (preceding their heliacal risings). Finally, we do note that



(Fig. 10) Detail from the NK funerary papyrus of the *Book of the Dead* (of Any, EA 10470, c. 1250 BCE), showing the double–lion of Aker, as the horizon god (observe the *3ht*–hieroglyph under the *pt*–hieroglyph). The right lion looks to the West, hence towards yesterday (*sf*) and death, while the left lion stares towards the East, hence towards *tomorrow* (*dw3w*) and the resurrection.

the hieroglyphic sign C200 is met in the temple of Edfou⁴⁶ with the phonetic value *pt*.⁴⁷

III. Discussion and Conclusions

According to the ancient Egyptian ideas, as they are met in the *Book of the Celestial Cow*,⁴⁸ the articulation of time started as soon as Shū uplifted his daughter Nūt, thus separating her from her husband and brother Geb.⁴⁹ The semantics of this fact are explicitly astronomical: since the Sky was separated from the Earth and the light illuminated the terrestrial atmosphere,⁵⁰ the virtual cosmic scenery was ready, in order that the time should be measurable. It is evident that the order created by the uplifting of Nūt implies that the celestial bodies (stars, planets, Sun and Moon), which consist of the principal calendrical sources, should be visible and usable in order to calculate



(Fig. 11) Detail from the astronomical ceiling in the tomb of Ramesses VI (KV9, c. 1151-1143 BCE), showing the face of Nūt in the early evening, just before she devours the Sun who will enter the *Dw3t* for his nocturnal journey. The oceanic waters of the primeval Abyss (*Nwn*) are also visible. A parallel band of them, whereon the Sun navigates in the firmament, looks like virtual ‘solar rays’.



(Fig. 12) Detail from the rectangular zodiac in the temple of Hathor at Dendara (c. 50 BCE). We observe the legs and feet of the goddess, as well as the birth of the Sun near her genitals, from the disc of whom bright solar rays are emitted, in order to illumine the cow-like head of Hathor, as well as the asterisms and the Earth beneath the celestial vault.

time, offering a double primeval glimpse at both: the periodicity of Nature and heavenly phenomena and also the irreversible passing of time (*hora ruit*). *Cosmological time* is but the visible and measurable product of the astral cycles and of the harmony that persists throughout the firmament; it flows unceasingly, becoming tangible for humankind as an archetypal time between the Earth and Heavens, between the ground of mortals and the celestial sphere.⁵¹ This notion is symbolically expressed by the late hieroglyphic signs we are studying in this article, especially by C203 and C204. These show the celestial goddess arching her body over the Earth (*t3*) and between the former and the latter either a scarab (*hpr*) or the radiating Sun (*wbn*) with the divine solar child (reborn anew every day) are depicted.⁵² This *divine youth* (*hwn ntry*), the *solar stripling* and the *heir of eternity* (*iw^cw nhh*) reminds us of several hymns to the solar God Rē,⁵³ where similar words are used, in order to describe the perpetual regenerative power of the Sun, one of the most important astronomical archetypes for the Egyptians of Antiquity. On a door-jamb of the tomb of Pharaoh Horemheb (*Hr-m-hb*, c. 1319-1307 BCE) there is a hymn to the Sun, a verse of which is characteristic:⁵⁴ *hwn ntry, iw^cw nhh* (= [the] *divine stripling, the heir of eternity*). In the *Coffin Texts* there are instances of similar phraseology, describing the union of the deceased with the solar god and his inheritance of everlastingness:⁵⁵ *[...] pr.kwi r pt hrt nt R^c [...] s^cnh.n.i R^c [...] ^cnh R^c im.i r^c-nb [...] nbt-nhh, nbt drw pt [...] ink iw^cw nhh, sbi.n.i dt!* (*[...] I have ascended to the Upper Sky of Rē [...] I have nourished Rē [...] Rē lives in me every day [...] the Mistress of eternity, the Mistress of the limits of the sky [...] I am the heir of eternity, I have passed everlastingness!*). In the *Book of the Dead* there are also several instances, where similar ideas are found. In the papyrus of Nakht at the British Museum it is said of the solar god Rē:⁵⁶ *nfr.ti, rnp tri.ti m itn, m-hnw^c mwt.k Hwt-Hr* (= *thou hast become fair, thou hast become young in [thy] season, in the solar disc,*

in the hand of thy mother Hathor).⁵⁷ Hence, the Sun is considered as the divine and everlasting youth,⁵⁸ the regenerator of everything (see Fig. 8), whose eternal path is situated on the sky, on the body of ‘his’ mother Nūt. In the *Orphic Hymns* the significant role of the Sun in the cosmic scene is denoted by his characterization as the *indicator* (*σημάντωρ*) of *fine* (*lit.: good*) *deeds* (*ἔργα ἀγαθὰ*); similarly, the Sun is the *eternally young stripling* (*χοῦρος*), who is *nourishing the yearly seasons* (*ώροτροφός*).⁵⁹ Thus, the Sun is considered as the virtual cosmic clock that eternally marks the seasons and offers a calendrical context in human life.⁶⁰ Finally, the idea of supporting the sky, inherent in the hieroglyphic sign C200, is reminiscent of the archetype of Atlas (see Fig. 13). There are more cases of similar hieroglyphic signs, like those of the A121 group, one of which (namely A121C) is used for the cryptic writing of the name of god Ptah as  *Pth*.⁶¹ These present the idea of a divine power that supports the firmament, as also does the hieroglyphic sign  B58 that shows a female (divinity?) uplifting the sky.⁶²

Hence, the role of the sky, as it was personified by Nūt,⁶³ was critical for the visualization of *time* and for the notions of *eternity* as they were conceived by the ancient Egyptians. She was considered as the divine separator of the visible from the invisible, of the tangible world from the metaphysical realm, of the celestial sphere from the unfathomable chaos of Nūn, of the extra-cosmic worlds from the mundane space, of the above from the below, of the cosmological time from the archetypal time and from everlastingness, being at the same time the very recipient of eternity and the archetypal scenery for all the celestial phenomena. Paintings and reliefs depicting Nūt can be considered as virtually macroscopic hieroglyphs, that concisely incorporate a whole cosmovision and a complete cosmography in themselves. They show explicitly the pre-scientific, yet intuitive, approach



(Fig. 13) The Farnese Atlas is a stone statue depicting the Titan Atlas holding up a celestial globe. Acquired by Cardinal Alessandro Farnese in the early 16th century, now is at the Museo Nazionale Archeologico in Naples. It is probably a Roman copy, made at c. 150 CE, of a Hellenic original dating from 200 BCE.

of the ancient Egyptian mind that could express and communicate important notions based on archetypes and mythological schemes. Each and every one of the hieroglyphic signs studied here is a virtual microcosm expressing a natural truth: the celestial expanses (personified by Nūt) are overlooking everything from above; the sky is the carrier of the Sun (whose return is non ceasing), and of other astral bodies (whose heliacal risings remind of their power over decay); the eternal periodical cycle of settings and risings under the heavens invokes the expected immortality of the soul and the recurrence of life patterns in *saecula saeculorum*.

In the course of time the ancient Egyptian Hieroglyphic Writing was substantially transformed, as is the case for every other scripture, due to various socio-cultural and linguistic reasons. Eventually new signs came into use or were devised, based on more ancient archetypes, whose very conception was an outcome of the immediate ambience of the Egyptians. Some of them feature a clear cosmovisional meaning and their symbolism is related to either astronomical or cosmographic notions. As each hieroglyph (*phonograms*, but mainly *semograms* and *taxograms*) was the carrier of some appropriate semantics, similar was also the case for these ‘cosmovisional’ hieroglyphs. In this article an attempt was made to study their evolution and significance, starting from a certain group of signs (namely C199-C204, C296-C297 & C314). The evolution and gradual change in the depictions of Nūt since the NK royal tombs (see Fig. 1, 11) down to the Ptolemaic Period (see Fig. 2, 12) is evident; however, the hieroglyphic signs studied here incorporate the whole volume of astronomical and cosmovisional semantics (dated from even earlier eras) and consist of virtual ancient mini ‘databases’, reviewing the basic semantics of the celestial goddess and the relation of the sky to common astronomical phenomena. The example of these hieroglyphs [especially of that

depicting Nūt with a scarab (*hpr*), personification of the newly born morning Sun, and/or a divine baby/youth (*hwn ntry*) between her and the earth, carrying also a certain solar symbolism] was examined and their astronomical and cosmographic semantics were studied. Although these were signs mainly used at a later period, they do contain several notions that date—as already stated—since many centuries earlier. Some remarks on their æsthetic appearance and their subsequent calligraphic function were also given. We conclude that these signs, their form and their meaning being always deeply interlaced, present us with vivid paradigms of how important astronomical and cosmographical notions (that were also discussed here) can be communicated through the vehicle of *rebus* and symbolic writing, although in a pre-scientific level. Our study has shown that the Egyptians, using certain hieroglyphic signs to express specific (let's say *cosmographic* or *cosmovisional*) ideas, could—at least in principle—profit from the physical appearance of these very signs, in order to evoke concomitant (let's say purely astronomical) notions dependent (e.g.: C200, C203, C204, C296, C297) or even independent and having a metaphorical sense of their initial phonetic values (e.g.: C199, C199A, C314).

Acknowledgements

The author should like to thank the Bibliotheca Alexandrina (and the director, Prof. Dr Ismaïl Serag 'el-Dīn) for his kind invitation to the 2nd International Forum on Calligraphy, Writings & Inscriptions in the World throughout the Ages, where this article was presented, as well as for his accommodation. Special thanks are due to Dr Khaled Azab. The kind help and offer of information by Dr Nadine Guilhou (Université Paul Valéry, Montpellier) is also highly appreciated. Dr Nadine Guilhou and Mr Kurt Locher, MSc (Zürich) have kindly read the manuscript and proposed some minor amendments.

Endnotes

- 1 For these signs [which do happen to be included in the relevant lists of *EG* (cf. 448–49)], see N. Grimal, J. Hallof and D. van der las (eds), *Hieroglyphica: Sign List*, (Utrecht–Paris, 1993), 1C-6; Grimal *et al.*, *Hieroglyphica*, (Utrecht–Paris, 2000), 1C-4, 1C-5, 2C-8.
- 2 In this paper our principal axis of study is not the Calligraphy and Palæography *per se*, for which see (among others) H.G. Fischer, *The Orientation of Hieroglyphs, I: Reversals*, (New York, 1977); H.G. Fischer, *Ancient Egyptian Epigraphy and Palæography*, (New York, 1987); Fischer, *Ancient Egyptian Calligraphy*, (New York, 1988). For an introduction to the ancient Egyptian language and script, see A. Loprieno, *Ancient Egyptian: A Linguistic Introduction*, (Cambridge, 2000); W. Schenkel, 'The Structure of Hieroglyphic Script', *Roy. Anthr. Inst. News* 15, (London, 1976), 4-7; J.P. Allen, *Middle Egyptian: An Introduction to the Language and Culture of Hieroglyphs*, (Cambridge, 2000); A.H. Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs*, (Oxford, 1988); S.A.B. Mercer, *An Egyptian Grammar with Chrestomathy and Glossary*, (London, 1927); B. Menu, *Petite grammaire de l'égyptien hiéroglyphique, à l'usage des débutants*, (Paris, 1993); W.V. Davies, *Reading Egyptian Hieroglyphs*, (London, 1987).
- 3 For Nūt, see mainly *LÄ* IV, 1982, 535-41: art. 'Nūt'; M. Lurker, *The Gods and Symbols of Ancient Egypt: An Illustrated Dictionary*, (London, 1986), 90: art. 'Nūt'; G. Hart, *A Dictionary of Egyptian Gods and Goddesses*, (London, 1986), 143-47: art. 'Nūt'; G. Posener, (*et al.*, eds.) *Dictionnaire de la civilisation égyptienne*, (Paris, 1992), 192: art. 'Nout'; *BMD* = I. Shaw, P. Nicholson (eds), *British Museum Dictionary of Ancient Egypt*, (London, 1995), 207-08: art. 'Nūt'; for a thorough study, see J. Bergman, 'Nūt–Himmelsgöttin–Baumgöttin–Lebensgeberin', *Humanitas Religiosa: Festschrift für H. Biezais*, X, (Stokholm, 1979), 53-69. Also A. Rusch, *Die Entwicklung der Himmelsgöttin Nut zu einer Totengottheit*, (Leipzig, 1922); H. Grapow, *Die bildlichen Ausdrücke des Ägyptischen: Vom Denken und Dichten einer altorientalischen Sprache*, (Leipzig, 1924), 24-29 (especially 27, 32); A. Piankoff, 'The Sky–Goddess Nut and the Night Journey of the Sun', *JEA* 20, (1934), 57-61. E. Hornung, *Der Ägyptische Mythos von der Himmelskuh: eine Ätiologie des Unvollkommenen*, (Freiburg, 1982); E. Laskowska–Kusztal, *Deir 'el-Bahari III: Le sanctuaire ptolémaïque*, (Warsaw, 1984), 82-88: on the astral role of Opet–Nūt. D. Meeks et C. Favard–Meeks, *La vie quotidienne des dieux Égyptiens*, (Paris, 1993), 166-72, 283-89; N. Billing, 'Text and Tomb: Some Spatial Properties of the Goddess Nut in the Pyramid Texts', *Egyptology at the Dawn of the 21st Century: Proceedings of the 8th*

- International Conference of Egyptologists*, (Cairo, 2000); Z. Hawass, L. Pinch-Brock (eds), (Cairo, 2003), II, 129-36.
- 4 For the funerary synthesis known as the *Book of the Celestial Cow* and the concomitant mythology, see C. Maystre, ‘Le livre de la Vache du Ciel dans les tombeaux de la Vallée des Rois’, *BIFAO* 40, (1941), 53-115; Piankoff, *The Shrines of Tut-Ankh-Amon*, N. Rambova, (ed.), Vol. 2 (New York, 1977), 26-37, 142-143; N. Guilhou, ‘Temps du récit et temps du mythe: des conceptions égyptiennes du temps à travers le Livre de la Vache Céleste’, *Mélanges A. Gutbub, OrMonsp* 2 (Montpellier, 1984), 87-93, 87-93; N. Guilhou, *La vieillesse des dieux, OrMonsp* 5 (Montpellier, 1989), 197-213; E. Hornung, *The Ancient Egyptian Books of the Afterlife*, (London, 1999), 148-51. For a depiction of the celestial cow, see N. Guilhou, ‘Un nouveau fragment du Livre de la Vache Céleste’, *BIFAO* 98, (1998), 197-213, Annexe I, iv-v.
- 5 See *PT*, 431, § 781a: 62; *PT*, 444, § 824a, 101: ‘*Nwt ḥꜥ.n.ṯ m bit*’ (*O Nut! Thou appearest as [a] bee*).
- 6 See e.g. *Urk.*, IV, 620: 16, for a reference on the *Poetical Stela* of Tuthmosis III; P. Wilson, *A Ptolemaic Lexicon: A Lexicographical Study of the Texts in the Temple of Edfu*, *OLA* 78, (Leuven, 1997), 379. Cf. also Posener, *Sur l’orientation et l’ordre des points cardinaux chez les Égyptiens*, *NAWG* 2 (Göttingen, 1965).
- 7 For a thorough account, see H. te Velde, ‘The Theme of the Separation of Heaven and Earth in Egyptian Mythology’, *StudAeg* III, (Budapest, 1977), 161-70. Cf. also *CT*, II, 78: §§ 19a-19b [B1C, B2C, B1P, B1Bo].
- 8 Referred to by Ploutarchos (see *De Iside et Osiride*, 12: 355^D-356^A).
- 9 See H. Frankfort, *The Cenotaph of Sethi I at Abydos*, I, *Memoirs* 39, (London, 1933), 72-86, II: pls. LXXXI-LXXXV. For the dramatic text in the cenotaph of Sety I, see also *EAT* = O. Neugebauer, R.A. Parker, *Egyptian Astronomical Texts*, I: *The Early Decans*; II: *The Ramesside Star Clocks*; III: *Decans, Planets, Constellations and Zodiacs/Plates*, (Providence RI, 1960), I, chap. 2 & tabs 44-51. Additionally, Nūt is depicted on the interior of the calcite sarcophagus box of Sety I (see for instance N. Reeves, R.H. Wilkinson, *The Complete Valley of the Kings: Tombs and Treasures of Egypt’s Greatest Pharaohs*, (London, 1997), 137.
- 10 On Hathor, see P. Derchain, *Hathor Quadrifrons: Recherches sur la syntaxe d’un mythe égyptien*, 28 (Constantinople, 1972). M.H.T. Lopes, ‘Les déesses Isis et Hathor, représentantes d’un type de pouvoir’, *Le Monde Copte* 16, (1989), 21-26. C.J. Bleeker, ‘Isis and Hathor. Two Ancient Egyptian Goddesses’, *The Book of the Goddess: C. Olson*, (ed.), (New York, 1983), 29-48; A. Roberts, *Hathor Rising: The Power of the Goddess in Ancient Egypt*, (Windsor, 1997); cf. also n. 57, *infra*.
- 11 Cf. A.-A. Maravelia, ‘Cosmic Space and Archetypal Time: Depictions of the Sky-Goddess Nūt in Three Royal Tombs of the New Kingdom and her Relation to the Milky Way’, *GM* 197, (Göttingen, 2003), 55-72 (especially 66-70), discussing A.P. Kozloff, ‘Ritual Implements and Related Statuettes’, in A. Kozloff, B.M. Bryan (eds), *Egypt’s Dazzling Sun: Amenhotep III and his World*, (Cleveland, 1992), 331-48. Also A.P. Kozloff, ‘Star-Gazing in Ancient Egypt’, in C. Berger, *et al.* (eds), *Hommages à J. Leclant*, IV, Le Caire (*BdE*, 106¹⁻⁴) 1994, 169-76.
- 12 See G. Hart, *A Dictionary of Egyptian Gods and Goddesses*, (London, 1986), 146. For the root *st3*, see *Wb.* IV, 551 ff [especially 553, I: (e)] & cf. *Urk.*, V, 55, 10.
- 13 On the fact that the Egyptians considered the sky as a female divinity and the earth as a male divinity, see T. Martinelli, ‘Geb et Nout dans les Textes des Pyramides. Essai de compréhension du caractère masculin de Geb et de la Terre, ainsi que du caractère féminin de Nout et du ciel’, *BSEG* 18, (1994), 61-80. On the symbolism of the *pt*-hieroglyph (N1), see R.H. Wilkinson, *Reading Egyptian Art: A Hieroglyphic Guide to Ancient Egyptian Painting and Sculpture*, (London, 1992), 126-27.
- 14 See, e.g. *Dendara: Le fonds hiéroglyphique au temps de Cléopâtre*, (Paris, 2001), 49; *Cat. IFAO*, (1983), 90, 3.
- 15 See, e.g. S. Cauville, *Le temple de Dendara*, XI¹, (Cairo, 2000), 41, 10.
- 16 See, e.g. *Dendara* VIII¹, 1978: 85, 11; *Wb.* III, 238.
- 17 See, e.g. *Dendara* VI, 1965: 111, 4; *Wb.* V, 162. To be compared also with the sign C201, studied here (*see infra*).
- 18 See, e.g. *Dendara* IV, 1935: 232, 2; *Wb.* II, 161-62.
- 19 See, e.g. *Dendara*, 2001: 50; *Cat. IFAO*, 1983: 90, 6.
- 20 See, e.g. *Dendara* III, 1935: 165, 14.
- 21 See, e.g. *Dendara* X¹, 1997: 18, 8.
- 22 See, e.g. *Dendara* VIII¹, 1978: 20, 7; *Wb.* V, 420 (cf. also *Wb.* II, 106).
- 23 Nadine Guilhou, *personal communication*. We thank Dr Guilhou for her useful information.
- 24 For which see Wilson, *A Ptolemaic Lexicon*, 378 (*pt*, with C199); 1097 (*gbt*, with C199A). Cf. also *Edfou* V, 1930, 8, 10; *Edfou* I, 1892: 474, 10; *Edfou* III, 1928: 243, 14.

- For the astronomical ideas of the Egyptians, as they are met in the texts of the temple of Khnoum at Esna, see A. von Lieven, *Der Himmel über Esna: Eine Fallstudie zur Religiösen Astronomie in Ägypten*, *ÄgAbh* 64, (Wiesbaden, 2000).
- 25 See, for instance, W.V. Davies, *Reading Egyptian Hieroglyphs*, (London, 1987), 51, 52-54.
- 26 See S. Morenz, 'Ägypten und die altorphanische Kosmogonie', in S. Morenz, (ed.) *Aus Antike und Orient*, (Leipzig, 1950), 64-111; S.A. Marakhonova, 'A Version of the Origins of the World in Egyptian, Orphic and Gnostic Cosmogonies', *Ancient Egypt and Kush: In Memoriam M.A. Korostovtsev*, (Moscow, 1993), 277-289; A.–A. Maravelia, *Les astres dans les textes religieux en Égypte antique et dans les Hymnes Orphiques helléniques*, (Diss., Université de Limoges, 2004), 365-69. On the symbolism of the οὐροβόρος ὄφις, cf. Fig. 8.
- 27 See, for instance, H. Junker, *Über das Schriftsystem im Tempel der Hathor in Dendera*, (Berlin, 1903), 4.
- 28 For which see Wilson, *A Ptolemaic Lexicon*, 378 (*pt*), 379 (*hnt*), 499 (*Nwt*), 1097 (*gbt*). Cf. also *Edfou* VI, 1931, 304, 2; *Edfou* V, 1930, 95, 7; 173, 11; *Edfou* VIII, 1933, 111, 112 (respectively).
- 29 For the hieroglyphic sign of the scarab (L1), see also Wilkinson, *Reading Egyptian Art*, 112-13; Fischer, *Ancient Egyptian Calligraphy*, (New York, 1988), 32; *EG*, 477.
- 30 For the symbolism of scarabs (*scarabeus sacer* L.), see LÄ V, 1984, 967-81: art. 'Skarabäus'; J. Ward, *The Sacred Beetle: A Popular Treatise on Egyptian Scarabs in Art and History*, (London, 1902); M. Malaise, *Les Scarabées de cœur dans l'Égypte ancienne*, (Bruxelles, 1978); A.–A. Maravelia, 'The Egyptian Golden Ring with Lapis Lazuli Inscribed Scarab at the Benaki Museum: Was it the Property of a Libyan Pharaoh of Dynasty XXII?', *Museio Benakē* 4, (Athens, 2004), 11-12 & nn. 3-4.
- 31 On *static eternity* (*dt*), see W. Westendorf, 'Zweiheit, Dreiheit und Einheit in der altägyptischen Theologie', *ZÄS* 100, (1974), 136-41. A. 'el-M. Bakir, '*nhh* and *dt* reconsidered', *JEA* 39, (1953), 110-11. Bakir, 'A Further Re-Appraisal of the Terms: *nhh* and *dt*', *JEA* 60, 1974, 252-54.
- 32 See, e.g. F. Daumas, *Les mammisis de Dendara*, I-II, *PIFAO*, *IF*, 314¹⁻², (Cairo, 1959) 183, 12; 187.
- 33 As is the case, for instance, of writing the word *psd* on the band of the basement of the external wall and in the *mammisi* (cf. Daumas, *Les mammisis de Dendara*, 273, 4; Daumas, (ed.), *Valeurs phonétiques des signes hiéroglyphiques d'époque gréco-romaine*, I-IV, *OrMonsp* 4, (1988-95), I, 124, N° 11, 13.
- 34 For Aker; see LÄ I, 1975, 114-15, art. 'Aker'; C. de Witt, *Le rôle et le sens du lion*, (Leiden, 1951). The lion looking towards the west alludes to yesterday and death; while the one facing the East alludes to tomorrow and resurrection (see Fig. 8 & 10).
- 35 On *dynamic eternity* (*nhh*), see Westendorf, *ZÄS* 100, 136-41; Bakir, *JEA* 39, 110-11; Bakir, *JEA* 60, 252-54; Allen, 'Genesis in Egypt: The Philosophy of Ancient Egyptian Creation Accounts', *YES* 2, (New Haven, 1988), 25-27.
- 36 On these signs (N7 & N8), see *EG*, 486; Wilkinson, *Reading Egyptian Art*, 128-29.
- 37 See *pBM 10470*; cf. R.O. Faulkner and O. Goelet, *The Egyptian Book of the Dead: The Book of going forth by Day: Being the Papyrus of Ani*, E. von Dassow, et al. (eds), (San Francisco, 1998), pl. 1.
- 38 See *Edfou* V, 1930, 95, 7.
- 39 Cf. Daumas, *Valeurs phonétiques des signes hiéroglyphiques d'époque gréco-romaine*, I, 124, N° 8.
- 40 See Daumas, *Les mammisis de Dendara*, 143, 6. For a discussion on a similar image from Dendara, see Daumas, 'Sur trois représentations de Nout à Dendara', *ASAE* 51, (1951), 380, pl. I^A.
- 41 Cf. Daumas, *Valeurs phonétiques des signes hiéroglyphiques d'époque gréco-romaine*, I, 124, N° 10; *Wb*, II, 69.
- 42 To be compared with a falcon-head (- Sun) appearing from the *pt*-hieroglyph in Wilkinson, *Reading Egyptian Art*, 126-27 and fig. 4.
- 43 For this sign (E23), see also Fischer, *Ancient Egyptian Calligraphy*, 21; *EG*, 460.
- 44 See e.g. *EG*, 487 (and cf. Wilkinson, *Reading Egyptian Art*, 131). For the *PT*, see Faulkner and Goelet, *The Egyptian Book of the Dead: The Book of going forth by Day*, (San Francisco, 1998).
- 45 Nadine Guilhou believes that: 'Au-delà des notions réductrices restreintes comme le souterrain, d'où, par exemple, les multiples apparences de la Douat, tantôt céleste, tantôt souterraine, et sa graphie: l'étoile encerclée. Elle est, en fait, le monde invisible, donc indéfini, plutôt qu'infini' (see N. Guilhou, 'Des ronds dans l'eau: *3hw* et *hk3w*, rapports à l'espace et au temps', in H. Györy, (ed.) *Mélanges offerts à Edith Varga*, (Budapest, 2001), 134 & n. 13.
- 46 See *Edfou* IV, 1929: 11, 3; Wilson, *A Ptolemaic Lexicon*, 378.

- 47 Cf. also C. de Witt, ‘Inscriptions dédicatoires du temple d’Edfou’, *CdE* XXXVI/71, (1961), 82, 3.
- 48 See Guilhou, *La vieillesse des dieux, Montpellier, OrMonsp* 5 (1989). Guilhou, ‘Un nouveau fragment du Livre de la Vache Céleste’, *BIFAO* 98, (1998), 197-213. Cf. also S. Bickel, *La cosmogonie égyptienne avant le Nouvel Empire, OBO* 134, (Fribourg, 1994), 209 & n. 268.
- 49 On the mythological separation of Heaven from the Earth, see n. 7, *supra*.
- 50 See our discussion in: Maravelia, *Les astres dans les textes religieux en Égypte antique*, 399.
- 51 Cf. *Tabula Smaragdina*, 2: ‘quod est superius est sicut quod est inferius’.
- 52 See Grimal *et al.*, *Hieroglyphica*, 1993, 2C-5: C203, C204; Grimal *et al.*, *Hieroglyphica*, 2000, 2C-8: C203, C204.
- 53 For the ancient Egyptian hymns to divinities and especially to the Sun, cf. J. Assmann, *Liturgische Lieder an den Sonnengott: Untersuchungen zur altägyptischen Hymnik I, MÄS* 19 (Berlin, 1969); Assmann, *Ägyptische Hymnen und Gebete*, (Zürich–München, ¹1975-²1999); H. M. Stewart, ‘Traditional Egyptian Sun Hymns of the New Kingdom’, *Bul. Inst. Arch.* 6, (London, 1967), 29-74; P. Barguet, *Le livre des morts des anciens Égyptiens*, (Paris, 1967), 45 ff. On the solar god, see *LÄ* V, 1984, 156-80: art. ‘Re’.
- 54 See *BM* 552, VIII, pl. xxvii.
- 55 See the various excerpts from *CT*, VII, 956, §§ 170j-172j [*pGardiner III*], as quoted above. For the *CT*, see A. de Buck, *The Egyptian Coffin Texts*, I-VII, (Chicago, 1935-61). Barguet, *Textes des sarcophages égyptiens du Moyen Empire*, (Paris, 1968). Faulkner, *The Ancient Egyptian Coffin Texts*, I-III, (UK, 1973-78).
- 56 E.A.W. Budge, *The Egyptian Book of the Dead: The Papyrus of Ani: Egyptian Text, Transliteration and Translation*, (New York, ²1967), 5 (*pBM* 10471). For the *BD*, see Budge, *The Book of the Dead: The Chapters of Coming Forth by Day: The Egyptian Text According to the Theban Recension in Hieroglyphic, Edited from Numerous Papyri, with a Translation, Vocabulary, & c.*, I-III, (London, ¹1898); Barguet, *Le livre des morts des anciens Égyptiens*, (Paris, 1967); E.H. Naville, *Das Ägyptische Totenbuch der XVIII–XX Dynastie aus Verschiedenen Urkunden zusammengestellt*, I-II, (Graz, ²1971); T.G. Allen: *The Book of the Dead or Going forth by Day: Ideas of the Ancient Egyptians concerning the Hereafter, as expressed in their own Terms*, in: E.B. Hauser (ed.), *SAOC* 37, (Chicago, 1974).
- 57 Hathor was conceptualized as the goddess of love, fertility, and mistress of music and dance. For a Ptolemaic hymn from her temple at Dendara, stating that the firmament offers its musical harmony to Hathor, see H. Junker, ‘Poesie aus der Spätzeit’, *ZÄS* 43, (1906), 101-27. For another similar hymn of the same period from Medamūd, cf. E. Drioton, *Rapport sur les fouilles de Médamoud (1926): Les inscriptions*, (Cairo, 1927), 26-28. For more information on Hathor, see also *LÄ* II, 1977, 1024-33: art. ‘Hathor’ and n. 10, *supra*. Similar archetypal symbolism concerning Hathor/Nūt is found in the tale of Sinūhe (see, for instance, Maravelia, *Les astres dans les textes religieux en Égypte antique*, 274, 353 and n. 189).
- 58 For a similar reference in ‘nh^h ntr nfr [h]wn n R^{rw}’ (= *Es lebe der vollkommene Gott, der Jüngling des Re*), from the Sheshonqide era; see E.R. Lange, ‘Ein neuer König Schoschenk in Bubastis’, *GM* 203, (2004), 72.
- 59 See G. Quandt (ed.), *Orphei Hymni*, (Zürich–Dublin, ⁴1973), 8, 10: ‘Ἐργων σημιάντωρ ἀγαθῶν, ὠροτροφέ κοῦρε’. For a comparison between an Orphic hymn to Hēlios (the Sun) and an Egyptian hymn to Rē[’] from the *BD*, see Maravelia, ‘Hēlios et Rē[’]: Deux textes anciens vus par une astronome–égyptologue’, *Tōzai* 6, (Limoges–Tokyo, 2001), 49-72. Cf. also Maravelia, *Mouseio Benakē* 4, 2004, 9-14.
- 60 The other celestial luminary that is connected to the measurement of time and the lunar calendars is the Moon. For a concise introduction to calendars and the measurement of time, J. de Bourgoing, *The Calendar: Measuring Time*, (London, 2001).
- 61 See S. Sauneron, *The Priests of Ancient Egypt*, (London, ³2000), 129 ff. As a typical example, see the Farnese Atlas (a stone statue showing the Titan Atlas holding up a celestial globe; acquired by Cardinal Alessandro Farnese in the early 16th century, now at the Museo Nazionale Archeologico in Naples; it is believed to be a Roman copy, made at c. 150 CE, of a Hellenic original dating from 200 BCE; it is one of the oldest surviving Western representations of a celestial globe (see Fig. 13); cf. also E.L. Stevenson, *Terrestrial and Celestial Globes*, (Yale, 1921). For the role of Ptah as a virtual Atlas, cf. also J. Berlandini, ‘Ptah–démurge et l’exaltation du ciel’, *RdE* 46, (1995), 22-23 & fig. 3. For the A121 group, see Grimal *et al.*, *Hieroglyphica*, (2000), 1A-3. Finally, concerning the use of A121C in the context of the *tw³-pt* ritual (also alluding to the 4 pillars of heaven), see Wilson, *A Ptolemaic Lexicon*, 378-79 and cf. *Edfou* I, 1892: 130, 11.
- 62 For the sign B58, see Grimal *et al.*, *Hieroglyphica*, (2000), 1B-1. On the four supports of heavens, see n. 6, *supra*. Concerning the cosmovisional idea of supporting the sky,

it would be interesting to be compared with some similar motifs found in temple reliefs and altars (see Wilkinson, *Reading Egyptian Art*, 126-27 & fig. 1, 3).

- 63 For more depictions of Nūt in a cosmographic context (dating from various periods), that could be compared —*mutatis mutandis*— to the hieroglyphic signs studied here, see *EAT* III (plates), 1969: pls. 16 (- C199), 26 (- C204, C296, C297), 28 (- C296), 38 (- C199, C199A), 39 (- C200), 40 (- C199, C199A, C201, C202), 50 (- C204, C296, C297). The representations of Nūt in various royal tombs of the NK could also be compared —*mutatis mutandis*— to some of the hieroglyphic signs examined here. Hence sign C200 could be compared to the image of Nūt in the tomb of Ramesses IV (KV2); signs C199, C296 and C297 could be compared to the images of Nūt in the tombs of Ramesses VI (KV9) and Ramesses IX (KV6), & c. (cf. also , Maravelia, ‘Cosmic Space and Archetypal Time, *GM* 197, 59-66. The depiction of the body of Nūt in Fig. 2 (*supra*) reminds of some of the hieroglyphic signs studied here (e.g.: C200); cf. also Daumas ‘Sur trois représentations de Nout à Dendara’, *ASAE* 51, 373-400 & pls. I^A-I^B. Finally, cf. the representations of Nūt in *Dendara X*², 1997: pls X-60, X-86, X-144, X-204, X-235, X-260, X-283, & c.