

Original article

LINGUISTIC SYMBOLIC APPROACH OF ANCIENT EGYPTIAN
DIFFERENTIATION BETWEEN NORTHERN AND SOUTHERN
CONSTELLATIONS

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Abstract

*The ancient Egyptians believed that the sky was divided into northern and southern hemispheres separated by a winding channel called *Mr-n-h3*, each section contained an astral entity which has unique cosmic qualities that distinguish them from the other stars. These astral entities are located in the northern hemisphere, some of them are polar while others are non-polar and in accordance to the proximity and distance from the center of the northern hemisphere. Examples of these astral entities in the northern sky are a group of immortal stars known as *Ihmw-sk*, while the constellation located in the southern hemisphere is a set of non-polar stars that include of a group of stars called *Ihmw -wrd*.*

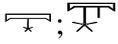
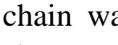
Keywords: *Northern hemisphere, Southern hemisphere, astral entities, Polar, Non-polar, Cosmic phenomena, Astronomical aspects.*

1. Introduction

Religion remains a main element in ancient Egypt life, everyday and its close association to the afterlife/ life after death. Consequently, the ancient Egyptians were interested in many branches of science related to primarily the ancient Egyptian beliefs. Astronomy was one of those promoted branches of sciences; it was related to faiths, especially the solar dogma. Besides this was a link between astronomy and the ancient Egyptian religious aspects. Furthermore, the ancient Egyptian daily life aspects included the observation of the star of *Spdt* / Sirius / Sothis appearance and disappearance in the sky that related to the Nile flood, a reason for the development of astronomy in ancient Egypt. The process of stars observing

was a profound impact on the later knowledge of celestial objects called with names related with astral dogma. When observing and learning about certain stars, it was noticeably divided into individual or singular and gather or set of moving within the stellar constellation. Thus, use the term astral entity, which is equivalent to the term constellation, the unity of a group of stars combined by common traits in their structure. Astral entities monitored by the ancient Egyptians, who knew that the sky was divided into northern and southern hemispheres separated by a winding channel called *Mr-n-h3*, each section contains astral entities which has unique cosmic qualities that distinguish them from other stars. The ancient Egyptians

believed that the astral shapes were mainly entities located in the northern hemisphere, some of them are polar and others are non-polar according to the scope of the proximity and distance from the center of the northern section. Examples of these astral entities exist in the northern hemisphere; a set of immortal stars *Ihmw-sk*. While the ancient Egyptians considered that the constellation located in the southern hemisphere was a set of non-polar stars including a group of moving stars called *Ihmw-wrd*. According to the ancient Egyptians' point of view the cosmic phenomena were linked to his religious beliefs; these two constellations were a major part of the ancient Egyptians' religious beliefs. The ancient Egyptians tried carefully to identify the secrets of his surrounding universe and the beginnings of creation, as well as the nature of heaven and the celestial bodies that move in it through his daily observations of what surrounds him from natural and cosmic

phenomena [1,2]. The sky was the place of stars and planets, where the observer watched boundless heavens including bright spots of variable brightness known as stars [3,4]. The renowned stars appear on the horizon after sunset then the less illustrious appear with darkness; moving from the east to the west, as is the moon at night and the sun by day [5]. During the day stars are not shown because the sunlight prevents its vision [3,4], The stars are shining objects that the ancient Egyptians saw in the sky at night, and believed that these stars are descend from a sky dome at night and during the day they are hang from it by chains or ropes [6]. That was inscribed by the term that includes a determinative of the night *grh* ; . Noticeably, the end of the chain was free and through which the stars could appear during the day and disappear in the sky (*Nwt*), while being lowered at night and brighten the darkness of night [7,8].

2. The linguistic structure of *Ihmw-sk* and *Ihmw-wrd* in ancient Egyptian language

The linguistic structure of *Ihmw-sk* and *Ihmw-wrd* in the ancient Egyptian language reflects their developed forms

2.1. *Ihmw-sk*

This linguistic term *ihmw-sk* consists of two words, first is *ihmw*, which is the plural of *ihm* which means "unaware"^(a) [9]. Furthermore, it is a derivative participle of a trilateral, intransitive and weak verb *hmi*  which means "unaware of"^(b) [9,10]. Occasionally the word *ihm* was reduced to the forms of either  or , which is usually found among the names of stars^(c). [9] As for the 2nd word *sk*, it is derivative of a trilateral, transitive and weak verb *ski*  which means "to destroy or die"^(d) [11]; usually this form comes with the term *ihm-sk*^(e) [12]. Thus, the term

2.2. *Ihmw-wrd*

This linguistic term consists of two words *Ihmw* which was mentioned previously, and the other

of writing in different linguistic times, as will be seen in the following:

ihm-sk can be translated literally to mean "Which does not know to die", also it can be come with the immortality meaning and can be written in the following way ^(f) [12]. This term was launched in the plural form on a set of northern polar stars known as the "stars that can't be destroyed" or "the eternal stars that do not know the demise"^(g) [11]. The term was written with several forms like ^(h) [9]. It should be mentioned that the term *ihmw-sk* was given to the passengers of the night boat of god *Rc* during its voyage to the afterlife⁽ⁱ⁾ [12].

was *wrd*  which is a derivative of a trilateral, transitive and strong verb which means "weary"⁽ⁱ⁾ [9]. It was

sometimes written and uttered as *wrd* ^(k) [11]; therefore, the term *ihm-wrd* could be translated literary to mean "Which does not know weary". Idiomatically, this term in the plural form of a set of moving stars does not change^(l) [11]. These are both a set of

southern and non-polar stars^(m) [12]. The term was written in several forms like ⁽ⁿ⁾ [12]. As previously mentioned the term *ihmw-wrd* was given to the passengers of the night boat of god *R^c* during its voyage to the afterlife^(o) [12].

3. The writing forms of *Ihmw-sk* and *Ihmw-wrd* in the different stages of ancient Egyptian language

By studying the written forms of the two terms *ihmw sk* and *ihmw wrd* in the different phases of linguistics, starting from the old Egyptian, then middle Egyptian and ending with the late Egyptian, along the changing of determ-

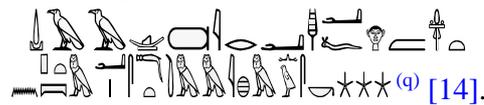
inatives and replacing the signs with literal and idiomatic meanings of the word. Furthermore, the different ways of writing linguistic signs in the ancient Egyptian sources through its linguistic phases which appear as follows:

3.1. The old Egyptian linguistic stage

3.1.1. *Ihmw-sk*

The usual appearance of the term *ixmw sk* was in the pyramid texts; the term *ihmw*  was consistently written with the pronunciation *i-h-m-w* then followed by the determinative  indicating denial and unawareness^(p) [13]. The word *sk* was written in its simple form  *sk*, followed by the determinative  indicative astronomical entity of an astral shape. However, it

should be kept in mind that there are other forms of writing it. Many previous signs were mentioned in the pyramid texts of the latter astral entities; according to the ancient Egyptian beliefs the pyramid texts have mentioned the admissibility of the deceased king in eternity through his incorporation with the heavenly northern stars that do not die or disappear mentioned in the following:



d33 (N) ir h^c.f hr gs i3bty n pt
m-^c.s mhty m-m ihmw-sk

"The deceased king passing (crossing) until he stands on the eastern side of the sky, in the Northern part among Timeless stars (imperishable stars)"^(c) [15].

▪ Remarks and comments

- 1- The ancient Egyptian used the verb "*d3i*" in the writing of the form "*d33*" because the sign "3" was used twice to indicate the continuity of the ascension to the heavenly world, and therefore has also been used in the full form "*ir*" as the preposition "*r*" means "*till*". Furthermore, the full form prepositions were used to assert the continuity of the deceased's ascension in order to obtain immortality similar to the timeless stars "*ihmw-sk*"^(s).
- 2- The writer referred to the eastern side of the sky, using the Nesba Form in the term *i3bty*. Also, he added the indirect-genitive using the masculine single article *n* added to rather than the feminine singular article *nt*.
- 3- The ancient Egyptian used the Nesba Form to express the northern part of the sky in the term *mhty*. Syntax of the term *mht* means "North", to confirm that the northern hemisphere is the home of the eternal stars that do not destroy.

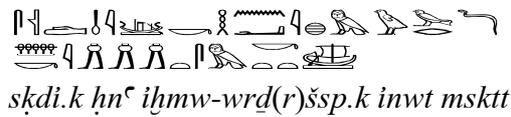
4- Then used the direct genitive in the expression *ihmw-sk* to indicate the undestroyed stars in the northern

hemisphere, which cross to gain immortality in the afterlife/the the everlasting life.

3.1.2. *Ihmw-wrd*

Ihmw-wrd is a term which usually appears in pyramid texts as previously mentioned. While the word *wrd* was written in its usual form starting with the bilateral sign *wr*, followed by the phonetic complement *r*, then the sign *d* as , finally the determinative  followed by the plural signs . But the notes in spell 1171 of the pyramid texts^(t) [14], where the substitution in the word *ihmw* written as , so the determinative  was in the middle, which known as

"Orthographic substitution", means replacement in the order of signs, for the purpose of using signs in the available space in the best possible way. Then the alphabetical substitution becomes the usual method in the words writing^(u) [16]. On the foregoing, the pyramid texts mentioned that the deceased king accompanied the moving star (which does not go away) in the sacred [night] boat of god *R^c* during his heavenly journey, where mentioned:



"You sail with the moving stars (which does not go away), (until) you receive the bounties of the Night boat"^(v) [14].

▪ Remarks and comments

- 1- The verb *skdi* is intransitive, weak and a quartet verb within the syntax *sdm.f* indicating the deceased optative.
- 2- The writer used direct-genitive in the expression *ihmw-wrd* to indicate the moving stars that do not disappear, and which the deceased desired to accompany god *R^c* in his night boat during its voyage to the afterlife/ the everlasting life.
- 3- The verb *šsp* is a trilateral, transitive, and optative strong verb which comes within the syntax *sdm.f* with the suffix pronoun *k*, the writer used the sign  in writing form of *šsp*, instead of the early form  which was used

during the old Egyptian linguistic and the following linguistic phases.

- 4- The ancient Egyptian used the direct genitive in the phrase *inwt msktt* to refer to the cargo bounties of the night boat of god *R^c* allowing the deceased king into the afterlife/ next life after death.
- 5- There is a substitution among the word *msktt* signs, which began with the signs instead of the sign *m* as: , but originally written as ^(w).

3.2. The middle Egyptian linguistic stage

3.2.1. *Ihmw-sk*

In this linguistic phase, the ancient Egyptians deserted the simple form of the word *sk* which was used in the pyramid text^(x) [17], where the word  was written *sk* , followed by the determinative of star  followed by the plural signs. Whilst the word *ihmw* in its usual form discarded using the *w* sign and writing . Noteworthy, there

are other forms of its writing. For example, as in the coffin texts there are several signs for these astral entities; coffin texts referred to the deceased to rise to heaven to enjoy the company of the timeless stars, which do never disappear^(y) [17]. This was mentioned in the following:



pr.k 3kr.k ir pt m-m sb3w ihmw-sk hwi.k m b3 hrp.k m i33t

"You Go up (of) your land to the sky among the timeless stars (that do not disappear forever), hit with the Scepter b3, and dominate with the Scepter i33t" ^(z) [17].

▪ **Remarks and comments**

- 1- The preposition *r* comes in its full form meaning "to" and it was preceded by the sign *I* as: .
- 2- The writer used the linguistic syntax *Ihmw-sk* as direct genitive to express a set of timeless stars that the deceased looked forward to rise to

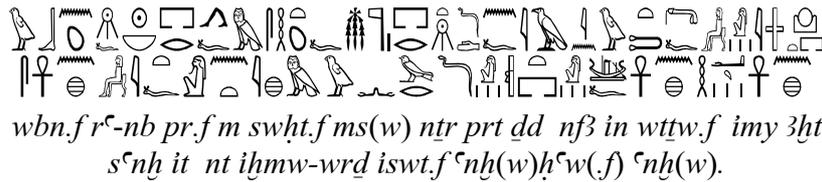
the heavens and become an undying star.

- 3- The term *b3* means a scepter, it appeared in pyramid texts as *b3*^(aa) [14], while the term *i33t* also means scepter^(bb) [11]. Similarly, it appeared in pyramid texts as *i33t*^(cc) [18].

3.2.2. *Ihmw-wrd*

The ancient Egyptians added at this determinatives' phase which was not used in the linguistic writing of the old Egyptian phase. The term *wrd* ^(dd) [17] was written as follows: , then a determinative of a man extended his arms signifying exhaustion ^(ee) [13]; this was followed by the star determinative  and the plural signs. While the term *Ihmw* was written

with its usual form without the *W* sign . Earlier, the coffin texts spell No.80, referred to the resurrection of the moving stars that does not disappear, to the deceased and help him get out of the coffin to enjoy eternity with the stars during the voyage to the afterlife. This was mentioned in the following:



"He shines every day, and goes out of his coffin, to be re-born and go out as a deity. This is what was said by the procession crew who are in the horizon to revive (their) father, who is with the moving stars (that do not go away). His procession crew are reviving and (also) his members are reviving"^(ff) [17].

▪ **Remarks and comments**

- 1- The article *in* preceded the subject, the word *wttw* to conclude its meaning "what his procession crew said" or "the speech of his procession crew".
- 2- The writer used the plural sign *nf3* to refer to "what his procession crew said", but noted that it came also in other written forms such as: , , ^(gg) [19]. However, the writer added the sign *I* between the signs *n*, *f* on one side and the sign *3* on the other side,

which was written in the form of .

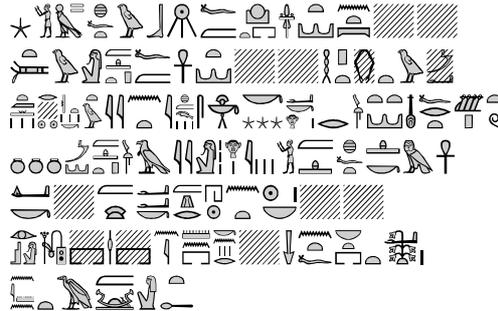
- 3- The ancient Egyptian writer used the linguistic syntax *ihmw-wrd* as a direct-genitive to refer to "the moving stars that do not destroy or go away". The apposition formula was also used^(hh) [20] in the syntax *iswt wi3.f* of the exchange term *ihmw-wrd* through a clear association of these astral entities representing the crew of sacred boat of god *R*⁽ⁱⁱ⁾.

3.3. The late Egyptian linguistic stage

3.3.1. *Itmw-sk* :

Lesko mentioned that the term *ihmw-sk* was written in this linguistic phase in the following form , uttered as *ihmw-wrd* which means "the

timeless stars"⁽ⁱⁱ⁾ [21]. Of the latter there is a text from the tomb^(kk) of ^(ll) *Nfr-rnbt* which stated^(mmm) [22]



Dw3 (n) R^c-Hr-3hty hft (m) wbn.f m 3ht i3btt nt pt...Itmw m htp.f m ^cnh^t...hpt.tw m3^ct r (tr)wy iswt.k twy nt ihmw-sk di.k hr.k r imntt nfrt šsp.tw m3nw m htp imntyw hr i3w m htp hft htp.k m ^cnh di.k (m3.i tw) m h^c.k m hrt hrw nt r^c-nb(n-k3-n)Wsir sš-pr-ḥd n pr Imn Kn-r3 (m3^c-hrw) snt.f nbt pr šm^cyt n Imn Mwt-m-wi3 m3^ct-hrw

"Worship [Adoring] to R^c-Hr-3hty. When he shines in the Eastern horizon of the sky ... And (Worship to) Atom when he resting in life...would M3^ct enfold you over two times (day and night), and (also) your procession crew of the timeless stars, to take over your face to the beautiful west, will receive the sunset in peace, the westerners worshipping you in peace when you disappear from life. Would you let me see your rising in the Necropolis daily, for the soul of wsir, writer of the House of the South of the Imn palace, the kn-r(3), (true of voice), and his sister, the house lady, the Imn chanter, Mwt-m-wi3, true of voice".

▪ Remarks and comments

- 1-The writer began his worship with chanting and prayers addressed to god R^c. When R^c shines in the eastern horizon of the sky, as well as, to prayers to god *Itm* when he sets in the western horizon of the sky. A greeting form and adoration in ancient Egyptian known as "Praying and Greeting forms", such exists on a limestone statue in the British museum/ BM.21980, which states "*Dw3 (n) Imn-R^c (m) wbn .f*" and "*Dw3 R^c m hrt hrw*"⁽ⁿⁿ⁾ [23-26]. There are different praying and greeting invocations in the religious hymns to the gods like: "*Dw3 Imn-R^c*" [2,27]; "*Dw3 Mnw*" [28], and "*Dw3 H^cpy*" [29].
- 2- The term *trwy* came in a dual form adding *wy*, indicating the night and day.
- 3- The writer used the syntax *ihmw-sk* to express the direct genitive, to refer to the god R^c and *Itm*, also the

procession crew of the timeless stars, which do never disappear.

- 4- The writer used the syntax adjectival form with the syntax described *imntt-nfrt*, in the feminine form. Also, this adjective might be known as a feminine adj. form.
- 5- The ancient Egyptians called the westerners or people of the afterlife using Nesba-Form, in the term *imntyw* of the word *imntt* which means the west.
- 6- The direct genitive, as well as the indirect genitive were used in the statement *sš pr-ḥd n pr Imn* and the apposition of the syntax of *m3^c-hrw* originally was *kn-r3*. In the syntax *mwt-m-wi3* was originally *snt.f nbt pr šm^cyt n Imn*, all the latter were reflexive titles or adjectives then later were used as the optative *sdm.f* in the syntax *di.k (m3.i tw)*^(oo).

3.3.2. *Ihmw-wrd*

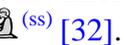
Furthermore, Lesko mentioned the term *ihmw-wrd* which was written in late Egyptian stage, in the form  pronounced *hm wrdw* which

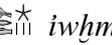
means "stars that do not weary or rest"^(pp) [21]. It is noted that Lesko adopted the kitchen devoting text of Ramses II's Abydos, as reported^(qq) [30]



Itmw m pt m t3 mi iw hm-wrd iw hm-sk
iw.k imy-h3t n wi3 n hhw wbn R^c m hrt irty ky hr nfr.f

"Atom in heaven and earth like moving stars (which do not disappear) and the timeless stars (which are not destroyed),(while) you are at the front of boat of millions years, (and) when R^c shines in the sky and your two eyes on him shine".

However, there are incompatible with what Lesko mentioned as the term "timeless stars, that do not destroy " is *hm sk*, and the term "stars that do not weary or rest "is *hm wrdw*, but depending on going back to the Berlin Dictionary, the substitution or replacement existed ever since the New kingdom the word *ihmw* to *iwhm*^(rr) [31], was identified as *ihmw-wrd* written as part of a text in TT 100 in the form  at Qurna. The tomb belongs to a vizier by the name *Rh-mi-R^c* ^(ss) [32]. This is an example of replacement of

the sign *w* with the signs *h* and *m*. Of the latter, the researcher thinks that the terms *ihmw-sk* and *ihmw-wrd* were developed by the late linguistic phase and written  *iwhm sk* or  *iwhm wrd* respectively. As for the orthographic substitution, it began by the New kingdom era and later became necessary to write them down in the later periods. In chapter 102 of the Book of the dead, the papyrus of *Nw* ^(tt), mentions the following^(uu) [33].



r(3)-n-h3t r wi3 n R^c dd mdw in Nw i wr m wi3.f
in.wi r wi3.k hrp.i skdwt.k m irwt.k iptn nty m iw hmw-wrd

"A spell to get off the boat of god R^c, recitation by Nw, "O" great one in his boat, to your boat you brought me to control your crew, to accomplish your tasks, which are within the timeless stars (which do not go away)".

■ Remarks and comments

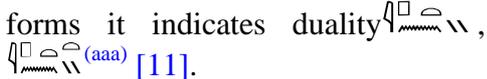
1- The text begins with the sentence *r(3)-n h3t r wi3 n R^c* the title of chapter No.102 in the "Book of the Dead". It is noted that this sentence had begun with the prefix word *r(3)*, while the word *h3t* came as an infinitive for a trilateral and weak verb *h3i*, that justifies adding sign *t*^(vv) [13,34]. Also, the infinitive was added indirectly through *n* sign as a genitive article^(ww) [13]. So in the spell "to

get off the boat of R^c" when the whole sentence is translated it becomes clear and is worth mentioning the infinitive uses that became titles of religious books [20].

2- The sentence *dd mdw* in *Nw* usually comes as an introduction for religious texts. The word *dd* came as a bilateral true verb *dd*, which explains why the sign *t* was not used in the word. The word *mdw* came as object

on the original subject *Nw*, which was preceded by the article *in* which means "by" [20].

- 3- The writer did not use an preliminary article to call or to venerate, except in a few cases, the expression was through the context of the speech^(xx) [9,20]. In religious hymns, the ancient Egyptians used the article *i*  to call which is more common than  *h3* ; also used for the same purpose. These articles used at the beginning or at the end of the sentence were seldom to come in the middle of a sentence^(yy) [9, 13-15,18,34,35].
- 4- The dependent pronoun (*wi*) came as an object to the verb *in*, while the subject *R^c* was removed. The caller is the suffix pronoun of the second person *k* masculine. The sentence might be passive including the removal of the passive pronoun *tw*, thus the sentence *in.tw.wi* was translated as "brought".

5- The composed demonstrative adjective *iptn* refers to the plural form which has been used since the middle linguistic phase. It usually comes after the name attached with a suffix pronoun^(zz) [13,34], and thus written in other forms to refer to the plural form . In the following forms it indicates duality  ^(aaa) [11].

6- The writer used the syntax *ihmw-wrd* to refer to the direct-genitive form which is the crew of the sacred [night] boat of god *R^c*. The term *ihmw* was substituted by the *w* sign which came before the signs *h*, *m*. Thus, the word written , it should originally be written in the form  as a system of writing the linguistic syntax during the New kingdom era^(bbb).

4. Symbolism of differentiation between *Ihmw-sk* and *Ihmw-wrd* in ancient Egyptian language

Studying astral entities *ihmw-sk* and *ihmw-wrd* and their role in ancient Egyptian astronomical circles clarified

4.1. *Ihmw-sk*

The ancient Egyptians considered the northern stars to be located in the northern hemisphere while the stars that revolve around the northern pole were

the importance of these two entities similar to the other constellation *Mshtyw* and *S3h*.

named "*Mr-n-h3*". These stars were classified according to their proximity to the Northern pole and were divided into two groups, fig. (1).

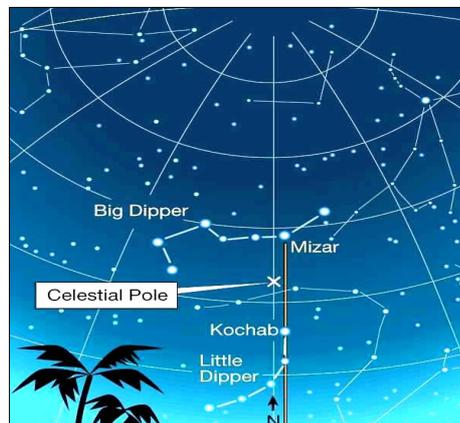


Figure (1) The division of the northern star to Polar and Non-polar stars (after Wallin, 2002)

The nearest stars to the North Pole are classified as polar stars that

never set on the horizon and keep rotating around the North Pole every



Figure (4) The sarcophagi of *Ttf-ib* representative of *S3h* correspond to *Mshtyw* on the opposite side (after Pogo, 1932).

5. Symbolism of differentiation between *Thmw-sk* and *Thmw-wrd* in Ancient Egyptian beliefs

The ancient Egyptians tried carefully to monitor the stars and become aware of majority matters appertaining to religion in order to perform the religious

rites and the ceremonies. Therefore, they give the astral entities of *Thmw-sk* and *Thmw-wrd* a lot of interest.

5.1. *Thmw-sk*

The ancient Egyptians consider *Thmw-sk* holy celestial entities and treat them as immortal gods in the northern

hemisphere. This was confirmed several times in the pyramid texts such as spell 818-c, were mentioned as follows:^(III) [18]


sm.k n ntrw ipf mhtyw Thm-sk

"You can go ahead [ascend] to those northern gods, the timeless stars"^(mmm) [14].

Also, spell (380, b) which states the following:⁽ⁿⁿⁿ⁾ [14]


Ntrw ipf sbkw s3w Thmw-sk

"The wise (and) guardians gods are the timeless stars". Also, spell "1080, a" which mentions the following:^(ooo) [14]


Ntrw ipw mhtyw pt Thmw-sk

"Those northern sky' gods' are the timeless stars" [46]

The ancient Egyptians often give the word *Thmw-sk* a determinative of a seated god  [6]. Thus, such stars were interpreted as a head of *Hr*, face of *Mhnty-irty*, ears and twin eyes of *Itm*" *Šw* and *Tfnwt* ", nose of *Inpw*, teeth of *Spdw* and hands of *Hpy* and *Dw3-mwt.f* [47]. This was revealed in the pyramid texts spells 148-149^(PPP) [14]. Therefore, such classification was not unintentional but according to certain deities' characteristics those stars represent Anubis the jackal who was known for his strong sense of smell, who guarded the cemetery with his nose. Likewise the teeth of *Spd* as it were known for sharp teeth [47]. So in order for

the deceased king to ascend along with the great gods and become *Wsir*. Afterwards, he needs to join with *Thmw-sk* to be able to enjoy everlasting life in the afterlife. This is clear through the two holes on the north wall of the vault located in the northern-eastern side of the step pyramid of the King Djoser at Saqqara, fig. (5). There lies the statue of King Djoser *K3* facing the northern star, and the two are considered as a channel of communication between the *K3* of the king and the northern timeless stars *Thmw-sk*, in order to help the process of unification between the *K3* of the king and those stars [36].

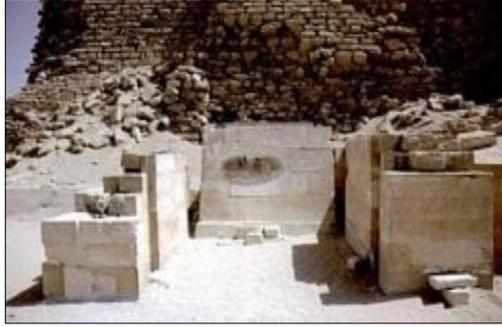


Figure (5) The vault of the king Djoser at Saqqara (after Belmonte, J., & Shaltout, 2010).

Furthermore, there is a text referring to the personification of the deceased king with *Ḥmw-sk* for merger with *Wsir*; as reported in the spell No.684 of the pyramid texts [48]. This personi-

fication was done through the goddess *Nwt*, that was according to what written on a statuette of the King Tutankhamun were mentioned the following:^(qqq)



h3 mwt.i Nwt psš.t hr.i di.i m ḥmw-skw imy.t

"(O) My Mother *Nwt* which is outspread above me, [would you] reform me as the immortal stars that are inside you"

The embodiment with those stars begin since putting the deceased' coffin in the tomb and continue with the rite of mouth' opening. The ancient Egyptian links between this rite and those stars through the tool of mouth' opening [6]. May be that due to the distribution of the group *Ḥmw-sk* in the northern hemisphere

is similar to the form of that tool, figs. (2, 3) [37]. Furthermore, it followed by a determinative of a bull's thigh [6]. The bull's thigh is an offering of the deceased after completion of the rite of mouth' opening for achieve his rebirth, and was represented as follows, fig. (6)



Figure (6) The rite of opening of the mouth to the king Tutankhamun that linked with a special feature of the bull' thigh/*Mshtyw* (after Roth, 1993).

Therefore, some scholars consider that the distribution of that group in the northern hemisphere is similar to the shape of a bull's thigh, figs. (2, 3). It is similar to the belief of the researcher which is enhanced through aforementioned evidences. Thus, there is a close relationship between *Ḥmw-sk* / a group of *Mshtyw* and the form of the

bull's thigh. It should be mentioned that the set of *Ḥmw-sk* considered as passengers accompany god *R* during his heavenly voyage to the afterlife through the sacred [daily] boat named *Mndt*  ⁽ⁱ⁾ [6,12]. Therefore, the ancient Egyptian consider these immortal stars located in the northern hemisphere [6,12].

And because in some cases, the deceased can be control of those stars or become their leader during sailing of the sacred

5.2. *Ḥmw-wrd*

The ancient Egyptian was able to know the celestial objects/stars since the prehistoric ages. Through observing and learning about certain stars, it was noticeably divided into individual or singular and gather or set of moving within the stellar constellation like a

boat of god *R^c* throughout its heavenly voyage to the afterlife/ the everlasting life⁽ⁱ⁾ [6,12].

group of five stars represented on a pallet dating back to the era of Naqada II and discovered in Gerzeh^(trr). It was made of schist and now preserved at the Egyptian Museum of Antiquities No.43103, fig. (7)^(sss) [49,50].



Figure (7) A group of five stars depicted on the Gerzeh' palette dating back to the era of Naqada II. (after Lesko, 1999).

It represent a cow' face with the two horns, and the stars were distributed around it, two of these stars dangled from its ears look like as earrings, while there is one of these stars seem on its head as an ornament of the crown, and there are two stars on both sides of its two horns. Scholars agree that the cow is a representation of the goddess Bat. Therefore, there is a scene was pictured on surface of a vase dating back to the 1st. dynasty [51]. Thus, may be that group of stars represent the set of *Ḥmw-wrd*, which consist of five stars. Therefore, this constellation considered of the oldest celestial objects known by the ancient Egyptian. So the set of *Ḥmw-sk* as well as the set of *Ḥmw-wrd* are represent-

ation of the celestial gods. This is become clear through the association of these astral entities representing the crew of sacred boat of god *R^c* (ii). And confirmed by the spell No.53 of coffin texts discussed above in the symbolism of differentiation in ancient Egyptian language^(ttt) [17]. So *Ḥmw-wrd* played a profound role in the revival the deceased' members in order to enjoy in the afterlife, that confirmed by the spell No.80 of the coffin texts mentioned above in the linguistic structure and writing forms^(uuu) [17]. As well as the spell No.43 of the coffin texts noted the profound impact of the *Ḥmw-wrd* in the everlasting life, which states the following^(vvv) [17].



in *Ḥmw-wrd* *m33.sn wsrw (n) [N] h3.f m t3 m Ntr ds.f*

"By the immortal stars, they can see the power (of the deceased) when go down on earth as a god by himself [personally]"^(www) [17].

By *Ḥmw-wrd* can revive the deceased every night in order to across accompany god *R^c* throughout his heavenly voyage to the everlasting life /afterlife through the sacred [night] boat

named *Msktt*. Therefore, the ancient Egyptian considers these immortal stars located in the southern hemisphere as passengers accompany god *R^c* [6]. Similarly, by the set of *Ḥmw-sk* in

some cases, the deceased can be control of those stars or become their leader during sailing to the afterlife/ the everlasting life⁽ⁱ⁾ [6,12]. That confirmed by the chapter No.102 of the book of the dead aforementioned in the linguistic structure and writing forms^(xxx) [33]. The ancient Egyptian tried carefully to identify the secrets of his surrounding universe and the beginnings of creation, as well as the nature of heaven and the celestial bodies that move in it through his daily observations of what surrounds him of natural and cosmic phenomena [1,2]. The infinite and unchanging nature of the stars of the northern and southern hemisphere/Polar and Non-polar influenced the development of the ancient Egyptians' astronomy and their beliefs regarding the life after death. Every Egyptian temple was a complex model of the cosmos, and thus many forms of stars, constellations and stellar deities grace temple ceilings. In instances where the night sky was charted on the ceiling, brighter stars were sometimes designated by circles like the sun disks. In decorative uses, the sky' body of the goddess *Nwt/Nut* was decorated with five-pointed stars [10,52]. It was believed that the astral forms were mainly entities located in the northern hemisphere, some of them are Polar and others are Non-polar according to the scope of the proximity and distance from the center of the northern section. Examples of these astral entities exist in the northern hemisphere; a set of immortal stars *Thmw-sk*. While the ancient Egyptians considered that the constellation located in the southern hemisphere was a set of Non-polar stars including a group of moving stars called *Thmw-wrd* According to the ancient Egyptians' point of view the cosmic phenomena^(aaaa), figs. (1,2, 4,7) [10, 43, 52-57]. Religious symbols are used to convey concepts concerned with humanity's relationship to the holy and also to his social and physical

cosmos, so the concept of the religious symbol also embraces an abundantly wide variety of meanings, so the symbolical aspect of ancient Egyptian religion has a profound symbolic impact on the art in ancient Egypt. Thus, the ancient Egyptian did not illustrate the cosmos in a pure physical concept^(zzz) [54]. It was believed that the stars did not just inhabit this mundane earth, but in the *Dw3t/Duat* (Land of the afterlife) as well. The Egyptians believed that the *B3/soul* of the deceased might ascend to the sky to live as a star in heaven. Many tombs also featured deep blue ceilings dotted with bright yellow stars in the exact shape of the Hieroglyphic form in hopes to make the *B3/soul* feel at its new dwelling place. The stars were called the "Followers of the god *Wsir/Osiris*", and represented the souls of deceased in the afterworld in order to obtain the everlasting life. The five-pointed stars within a circle were the Egyptian symbols of the *Duat/Dw3t*^(yyy) [9,10,52,58]. These five stars appeared since the pre-dynastic age, specifically at the era of Naqada II as aforementioned of Gerzeh palette^(bbbb), fig. (7) [49,50,59]. In the later eras played an important role in ancient Egyptian social concepts and religious beliefs, especially during the Old kingdom up to the end of Greek and Roman eras^(bbbb) [49,50]. It should be mentioned also that these five stars are the sons of *Nwt/Nut*, which born during the Epagomenal five days and mention in the ancient Egyptian sources as; pyramid texts, coffin texts, book of the dead and the books of the next world, and named "*Mswt-Ntrw;Mswt-Nwt*". This is without specifying their respective entities, which termed as "*Thmw-sk; Thmw-wrd; Thmw-wrs*"^(cccc) [9,14,49, 50,59-61]. It should be noted that the deceased ascend to the sky accompany the stars *Thmw-sk*, which do not disappear forever [by day]. Likewise, accompany the stars *Thmw-wrd* that

which does not go away [by night] to live as a star-shape to enjoy with everlasting life. Thus, there are two forms of stars in ancient Egypt, the first form used in the linguistic syntax *Thmw-sk* to express a set of "timeless stars by day", that the deceased looked forward to rise to the heavens and become an undying star. Whilst the second form used in the linguistic syntax *Thmw-wrd* to express a group of "immortal stars by night". So, the deceased can live the everlasting life through these two sets of stars which do not disappear during the day or by night^(cccc) [14,60]. The ancient Egyptian civilization throughout the historical ages achieved an important development in the astronomy, it was noticeably appeared on the ceilings of temples, tombs and coffin covers [5,62]. So, the ancient Egyptian build

the ceilings of the tombs like a vault of the sky, also featured deep blue ceilings dotted with bright yellow stars^(dddd) [63]. Moreover, there are some coffins of Assiut dating back to the First intermediate period included for the first time the simple models of astronomical scenes represented a square units adjoining in two parallel rows, the later depicted, specifically during the new kingdom by more detail. The most important notice in these astronomical sections were keen to distinguish clearly between the southern stars hemispheres through depicting a set of star *S3hw* and the northern stars hemispheres through depicting a set of *Mshtyw*^(eeee) [42-45], that confirmed by the coffin of *Itf-ib* of Assiut^(ffff), fig. (4) [42-43].

6. Symbolism of astronomical differentiation between *Thmw-sk* and *Thmw-wrd*

6.1. Northern stars *Thmw-sk* (The set of Ursa Major)

A group of seven stars, located in the northern hemisphere, looks like a bull' thigh, the ancient Egyptians knew these astral entities as a set of immortal stars *Thmw-sk* or a set of Ursa Major, what they named *Mshtyw*, fig. (2). The word *Mshtyw* was followed by two determinatives like: ,  and written as follows:  ^(ccc) [9]. They considered it as the most important feature of the northern hemisphere, which consists of the seven brightest stars. Plutarch entitled this group as "The spirit of Typhoon", due to the merger between the Roman god Typhoon with the Egyptian god Seth/*Swth*, both of them appeared to be a representation of a male hippopotamus^(gggg), figs(2,3, 4,6) [6,64-68]. The astral entities monitored by the ancient Egyptians, who knew that the sky was divided into northern and southern hemispheres separated by a winding channel called *Mr-n-h3*, each section contains astral

entities which has unique cosmic qualities that distinguish them from other stars. The ancient Egyptians believed that the astral shapes were mainly entities located in the northern hemisphere, some of them are Polar and others are Non-polar according to the scope of the proximity and distance from the center of the northern section, fig. (1) [6]. The representative scenes of these northern stars *Thmw-sk* (The set of Ursa Major) were since the first intermediate period, as aforementioned of the coffin of *Itf-ib* Je 36444^(kkk), fig. (4) [42, 43]. In the later eras played an important role in ancient Egyptian religious beliefs, thus these stars appeared at the burial chamber' ceiling of the incomplete tomb "TT 353" at Thebes on the West bank of the Nile. The tomb was built during the eighteenth dynasty, and it belonged to Queen Hatshepsut's vizier *Snmwt* /Senenmut, "also known as Senmut"^(hhhh), figs. (8,9) [43, 55, 69-72].

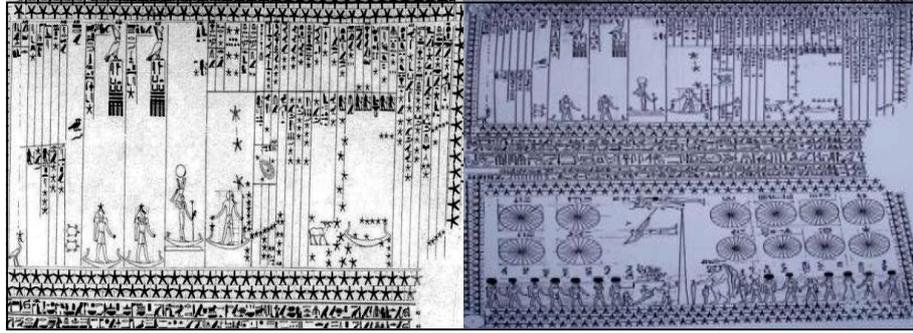


Figure (8) The southern stars (*Ihmw-sk/* the set of Ursa Major) and the northern stars (*Ihmw-wrd/*the set of Ursa Minor) that were depicted on the astronomical ceiling of the Senenmut's tomb (No.TT 353). (after Wilkinson & Hill, 1983).

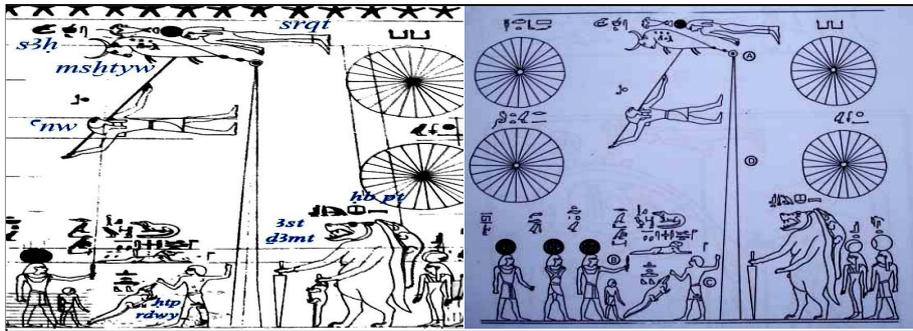


Figure (9) A female hippopotamus *Rrt* and the northern stars/constellations *Ihmw-sk* (The set of Ursa Major) depicted on the astronomical ceiling of the Senenmut's tomb (after Wilkinson, 1991).

The astronomical scenes registered at Senenmut's tomb were on two levels or two registers, one above the other; the upper' register separated through vertical lines into thirty-six sections. These sections' number reflected the year weeks' number or decimal units, each of them carried the name of one star of the thirty-six decanal stars. Likewise, the lower' level depicted the twelve months of the year in twelve circles; each of them subdivided into twenty-four units. Probably to express hours of the day and the night. Each month called a name expressing to the nature of this month, while according to Parker' study the registered months referring to the lunar months, figs. (8, 9) [52,55,69,72,73]. The twelve months arranged and divided carefully by the ancient Egyptians registered equally on two registers; the first register that is above the other one, and so, there is a differentiate limit between them. The right side, according to the differentiate limit be represented eight months; the upper ones represented the four months of the flood season, the lower ones represented the four months

of the planting season. Whilst the left side, according to the differentiate limit be represented the four months of the harvesting season [43,70,71]. On the both sides, according to the differentiate limit be represented the months' circles, figs. (8, 9). There are two groups of deities, a female hippopotamus *Rrt* depicted in a large size relatively, on its back there is a crocodile. While a group of deities that are the left limit consists of seven stars represented *Ihmw-sk*, figs. (8,9) [69,70]. So, the astronomical ceiling of the Senenmut's tomb (No.TT 353) is divided into two sections representing the northern and southern hemispheres' stars. The northern hemisphere (*Ihmw-sk/* the set of Ursa Major) is decorated with a list of decanal stars, as well as constellations of the northern hemisphere. Furthermore, the planets Jupiter, Saturn, Mercury and Venus are shown and associated deities who are traveling in boats over the sky. Thus, the southern ceiling marks the hours of the night. The southern section shows constellations of the southern hemisphere (*Ihmw-wrd/* the set of Ursa Minor), and depicted at the center of section the Great

Bear/ Ursa Major. On the right there are eight circles, and on the left there are four circles shown and below them several deities, each carrying a sun disc towards the centre of the figure. The inscriptions associated with the circles mark the original monthly celebrations in the lunar calendar, whereas the deities mark the original days of the lunar month. The celestial diagram consisted of the northern and the southern hemispheres, which depicted circumpolar constellations in the form of discs; each divided into twenty-four units suggesting a twenty-four hours, lunar cycles, and astral deities of ancient Egypt. Some of the main forms and stars seen in the diagram are Sirius, Orion, Ursa Major, and a female hippopotamus with crocodile on its back may be depicted as Draco; it is a large northern constellation, stretching around the north celestial pole. The four circles on the top right refer to the four months of *3ht* / inundation season; it is between July and October. The two circles at the top left and the two below them refer to the season of *pṛt* / planting season; it is between November and February. The

four circles on the right refer to the season of *šmw* / harvesting season; it is between March and June. The diagram on the southern section could well reflect a specific conjunction of planets in 1534 BCE around the longitude of Sirius. The four planets Jupiter, Saturn, Mercury and Venus are relatively easily recognizable. The planet Mars is not included in the actual grouping and at first sight seems to be missing in the diagram. However, one explanation is that Mars is represented in the Senenmut' diagram as an empty boat in the west. This may refer to the fact that Mars was retrograde and was not with the other planets (indeed, being in the west in the 1534 BCE conjunction). The reason for the boat being empty is perhaps in this backward movement; a well known phenomenon to the Egyptians, the position of Mars was not considered to be specific, figs. (8, 9) [43,52,55,69,70-73]. Moreover, the Cenotaph/ Osireion of the king Seti I at Abydos highlighted the ancient Egyptian' progress in astronomy and astronomical improvements to monitor the northern constellations, figs. (10,11) [55,73,74].

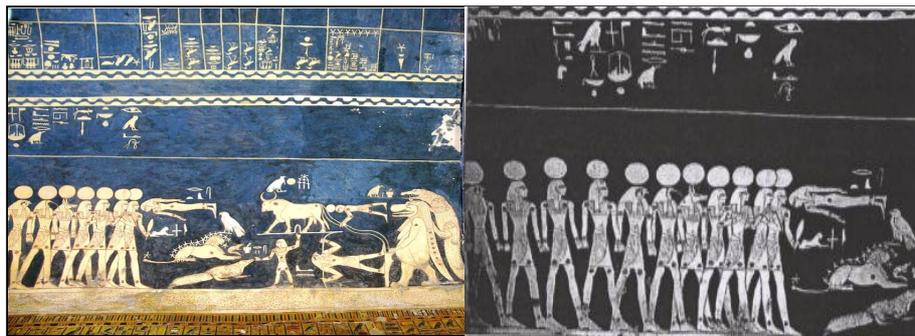


Figure (10) The Decanal stars or the northern constellations, which depicted on the Cenotaph/Osireion of the king Seti I at Abydos. (after Wilkinson, 1991).

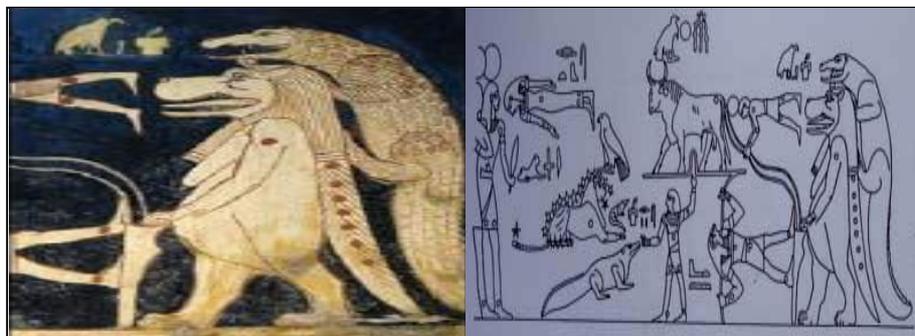


Figure (11) The northern constellations, which depicted on the Cenotaph/Osireion of the king Seti I at Abydos(after Wilkinson, 1991).

It should be noted that the cenotaph of the king Seti I is of the most conspicuous examples of religious symbolism in Egyptian architecture. Its astronomical scenes consisting of many personified representations of stars and constellations that show a great progress in astronomy in ancient Egypt. The astronomical ceilings began to represent a complicated model of the celestial forms, in which lists of stars were connected with actual representations of the southern constellations as *S3h* and *Spdt*,

6.2. Southern stars *Thmw-wrd* (The set of Ursa Major)

The ancient Egyptians considered that the five-stars located in the southern hemisphere were a set of Non-polar stars including a group of moving stars called *Thmw-wrd*; therefore, the term *Thmw-wrd* could be translated literary to mean "Which do not know weariness". Idiomatically, this term in the plural form of a set of moving stars does not change^{(l(m))}, figs. (1, 4, 7) [6, 11, 12]. They are a group of stars that are distanced from the North Pole including a series of non-polar stars and moving planets. Krauss believed that the group of Ursa Minor follows the path of the star *S3h* in the southern hemisphere as aforementioned in the coffin texts spell No.53, 241, a-b, which confirms that the path of five tireless stars "*Thmw-wrd*" is the same path of the star *S3h* in the southern hemisphere. This interpretation increases the probability of including the group *Thmw-wrd* on a set of linked stars as proven by the name of *Thmw-wrd* means the stars "Which do not know weariness", and reflects the nature of astrological moving to these stars that located in the southern hemisphere [6]. The ancient Egyptians believed that *Thmw-wrd* consists of five holy stars/planets (Mercury  *Sbg(w)*^(ggg) [9,39,40]; Venus  *Ntr-dw3i* or *Sb3 d3i*^(hhh) [9,39,40]; Mars *Hr-3hty* or *Hr d3r*; Jupiter *Hr t3š t3wy* or *Hrwpš t3wy*; Saturn  *Hr-k3-pt qr Hr p3 k3*^(hhh)

and the northern constellations like *Mshtyw*, *M3* (the Lion) and *ʿnw* (a falcon-head god)⁽ⁱⁱⁱ⁾ [43]. There is a group of the northern stars or bull' thigh, which named  *Mshtyw* (The Ursa Major group), figs. (2,3,8,9) [3,55,73]. Notably, a female hippo  *Rrt* and the bull' thigh  *Mshtyw* represented the constellations of the northern hemisphere, figs. (8,9,10,11) [53,55,73]

[9,39,40]. These are a set of five rotating planets; Venus and Mercury, which the ancient Egyptians named "the morning and evening stars". Whilst Mars was called the "Red Hur", Jupiter the "sparkling star", and finally Saturn named the "Bull Hur"⁽ⁱⁱⁱ⁾ [39, 41]. The ancient Egyptians considered *Mshtyw* the most significant feature of the northern hemisphere, and considered *S3h* the most central feature of the southern hemisphere as it was written in the form                         

scenes depicted on the coffin of *Itf-ib* Je 36444, which found in tomb No.20 of Assiut dating back to the first

intermediate period and now preserved at the Egyptian Museum of Antiquities^(kkk), fig. (4) [42-45].

7. Results

1. The ancient Egyptians tried carefully to identify the secrets of his surrounding universe and the beginnings of creation, as well as the nature of heaven and the celestial bodies that move in it through his daily observations of what surrounds him from natural and cosmic phenomena. The process of stars observing was a profound impact on the later knowledge of celestial objects called with names related with astral dogma.
2. The ancient Egyptians believed that the sky was divided into northern and southern hemispheres separated by a winding channel called *Mr-n-h3*, each section contained an astral entity which has unique cosmic qualities that distinguish them from the other stars. The astral entities are located in the northern hemisphere, some of them are Polar, while others are Non-polar and in accordance to the proximity and distance from the center of the northern hemisphere. Examples of these astral entities in the northern sky are a group of immortal stars known as *Ihmw-sk*, while the constellation located in the southern hemisphere is a set of non-polar stars that include of a group of stars called *Ihmw-wrd*.
3. The ancient Egyptian was able to know the celestial objects/stars since the prehistoric ages. Through observing and learning about certain stars, it was noticeably divided into individual or singular and gather or set of moving within the stellar constellation like a group of five stars represented on a pallet dating back to the era of Naqada II and discovered in Gerzeh and now preserved at the Egyptian Museum of Antiquities No.43103.
4. The researcher proposes that the terms *Ihmw-sk* and *Ihmw-wrd* were developed by the late linguistic stage and written  *Ihmw-sk* or

 *Ihmw-wrd* respectively. As for the orthographic substitution, it began by the New kingdom era and later became necessary to write them down in the later periods.

5. By studying astral entities *Ihmw-sk* and *Ihmw-wrd* and their role in ancient Egyptian astronomical circles clarified the importance of these two entities similar to the other constellations *Mshtyw* and *S3h*.
6. The ancient Egyptians knew the Ursa Major constellations and named it *Mshtyw*. They considered it as the most important feature of the northern hemisphere, which consists of the seven brightest stars.
7. The ancient Egyptians named stars in the southern hemisphere *Ihmw-wrd* which means "a set of moving stars that do not know weary". They are a group of stars that are distanced from the North Pole including a series of non-polar stars and moving planets. The ancient Egyptians believed that *Ihmw-wrd* consists of five holy stars/planets (Mercury; Venus; Mars; Jupiter; Saturn). These are a group of five rotating planets. These five stars appeared since the pre-dynastic age, specifically at the era of Naqada II as aforementioned of Gerzeh palette. In the later eras played an important role in ancient Egyptian social concepts and religious beliefs, especially during the Old kingdom up to the end of Greek and Roman eras.
8. The ancient Egyptians considered *Mshtyw* the most significant feature of the northern hemisphere, and considered *S3hw* the most central feature of the southern hemisphere. The set of *Mshtyw/Ihmw-sk* as well as the set of *S3hw/ Ihmw-wrd* are representation of the holy celestial entities and treat them as immortal gods in the northern and southern hemispheres.

9. The symbolism of differentiation between the two groups of the northern and southern stars was the same purpose of differentiation between the two warring brothers; the first brother is the God *Wsir* accompany the southern stars called *Ihmw-wrd*, which are the set of Ursa Minor *S3hw*. Whilst the second brother is the God *Swth* accompany the northern stars called *Ihmw-sk*, which are the set of Ursa Major *Mshtyw*.
10. The differentiation between those two groups of constellations achieve the ancient Egyptian' belief of two cosmic forces, which organizes the universe's system through the relation between the night / *Ihmw-sk*/Ursa Major *Mshtyw*/the God *Swth* and the day/*Ihmw-wrd* / Ursa Minor *S3hw*/the God *Wsir*, so the day/order/ *M3t* cannot exist without the night/disorder/*Isft* and vice versa; each totally depends on the other. There cannot be light/order/*M3t* without dark/ disorder/*Isft*, and cannot be order/*M3t* without disorder/ *Isft*. The balance between those two sets is

not a fixed state but a constant flux achieved by the dynamic movement of the two forces of cosmos; disorder, and order. Day consumes night; summer consumes winter. If the two sets become out of balance, then disharmony can occur. If one becomes very weak, it cannot support the other; or, if one becomes excessive, it may over-consume the other.

11. The researcher proposes that the symbolism of differentiation between the two groups of the northern and southern constellations was the same purpose of differentiation between the two warring brothers; the God *Wsir*/Ursa Minor *S3hw*/*Ihmw-wrd* and the God *Swth*/ Ursa Major *Mshtyw*/*Ihmw-sk*. Similarly, the same symbolism of differentiation between Disorder/*Isft* and Order/*M3t*. Therefore, the ancient Egyptians tried carefully to apply and keep the order/*M3t*, and prevent disorder/*Isft* to substitute the order/*M3t*.

8. Conclusion

*Each Mythological concepts often are representative of entities that created the sacred world, so all of mythology has a basis in the creation myths of each culture, representing by the duality of good and evil or order and disorder, which reflected in each legend⁽ⁱⁱⁱⁱ⁾. Religion remains a main element in ancient Egypt life, everyday and its close association to the afterlife/life after death. Consequently, the ancient Egyptians were interested in many branches of science related to primarily the ancient Egyptian beliefs. Astronomy was one of those promoted branches of sciences; it was related to faiths, especially the solar dogma. Besides this was a link between astronomy and the ancient Egyptian religious aspects. Furthermore, the ancient Egyptians tried carefully to identify the secrets of his surrounding universe and the beginnings of creation, as well as the nature of heaven and the celestial bodies that move in it through his daily observations of what surrounds him from natural and cosmic phenomena. The process of stars observing was a profound impact on the later knowledge of celestial objects called with names related with astral dogma. When observing and learning about certain stars, it was noticeably divided into individual or singular and gather or set of moving within the stellar constellation. The sky was the place of stars and planets, where the observer watched boundless heavens including bright spots of variable brightness known as stars. The renowned stars appear on the horizon after sunset then the less illustrious appear with darkness; moving from the east to the west, as is the moon at night and the sun by day. During the day stars are not shown because the sunlight prevents its vision. By studying astral entities *Ihmw-sk* and *Ihmw-wrd* and their role in ancient Egyptian astronomical circles clarified the importance of these two entities similar to the other constellation *Mshtyw* and *S3h*. Astral entities monitored by the ancient Egyptians, who knew that the sky was divided into northern and southern hemispheres separated by a winding channel called *Mr-n-h3*, each section contains astral entities which has unique cosmic qualities that distinguish them from other stars. The ancient Egyptians believed that the astral shapes were mainly entities located in the northern hemisphere, some of them are Polar and others are Non-polar according to the scope of the proximity and distance from the center of the northern section. Examples of these astral entities exist in*

the northern hemisphere; a set of immortal stars *Iḥmw-sk*. While the ancient Egyptians considered that the constellation located in the southern hemisphere was a set of non-polar stars including a group of moving stars called *Iḥmw-wrḏ*. According to the ancient Egyptians' point of view the cosmic phenomena were linked to his religious beliefs; these two constellations were a major part of the ancient Egyptians' religious beliefs. The symbolism leads up to understand the mythology and help to analyze various legends' aspects, so symbolism reflects the ancient humanity's experiences and the origin of cosmic system ^(mmmm). To sum up, the symbolism of differentiation between the two groups of the northern and southern stars was the same purpose of differentiation between the two warring brothers; the first brother is the God *Wsir* accompany the southern stars called *Iḥmw-wrḏ*, which are the set of Ursa Minor *S3ḥw*. Whilst the second brother is the God *Swḥ* accompany the northern stars called *Iḥmw-sk*, which are the set of Ursa Major *Msḥtyw* ⁽ⁿⁿⁿⁿ⁾. So, the differentiation between those two groups of constellations achieves the ancient Egyptian' belief of two cosmic forces, which organizes the universe's system through the relation between night/ *iḥmw-sk/Ursa Major Msḥtyw/the God Swḥ* and day/ *Iḥmw-wrḏ / Ursa Minor S3ḥw/the God Wsir*, so the day/order/ *M3ḥt* cannot exist without the night/disorder/*Isft* and vice versa; each totally depends on the other. There cannot be light/order/*M3ḥt* without dark/ disorder/*Isft*, and cannot be order/*M3ḥt* without disorder/*Isft*. The balance between those two sets is not a fixed state but a constant flux achieved by the dynamic movement of the two forces of cosmos; disorder, and order. Day consumes night; summer consumes winter. If the two sets become out of balance, then disharmony can occur. If one becomes very weak, it cannot support the other; or, if one becomes excessive, it may over-consume the other. Likewise, the control the flood arrival every year. This force was a source of risk, which could threaten the course of cosmos. The ancient Egyptians priests/astronomers who studied the skies for signs that connected the *Dw3t/Duat* (Land of the afterlife) above to the two lands below noticed a connection between the star of Isis, Sirius, and the rising of the Nile Flood. They principally observed helical culmination, which known as the point of rising just before dawn. The Five Epagomenal days, "days out of time," were placed between the 30th of the last month and the first day of the New Year to bring the total to 365. Although the rising of Sirius/Sothis originally marked the New Year (Thoth 1), the missing quarter day in the civil calendar caused a "Wandering year" as the rising of Sirius cycled through the days of the year; it returned to Thoth 1 every 1461 of the civil years/the Sothic cycle. The Epagomenal days are the transition duration between the end of the year and the beginning of the new one, it may be as a period of confusion and disorder. So the ancient Egyptian was afraid of occur disasters during those days. The papyrus "Salt 825" ^(oooo) reported on its beginning "Rite to keep life in Egypt", which means to prevent Disorder/ *Isft* and approval Order/*M3ḥt*. It was necessary to be done in order to keep the continuation of the life and order in the cosmos without cosmic disasters and disorder. So, the researcher believes that the symbolism of differentiation between the two groups of the northern and southern constellations was the same purpose of differentiation between the two warring brothers; the God *Wsir/Ursa Minor S3ḥw/Iḥmw-wrḏ* and the God *Swḥ/ Ursa Major Msḥtyw/Iḥmw-sk*. Similarly, the same symbolism of differentiation between Disorder/*Isft* and Order/*M3ḥt*. Therefore, the ancient Egyptians tried carefully to apply and keep the order/*M3ḥt*, and prevent disorder/*Isft* to substitute the order/*M3ḥt* ^(pppp). So, the ancient Egyptians exerted a big effort to preserve the cosmic order, which created by the creator god since the beginning of the cosmos creation, the so-called *Sp-tpy* ■ ● ☞ ^(qqqq).

Endnotes

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| (a) Wb.I, 125.13. | (n) HGHW.401. |
| (b) Wb. III, 278. 5,6,7. | (o) HGHW.401. |
| (c) Wb.I, 125.13. | (p) GEG. sign list,454. |
| (d) FCD, 251. | (q) Sethe, PT.II.1000, c-d. |
| (e) HGHW.401. | (r) Mercer, PT.IV.68. |
| (f) HGHW.401. | (s) Comments of the Researcher view. |
| (g) FCD.29. | (t) Sethe, PT.II.1171.c,d. |
| (h) Wb.I, 125.14. | (u) Kohler, § 21. |
| (i) HGHW.401. | (v) Sethe, PT.II.1171, d.; 1172,a. |
| (j) Wb.I, 337.1. | (w) Comments of the Researcher vision. |
| (k) FCD.65. | (x) CT. I. spell.48, 213, a. |
| (l) FCD.29. | (y) CT. I. spell.63, 274, c-d-e-f. |
| (m) HGHW.401. | (z) CT. I. spell.63, 274, c-d-e-f. |

- (aa) About that Review: Sethe, PT. I. 197, e.
- (bb) About that Review: FCD.8.
- (cc) About that Review: FPT.153.
- (dd) CT. I. spell. 53, 241, a.
- (ee) GEG. sign list, 442.
- (ff) CT. II. spell. 80, 36, c-d-e-f.
- (gg) For that Review: Allen, J., Middle Egyptian, § 5.10.
- (hh) For apposition Review: Nur el-Din. M.A., Egyptian Language, 52.
- (ii) Comments of the Researcher vision.
- (jj) Lesko, DLE.I, 360.
- (kk) TombTT178, at EL-Khokha, Thebes.
- (ll) Also known as *Kn-r(3)*, the writer of *Imn-R^c*, and the offerings writer of the holy house of Amun at the reign of Ramses II.
- (mm) Hofmann, TT178, Theben, IX, 18-20.
- (nn) Vandier, Manuel, II., 471-473.
- (oo) Comments of the Researcher vision.
- (pp) Lesko, DLE.I, 360.
- (qq) KRI.II, 332, §§12-14.
- (rr) Wb. Belegstellen. I, 23.
- (ss) Urk. IV. 1085, §§10-12.
- (tt) The papyrus of *Nw* preserved in the British Museum, No. 10477.
- (uu) Budge, BD. §102, 1-6.
- (vv) Allen, PT. § 14.3; GEG, §299.
- (ww) GEG. §305.
- (xx) Wb. II, 471, 1, 10.
- (yy) Sethe, PT. II. 2000, a; FPT. 288; Mercer, PT. II. 900; Wb. II, 471, 1, 10; GEG. §87.
- (zz) Allen, PT. § 5. 9; GEG. §110.
- (aaa) FCD.17.
- (bbb) Comments of the Researcher vision.
- (ccc) Wb. II, 149, 2.
- (ddd) Wb. II, 149, 3-4.
- (eee) Sethe, PT. I. 458, b-c.
- (fff) CT. I. spell. 53, 241, a-b.
- (ggg) Wb. IV. 95, 8-9; Leitz, LÄGG. VI. 266.
- (hhh) Wb. V. 423. 10-15; Wb. V. 96. 4; Leitz, LÄGG. VI. 445-446.
- (iii) CT. II. spell. 124, b-c.
- (jjj) For more information for *S3h* Review: Behlmer, Orion. LÄ. IV. cols. 609-611.
- (kkk) Neugebauer & Parker, Astronomical Texts, I.100.
- (lll) FPT. 153. spell. 818, c.
- (mmm) Sethe, PT. 818, c.
- (nnn) Sethe, PT. 380, b.
- (ooo) Sethe, PT. 1080, a.
- (ppp) Sethe, PT. 148-149.
- (qqq) <http://egy-king.blogspot.com/2012/05/ba-bird-falcon-tutankhamen.html>.
- (rrr) It is One of the villages of Ayyat, Giza Governorate; where found on the evidence of one of the most important civilizations of pre-dynastic age, known as "Gerzeh culture", dating back to the era of "Naqada II". Review: Nur el-Din. M.A. (2008). *Mawaqe Alathar Almasria Alqadima*, Misr-alswfla, Vol.1, Alkhaleej Alaraby Press, Cairo, p.11; Nur el-Din. M.A. (2006). *Mwage Alathar Alunania Walromania fi Misr*, Alkhaleej Alaraby Press, Cairo, pp.140-141.
- (sss) Baumgartel, Cultures of Prehistoric, II, 90-91, fig. 59; Lesko, Goddess, 17.f.
- (ttt) CT. I. spell. 53, a.
- (uuu) CT. II. spell. 80, 36, c-d-e-f.
- (vvv) CT. I. spell. 43, i-j-k.
- (www) CT. I. spell. 43, i-j-k.
- (xxx) Budge, BD. §102, 1-6.
- (yyy) Badawi, & Kees, Handwörterbuch, 107; 284; Wb. IV, 82, 11.
- (zzz) Robins, G., Calendars, III., 811.
- (aaaa) Budge, Gods, 303, 313; Wainwright, Constellations, 373. ff; Calverley, The Temple of King Sethos I, III. pl. 59; Neugebauer & Parker, III. 17; Daressy, Les Temples d' Abydos, 3.
- (bbbb) Baumgartel, Cultures, II. 90-91, fig. 59; Lesko, Great Goddess, 17-18.
- (cccc) Sethe, PT. II. 1171, b-d; 1961; Sethe, Überstezung, I. 52; Brugsch, Fünf Epagomenen, VI. 9.
- (dddd) Lauer, Saqqara, 143, pl. XV.
- (eeee) Neugebauer & Parker, I. 4-5.
- (ffff) Neugebauer & Parker, I. 100.
- (gggg) Buchwald & Josefowicz, Zodiac, 23-25; Quack, Astronomy, 285-287.

- (hhhh) Neugebauer, & Parker, III. 10-12; Parker, Calendars, 24-25; Leitz, Ägyptischen Astronomie, 34-36; Clagett, Egyptian Science, II,221-223, Figs. 3, 4.
- (iiii) Neugebauer & Parker, I.16, pl.26, 3b.
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