

The marriages of the ancient Egyptian kings were not incestuous

Susanne Koch-Meyer, Germany

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1 Consanguineous marriages

The inbreeding coefficient (F)¹ of a father-daughter or full sibling marriage (0.25) carries a high risk of a recessive genetic disease becoming apparent in one or more of the children. Mankind recognized the connection early on, as such marriages are tabooed in virtually all human societies.² Only in cultures where a divine sibling pair was part of the cosmogony or religious cult³ was this taboo softened. However, children, whether related or not, who have been raised continuously in the same household since birth, are usually not sexually attracted to each other as adults (the so-called Westermarck effect).⁴

On the other hand, there is a desire not to have to share inherited or acquired property with another family. Therefore, an uncle-niece or cousin marriage was a popular

¹ The inbreeding coefficient is the statistical probability that the two copies (alleles) of any gene of an individual are identical by descent from a common ancestor of the two parents of this individual.

² Ref 1.

³ For example, the couples of the Heliopolitan Ennead of Gods, Anshar and Kishar (Mesopotamia), the Theoi Adelphoi (Ptolemaic Empire), Zeus and Hera (Roman mythology), etc.

⁴ Ref 1; Ref 2.

compromise in pre-modern societies and royal families. Even today, most countries accept such marriages. However, their inbreeding coefficients (0.125 and 0.0625, respectively) are still riskily high and can have a significant impact on the life and survival of the offspring.⁵ With each subsequent generation in which a consanguineous marriage takes place, the coefficient of inbreeding will continue to increase.⁶ Nevertheless, from the subjective point of view of those involved, the advantages outweigh the disadvantages.

2 Terms of kinship in ancient Egypt

To approach the question of whether incestuous marriages occurred in ancient Egyptian royal families, we must familiarize ourselves with Egyptian kinship terms. These terms had a much broader meaning than in living languages, since there were no specific words for certain degrees of kinship. Only when it was important in a text to accurately reflect the degree of kinship, were unambiguous phrases used, e.g., beloved daughter of his body (his biological daughter), son of the son, wife of the son, wife of the brother, etc. In an ancient Egyptian royal family, kinship relationships to the king were used like titles. Sexual intercourse within or outside of a marriage was not explicitly addressed unless its mention was necessary in a tale, love poem, or legal document.

Tab. 1: Some terms for relatives and household members

Word	Main meaning	Possible other meaning
<i>zj</i>	Man	
<i>tj</i>	Man	Husband, young man, boy
<i>hj, h3j</i>	Husband	
<i>zj.t⁷</i>	Woman	
<i>hmt</i>	Wife	Female representative of a household ⁸
<i>jt(j)</i>	Father	Grandfather, stepfather, adoptive father, male ancestor, father-in-law, protector, mentor
<i>mw.t</i>	Mother	Grandmother, stepmother, adoptive mother, female ancestor, mother-in-law, female tutor of a young woman, ⁹ mother goddess
<i>z3</i>	Son	Grandson, son-in-law, stepson, adopted son
<i>z3 n z3</i>	Grandson	

⁵ Ref 3.

⁶ Ref 3; Ref 4.


⁷ Very rare.

⁸ Explanation in the text.

⁹ Ref 5, p 408.

Word	Main meaning	Possible other meaning
<i>z3.t</i>	Daughter	Granddaughter, daughter-in-law, stepdaughter, adopted daughter
<i>z3.t n ht=f</i> ¹⁰	Biological daughter	
<i>z3.t n z3.t</i>	Granddaughter	
<i>hm.t n.t z3</i>	Sister-in-law	
<i>sn</i>	Brother	Half-brother, cousin, uncle, nephew, other male relative, brother-in-law, close friend, colleague of equal rank
<i>sn.t</i>	Sister	Half-sister, cousin, aunt, niece, other female relative, sister-in-law, female friend, female regular sexual partner (concubine) ¹¹
<i>hrd</i>	Child	
<i>hrd.t</i>	Girl	Daughter; as a collective term: sum of all children of a person
<i>nn</i>	Infant	Toddler
<i>h3.w</i>	Relatives	Confidants
<i>ms.w, msw.t</i>	Offspring	
<i>hnw</i>	Relatives	Housemates
<i>nb.t pr</i>	Lady of the house ¹²	
<i>hbs.t, hbsy.t</i>	(female, unclear) ¹³	

3 Hypothesis

It is often claimed in Egyptological literature that there were incestuous marriages in the Egyptian royal dynasties. This has even been written about queen Nefertiti, although the title “King’s sister” or “King’s daughter” has not been proven for her.¹⁴ The fundamental question is whether the word  *hm.t* was used exclusively to mean “wife”. Many traditional translations are influenced by 19th and early 20th century European conventions. Only married couples were allowed to share a household at that time, and a sexual relationship between the two was taken for granted. However, the Egyptians did not leave behind a detailed description of what *Ma’at* (the all-encompassing order and norm of behavior) permitted in this regard. Therefore, we cannot rule out a platonic partnership between man and woman a priori. It is conceivable, for example, that *hm.t* was a female role defined under private law and ceremonially. Perhaps an ideal


¹⁰ Literally: “daughter of his body,” often in the form of “beloved daughter of his body.”

¹¹ Especially in the royal family.

¹² The role of a woman in an elite household who commands the servants and slaves.

¹³ Several literal meanings are possible: “the veiled one”, “the one kept secret”, “the one who receives protection”; possibly an unmarried woman who was supported by a family.

¹⁴ Ref 6, p 87.

ma'at-compliant household needed a male head and representative to the outside world and a female representative to assist her partner on certain occasions and to perform the "female" tasks in the house¹⁵ and cult. The two household representatives were usually married, but this was not necessarily required. Sex was a private matter and a sexual relationship only became apparent to outsiders when children were born. This is not to say that intimate relationships were unregulated. Documents from the New Kingdom indicate that there were criminal offenses such as adultery and neglect of a wife, with the cheated or neglected wife being addressed with the word *hm.t*. However, this word may not have been used exclusively in the sense of a sexual partner. This could explain why, in the royal palace, a sister or half-sister, or even the king's mother, was given the title of  *hm.t nsw wr.t* (traditional translation: "Great Royal Wife") without violating the *Ma'at*, and even though the king had only a platonic relationship with this woman.¹⁶

So if an Egyptian king made his "sister" the Great Royal Wife, there were three possible scenarios according to the present hypothesis:

- a) She was really his sister or half-sister who, for dynastic reasons, took on the role of the female representative of the palace, when the king had no wife at that time or was too young to marry. After all, there were other women available for the sexual life of an adult king. Likewise, when a king appointed his daughter as the Great Royal Wife, it was for purely economic, social, or religious reasons, not incest.
- b) She was an unmarried or widowed relative referred to in common parlance as a "sister", such as a cousin, aunt, niece, or sister-in-law (Table 1). This relationship may or may not have been sexual.
- c) She was a secondary wife who was risen to Great Royal Wife because she had given birth to the heir to the throne.¹⁷

Such an arrangement with a close female relative was understandable from an Egyptian perspective. Mortality was high for both sexes (infectious diseases, childbirth problems). Many Egyptians therefore had to experience widowhood. There was not a large pool of young candidates for replacement wives, as girls were married early and often promised to someone before puberty.¹⁸ Lower-class Egyptians often could not afford the bride price for a remarriage. In such a situation, a female relative, unmarried herself at the time, came in conveniently, either temporarily or permanently, to ensure the smooth running of the

¹⁵ Lower- and middle-class women were generally expected to perform chores such as grinding grain, cooking, baking, weaving, helping with the harvest, and caring for children. Ref 7, pp 118–120.

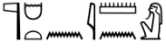
¹⁶ They were not living together anyway. The Great Royal Wife had her own palace or palace wing plus an agricultural domain. The secondary wives and women of the royal harem (*hnr.t*) and their children were housed in separate residences. Ref 7, pp 46–48; Ref 8.

¹⁷ Ref 7, p 48.

¹⁸ Ref 7, p 37.

household, to look after the children, to fulfill duties in the cult of the gods and ancestors, and to represent the family at her partner's side. It was particularly important for the king to always have a partner of appropriate status at his side to carry out representing and cultic tasks, so that occasionally even daughters were entrusted with this honorary role (e.g., the daughters of Amenhotep III). On the other hand, *nb.t pr.t* ("Lady of the House") was, in my opinion, the prestigious job title of a related or unrelated employee at the head of the servants in an elite household.

The inscriptions from the New Kingdom onwards suggest that many royal children died in childhood. This is also often seen as an indication of an incestuous marriage between their parents. But child mortality was generally high. Until the 19th century, an average of 40 to 50 percent of the world's children died before reaching adulthood.¹⁹ The average life expectancy at birth in Roman Egyptian females was only about 22 years.²⁰

From the New Kingdom to the Late Period, the female honorary title  *hm.t nṯr n Jmn* (traditional translation: "God's Wife of Amun"²¹) existed in Thebes. It was given to a woman of the king's family.²² As an incarnation of the goddess Mut (wife of Amun) she held the role of a representative of the temple at Karnak, Amun's household on earth, so to speak.²³ This entailed a priestly role and considerable political influence.²⁴ However, a (symbolic) sexual relationship with the god was never indicated in text or image. Some of the title bearers were the king's wife while exercising this office and gave birth to children who were then not considered to be Amun's children, except for an heir to the throne.²⁵ This proves that the word *hm.t* is not necessarily synonymous with a female sexual partner, but was rather defined by certain tasks of a representative and ceremonial nature. Not that Amun could not be the sexual partner of an earthly woman; Queen Hatshepsut (18th Dynasty), who portrayed herself as the daughter of Amun, unmistakably recorded Amun's "visit" to her mother in a relief cycle in the temple of

¹⁹ Ref 9.

²⁰ Ref 10.

²¹ Amun was the supreme god of Theban theology, understood in the New Kingdom as one of the manifestations of the sun god Re (Amun-Re).

²² Usually a king's principal wife, secondary wife, or daughter was appointed "God's Wife of Amun." Amenhotep II, who did not like the power of the God's Wife, and Akhenaten, who had renounced his belief in Amun, temporarily abolished this office.

²³ The temple of Amun in Karnak (with precincts for Mut and Khonsu, Amun's wife and son) was the largest temple at Thebes. Aside from its cultic function, it was a huge economic enterprise with associated agricultural land.

²⁴ Ref 11.

²⁵ There is some evidence that at least from the Third Intermediate Period onwards, God's wives of Amun were expected to be celibate. In any case, they were never depicted with a husband. Ref 5.

Deir el-Bahari.²⁶

4 Example: The 18th Dynasty

The family relationships to the reigning king of women at the royal court were reconstructed from their joint depiction with the king, from titles such as "[Great] Royal Wife", "King's Mother", "King's Daughter", or "King's Sister", and not infrequently also on the basis of mere conjecture.²⁷ The secondary meanings of the word "daughter" or "sister" were usually not taken into account (Table 1). Nor was it considered that genitive phrases can be translated with an indefinite article, e.g., *zʿ.t nsw* "daughter of a king". This can also refer to a predecessor of the reigning king.

These considerations will be taken into account below, when examining the family relationships of the 18th Dynasty kings (names are highlighted in the text) and their Great Royal Wives.²⁸

1. Ahmose I: His Great Royal Wife, Ahmose Nefertari, is often considered to be his sister or half-sister, since she held the title "Sister of a King". In addition, the titles "Daughter of a King" and "Mother of a King" are recorded for her. Thus, Ahmose Nefertari may have been a young aunt, cousin, or niece of her husband (younger sister of Seqenenre Taa II or daughter of Kamose, if he was a brother of Seqenenre Taa II or Ahmose I).²⁹ The couple had several children, including the heir to the throne, Amenhotep I.³⁰
2. Amenhotep I: His Great Royal Wife, Ahmose Meritamun II,³¹ is believed to have been his sister or half-sister because she held the titles "Sister of a King" and "Daughter of a King". She could just as well have been a young aunt or cousin of Amenhotep I (sister of Ahmose I or daughter of Kamose, if he was a brother of

²⁶ It shows Amun visiting Hatshepsut's mother, whereupon she became pregnant and gave birth to Hatshepsut. Amun was very happy about his daughter, gave her her name and promised her the kingship. Hatshepsut used these scenes to legitimize herself as reigning queen. Ref 12, pp 13–17, pls 46–52.

²⁷ I even found an author who substantiated the presumed incest with pictorial scenes of Akhenaten's naked daughters next to him, or in which a king (Akhenaten or Ramesses III) tenderly touches his daughter's chin.

²⁸ Unless otherwise noted, this section draws from the following referenced works: Refs 6, 7, 13, 14, 16, 19, 22, 32–38.

²⁹ The skeletons of Ahmose I and Ahmose Nefertari show anthropological differences. Ref 13, p 42.

³⁰ The two were later worshipped as gods in the artisan village of Deir el-Medina.

³¹ Whether or not Ahmose Meritamun II held the title of "Great Royal Wife" is not consistently reported. (Ref 14, p 229).

- Ahmose I).³² The heir to the throne was Thutmose I, an adopted son, a relative of a branch line, or a brother-in-law of Amenhotep I.
3. Thutmose I: His father is unknown. His Great Royal Wife, Ahmose,³³ was according to isolated sources "Sister of a King" and "Mother of a King". Some scholars believe that Ahmose (despite the unproven title "Daughter of a King") was a daughter of Amenhotep I with a secondary wife. This would make Thutmose I her adopted brother. Others assume that she was somehow related to Thutmose I and was therefore called "Sister of a King". According to another assumption, Ahmose was a younger sister of Amenhotep I, and Thutmose I took her as his wife in order to legitimize his succession to the throne. In any case, the couple had a sexual relationship and had at least four children. Ahmose was called "Mother of a King" only after the coronation of her daughter Hatshepsut (see point 5). Hatshepsut was the only survivor of Ahmose's children. Since female succession was impossible, the son of a secondary wife, Thutmose II, became the heir to the throne.
 4. Thutmose II: The role of the Great Royal Wife of the still very young and sickly king was taken over by his older half-sister Hatshepsut. The girl Neferure is commonly regarded as their daughter and thus the child of an incestuous half-sibling marriage. However, the title "Daughter of a King" appears for the girl only after the coronation of Hatshepsut. Theoretically, Neferure could also have been their little sister or half-sister, who was only born after the death of her father Thutmose I and therefore was not mentioned among his children, and for whom Hatshepsut developed maternal feelings. The heir to the throne was the son of a secondary wife, Thutmose III.
 5. Hatshepsut: Since her nephew Thutmose III was still an infant when he was enthroned, she became his co-regent and pro forma Great Royal Wife. Seven years later, she had herself crowned queen (with all the powers of a king) and the two ruled together.³⁴ After her death, the now adult Thutmose III ruled as sole ruler for another 32 years.
 6. Thutmose III: In his adult life, his first Great Royal Wife was Satiah, the daughter of a royal nurse. She and the eldest crown prince died young. The second Great Royal Wife

³² In late inscriptions, she was erroneously given the title "Mother of a King".

³³ Ahmose ("Offspring of the Moon God") was a common name for both men and women at that time.

³⁴ There are speculations about an inappropriate relationship between Hatshepsut and Senenmut, the architect of her temple at Deir el-Bahari, who was also the nurse and educator of the girl Neferure (see point 4) (BM EA174; Cairo JE 36923). After Neferure's death, he was removed from his high offices and his name was removed from his buildings. Ref 15, pp 32–35. Some believe that Neferure was the daughter of Hatshepsut and Senenmut who came from a humble background, and this "blemish" had to be removed later.

was Meritre Hatshepsut, a woman with no known royal ties, who was given the title "Mother of a King" when she bore the heir to the throne, Amenhotep II.

7. Amenhotep II: One of his wives named Tiaa, who had no known relationship to the royal family, became the mother of the heir to the throne, Thutmose IV. However, the title "Great Royal Wife" only appears for her during the reign of her son. It seems that Thutmose IV had given her this honorary title after the fact (also to strengthen his own legitimacy for the kingship).³⁵
8. Thutmose IV: His first Great Royal Wife was Nefertari (Nefertiry), whose origin is unknown, and who probably died early in the reign of her husband. His second Great Royal Wife, Jaret, is said to have been his sister, half-sister or daughter, as she held the titles "Daughter of a King" and "Sister of a King". Had she been a younger sister of Amenhotep II instead, she would have been the aunt of Thutmose IV. But if she was indeed Thutmose IV's (half-)sister or daughter, she probably took over the representing and cultic duties of the deceased Nefertari. In any case, the heir to the throne, Amenhotep III, was the son of a secondary wife.
9. Amenhotep III: His Great Royal Wife was Tiye, the daughter of an official named Yuya. Genetic evidence suggests that Yuya was a maternal uncle of Amenhotep III, making Tiye her husband's first cousin.³⁶ After the 30th year of his reign, Amenhotep III's daughter Satamun also received this title, and the other daughters were later appointed secondary wives.³⁷ However, Tiye remained at his side throughout his life. It is doubtful that he had sexual relations with any of his daughters.³⁸ The mother of all his legitimate children, including the heir to the throne, crown prince Amenhotep [IV] who later called himself Akhenaten, was Tiye.
10. Akhenaten: His Great Royal Wife was Nefertiti. It has been suggested that she was a sister of the king (despite the lack of kinship titles), his first cousin,³⁹ a woman from the family line of the high official and later King Ay, or a foreign princess⁴⁰. The couple had at least six daughters. His eldest daughter, Meretaten, and a secondary wife (Kiya) were titled "Greatly Beloved Wife" (*hm.t mrj.t wr.t*), which was probably confused with the title "Great Royal Wife" (*hm.t nsw wr.t*).⁴¹ At the end of Akhenaten's reign,

³⁵ Ref 14, p 254.

³⁶ Ref 28, pp 192–193.

³⁷ Ref 16, p 9.

³⁸ Cf. Ref 16, p 7.

³⁹ Ref 28, pp 199–201.

⁴⁰ Based on the translation of the name "Nefertiti": "The beautiful one has come".

⁴¹ Ref 14, p 278; Ref 17, p 77.

Meretaten held the title "Great Royal Wife" as the wife of Semenkhhkare (see point 12). The line of succession is not clear.⁴²

11. Neferneferuaten (female): According to epithets, this queen was "beloved by Akhenaten" and "useful to her husband".⁴³ Akhenaten's Great Royal Wife, Nefertiti, probably had herself crowned co-regent or interim regent under the name Neferneferuaten.⁴⁴ Her ephemeral successor, Semenkhhkare, used the same throne name as her, but epithets with a masculine ending. Some scholars believe that Semenkhhkare was just another name that Nefertiti chose for herself after her coronation.⁴⁵ Others believe that Semenkhhkare was a half-brother or nephew of Akhenaten.⁴⁶
12. Semenkhhkare (unclear gender): According to a single source,⁴⁷ his (or her) Great Royal Wife was Meretaten, the eldest daughter of Akhenaten and Nefertiti. If Semenkhhkare was identical to Nefertiti, this would be a unique case of a daughter becoming the Great Royal Wife of her royal mother. However, if Semenkhhkare was male and a half-brother or nephew of Akhenaten, then Meretaten was his niece or cousin. The successor was Tutankhamun (Tutankhaten), described in a single inscription as the "bodily son of a king".⁴⁸ M. Gabolde provided epigraphic evidence that Tutankhamun was the youngest child of Akhenaten and Nefertiti.⁴⁹ Genetic data identify him as the son of a man whose skeletonized mummy was found in the royal tomb KV55.⁵⁰ It is the mummy of Akhenaten or another son of Amenhotep III, or of Semenkhhkare, if he was male.⁵¹

⁴² Ref 14, p 281. After the death of Akhenaten, Egypt was in a time of great political turmoil. The order of Neferneferuaten and Semenkhhkare is often given in reverse.

⁴³ Ref 18, pp 118–120; Ref 19, pp 153–157; Ref 20, pp 202–202. The hall in the palace complex at Amarna dedicated to Semenkhhkare proves a close family relationship with Akhenaten.

⁴⁴ Nefertiti's full name in cartouches was "Neferneferuaten Nefertiti" and there is further evidence that Nefertiti was Queen Neferneferuaten. Ref 21. For example, a scenario in which Akhenaten was still alive but no longer able to rule is conceivable. Alternatively, the legitimate heir to the throne, Tutankhamun (Ref 28, pp 196–199), was a baby, and the time until at least infancy had to be bridged. If there was any significant time span at all between the end of Akhenaten's reign and the beginning of Tutankhamun's reign, it was a maximum of 4 years. Two daughters of Akhenaten and Nefertiti also had the name or nickname "Neferneferuaten".

⁴⁵ Ref 14, p 281. Nefertiti probably took Hatshepsut (point 5) as a role model, who in her statues and monuments at times concealed her femininity in iconography and name endings.

⁴⁶ Ref 14, p 281; Ref 22, pp 337, 345; Ref 23, p 180.

⁴⁷ Tomb of the official Meryre II (Tell el-Amarna tomb #2), Ref 24.

⁴⁸ Ref 14, p 278.

⁴⁹ Ref 28, pp 196–199.

⁵⁰ Ref 25.

⁵¹ Refs 25–28. Gabolde's arguments that these are the skeletal remains of Akhenaten are convincing. Ref 28, pp 180–181, 183, 196–199. In addition, genetic analysis showed that Tutankhamun's parents

13. Tutankhamun: His Great Royal Wife was Ankhesenamun (Ankhesenpaaten), a daughter of Akhenaten. If Tutankhamun was the son of a secondary wife of Akhenaten, then Ankhesenamun was his older half-sister and was probably appointed a pro forma partner to the sickly, disabled⁵² 10-year-old.⁵³ But if Tutankhamun was a son of Semenkhkare, and Semenkhkare was a half-brother or nephew of Akhenaten, then Ankhesenamun was his cousin or great-cousin. In Tutankhamun's tomb lay the uninscribed mummies of two female fetuses who could have been his stillborn daughters, but whose mother was not Ankhesenamun.⁵⁴ His successor was the older high-ranking official Ay, who may have been Akhenaten's father-in-law or brother-in-law, and who had served as regent and mentor to the young Tutankhamun.
14. Ay: His Great Royal Wife, Tiye (same name as the wife of Amenhotep III, but usually called Ty, Tiy, or Tey to distinguish her), was the "Great Nurse of Nefertiti". The inscriptions on two finger rings indicate that Ay also married Tutankhamun's widow, Anchesenamun.⁵⁵ The heir to the throne was General Haremheb, who during his career as an official referred to himself as the prince regent (*jry-p^c.t*) of Tutankhamun and the "Chosen One of Horus of Hut-nesu".⁵⁶
15. Haremheb: His Great Royal Wife was Mutnedjmet, a younger "sister" (sister, cousin, or niece) of Nefertiti. Some scholars believe that she was the daughter of Ay. She died without a surviving son.⁵⁷ The heir to the throne was Ramesses I, an unrelated political foster son from the military, who had himself titled "son of King Haremheb" for legitimacy. With him began the 19th Dynasty.

Conclusion:

The example of the 18th Dynasty shows that one must be very careful when claiming that incestuous marriages were contracted in Ancient Egypt. Other explanations are possible,

were siblings. Ref 25, p 641; Ref 28, pp 187–189. However, this claim was challenged by arguing that the genetic data also fit double first cousins. Ref 28, pp 194–196.

⁵² Ref 25, pp 642–646.

⁵³ Ref 29. Tutankhamun died before the age of 20.

⁵⁴ Ref 25, p 641 (figs 1, 2); Ref 28, p 186. Genetic analysis of Egyptian mummies is generally uncertain due to embalming materials, poor condition, and possible contamination with modern DNA. Ref 28, pp 178–179.

⁵⁵ Anchesenamun may have been that certain widow who sent a cuneiform letter to the king of the Hittites asking for one of his sons to take as a husband, so that she could avoid marrying one of her "servants". However, the Hittite prince who was sent in reply died on his way to Egypt. Ref 14, p 292; Ref 30.

⁵⁶ The reason why Ay ascended the throne before Haremheb is unknown. It may have been because he married Tutankhamun's widow while Haremheb was away fighting the Hittites. Ref 14, pp 292–294.

⁵⁷ The skeleton of a baby was also found in her tomb in Saqqara. Ref 31, p 321.

if only because of the ambiguity of the words "sister" and "daughter". However, the majority of marriages were consanguineous. A woman naturally retained the title "Sister of a King" or "Daughter of a King" even after the death of this king. "Great Royal Wife" was an honorary title defined by duties but not necessarily by a sexual relationship with the king. This title was also kept by a woman for life, i.e., often beyond the lifetime of her partner (e.g. Ahmose Nefertari, Great Royal Wife of Ahmose I; Meritre Hatshepsut, Great Royal Wife of Thutmose III; Tiaa, Great Royal Wife of Amenhotep II). In at least one case in the 18th Dynasty, a boy-king was given an older half-sister at his side (Thutmose II and Hatshepsut; possibly also Tutankhamun and Ankhesenamun). In another case, a reigning queen may even have appointed her own daughter as her Great Royal Wife (Nefertiti as Queen Neferneferuaten/Semenkhkare and her eldest daughter Meretaten). All this gives rise to the misconception that an Egyptian king took his mother, sister, or daughter as his wife in a sexual sense.

Abbreviations

Ed/eds: Editor(s); JAMA: Journal of the American Medical Association; JARCE: Journal of the American Research Center in Egypt; JEA: The Journal of Egyptian Archaeology; KV: Kings' Valley; MDAIK: Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo; p/pp: Page(s); plts: Plates; Ref/Refs: Reference(s); Vol/vols: Volume(s).

References

1. P. Bateson, Inbreeding Avoidance and Incest Taboos, in AP Wolf, WH Durham (eds), *Inbreeding, Incest, and the Incest Taboo: The State of Knowledge at the Turn of the Century* (Stanford, 2004), 24–38.
2. A. P. Wolf, Westermarck Redivivus, *Annual Review of Anthropology* 1993, 22: 157–175.
3. G. Alvarez et al., The Role of Inbreeding in the Extinction of a European Royal Dynasty, *Plos One* 2009, 4 (4): e5174.
4. Wikipedia, Coefficient of Inbreeding, https://en.wikipedia.org/wiki/Coefficient_of_inbreeding (accessed December 07, 2024).
5. E. Teeter, Celibacy and Adoption among God's Wives of Amun and Singers in the Temple of Amun: A Re-examination of the Evidence, in E. Teeter, J. A. Larson (eds), *Gold of Praise: Studies on Ancient Egypt in Honor of Edward F. Wente* (Studies in Ancient Oriental Civilizations 58; Chicago, 1999), 405–414.
6. A. Dodson, *Amarna Sunrise: Egypt from Golden Age to Age of Heresy* (Chicago, 2016).
7. G. Robins, *Frauenleben im Alten Ägypten* (Munich, 1996).
8. Gurob Harem Palace Project, History of the Archaeological Study of the New Kingdom Harem, Town and Cemeteries at Gurob, <https://www.gurob.org.uk/history.php> (accessed December 08, 2024).
9. S. Dattani et al., Child and Infant Mortality: Key Insights on Child Mortality, <https://ourworldindata.org/child-mortality> (accessed November 29, 2024).
10. S. Zakrzewski, Life Expectancy, in E. Frood, W. Wendrich (eds), *UCLA Encyclopedia of Egyptology* (Los

- Angeles, 2015), <http://escholarship.org/uc/item/21198/zz002k5vrt> (accessed December 07, 2024).
11. G. Robins, The God's Wife of Amun in the 18th Dynasty in Egypt, in A. Cameron, A. Kuhrt (eds), *Images of Women in Antiquity* (Cranberra, 1983), 65–78.
 12. E. Naville, *The temple of Deir El Bahari, Part 2* (London, 1897).
 13. A. Grimm, S. Schoske, *Im Zeichen des Mondes: Ägypten zu Beginn des Neuen Reiches* (Schriften aus der Ägyptischen Sammlung 7; Munich, 1999).
 14. I. Shaw (ed), *The Oxford History of Ancient Egypt* (Oxford, 2000).
 15. F. Taterka, Hatshepsut and Senenmut or the Secret Affairs of Egyptian State, in D. Lewandowska, K. Marciniak, H. Rajfura (eds), *Cupido dominandi: Lust for power – power over lust* (Warsaw, 2015), 23–35.
 16. L. Green, The Royal Women of Amarna: Who was who, in D. Arnold (ed), *The Royal Women of Amarna: Images of Beauty from Ancient Egypt* (New York, 1996).
 17. W. J. Murnane, *Texts from the Amarna Period in Egypt* (Atlanta, 1995).
 18. J. P. Allen, Two Altered Inscriptions of the Late Amarna Period, *JARCE* 1988, 25: 117–121.
 19. M. Gabolde, *D'Akhenaton à Tout-ânkhamon* (Paris, 1998).
 20. J. K. Hoffmeier, J. van Dijk, New Light on the Amarna Period from North Sinai, *JEA* 2010, 96: 191–205.
 21. S. R. Campbell, Searching for the Identity of Neferneferuaten, *Celebration of Scholarship 2022*, 4, <https://pillars.taylor.edu/cs2022/4> (accessed November 30, 2024).
 22. R. T. Ridley, *Akheanten: A Historian's View* (Cairo, 2019).
 23. T. Tawfik, S. Thomas, I. Hegenbarth-Reichardt, New Evidence for Tutankhamun's Parents: Revelations from the Grand Egyptian Museum, *MDAIK* 2018, 74: 179–195.
 24. Line drawing from the north wall of the tomb of Meryre II, Tell el Amarna, https://de.m.wikipedia.org/wiki/File:Smenkhkare_and_Meritaten_from_Meryre_II.jpg (accessed December 01, 2024).
 25. Z. Hawass et al., Ancestry and Pathology in King Tutankhamun's Family, *JAMA* 2010, 303(7): 638–647.
 26. C. Duhig, The remains of Pharaoh Akhenaten are not yet identified: comments on 'Biological age of the skeletonized mummy from Tomb KV55 at Thebes (Egypt)' by Eugen Strouhal, *Anthropologie. International Journal of the Science of Man* 2010, 48 (2): 113–115.
 27. E. D. Lorenzen, E. Willerslev, King Tutankhamun's Family and Demise, *JAMA* 2010, 303 (24): 2471–2475.
 28. M. Gabolde, L'ADN de la famille royale amarnienne et les sources égyptiennes, *Égypte nilotique et méditerranéenne* 2013, 6: 177–203.
 29. C. Timmann, C. G. Meyer, Malaria, mummies, mutations: Tutankhamun's archaeological autopsy, *Tropical Medicine and International Health* 2010, 15: 1278–1280.
 30. Wikipedia The Free Encyklopedia, Dakhamunzu, <https://en.wikipedia.org/wiki/Dakhamunzu> (accessed January 04, 2025).
 31. E. Strouhal, Queen Mutnodjmet at Memphis: Anthropological and Paleopathological Evidence, in *L'Égyptologie en 1979: Axes prioritaires de recherches, Vol 2* (Colloques internationaux du Centre National de la Recherche Scientifique 595; Paris, 1982), 317–322.
 32. A. Dodson, D. Hilton: *The Complete Royal Families of Ancient Egypt* (London, 2004).

33. C. Roehrig (ed), *Hatshepsut: From Queen to Pharaoh* (New York, 2005).
34. W. Helck, W. Westendorf (eds), *Lexikon der Ägyptologie*, Vols 1–7 (Wiesbaden, 1975–1992).
35. L. Troy, *Patterns of Queenship in Ancient Egyptian Myth and History* (Uppsala Studies in Ancient Mediterranean and Near Eastern Civilizations 14; Uppsala, 1986).
36. T. Schneider, *Lexikon der Pharaonen* (Dusseldorf, 2002).
37. P. D. Manuelian, *Studies in the Reign of Amenophis II* (Hildesheimer Ägyptologische Beiträge 26, Hildesheim, 1987).
38. W. Grajetzki, *Ancient Egyptian Queens: A hieroglyphic dictionary* (London, 2005).