

'Blood Is Thicker Than Water':
Non-royal consanguineous
marriage in Ancient Egypt

An exploration of economic and biological
outcomes

Joanne-Marie Robinson

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To my husband, Stephen, and to the memory of my family

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Abbreviations

BF	Bagnall and Frier, <i>The Demography of Roman Egypt</i> , 2006, 1994, Cambridge
BM EA	British Museum Egyptian Antiquities
CdE	Chronique d'Égypte
CG	Catalogue Général des Antiquités Égyptiennes du Musée du Caire
CJ	The Codex of Justinian
CTh.	The Codex of Theodosius
Dig.	The Digest of Justinian
Inst.	The Institutes of Gaius
HTBM	Hieroglyphic texts from Egyptian Stelae, etc., in the British Museum, Parts 1-11, London.
IFAO	Institut Français d'Archéologie Orientale
JE	Journal d'Entrée (Cairo Museum)
KRI	Kitchen Ramesside Inscriptions, Historical and Biographical, 8 Vols, Oxford
Laws	Plato, <i>Laws</i>
LL	Laws of Lipit-Ishtar
LH	Laws of Hammurabi
MK	Middle Kingdom
MDAIK	Mitteilungen des Deutschen Archäologischen Instituts, Abt. Kairo
NBL	Neo-Babylonian Laws
MAL	Middle Assyrian Laws
OBT	Old Babylonian Tablets (Tell Rimah)
OED	Oxford English Dictionary
RT	Rowlandson and Takahashi, <i>Journal of Roman Studies</i> 99, 2009:104-39
UCL	University College London

Glossary¹

affinity: related through marriage

agnatic: see patrilineal

cognatic: related by genealogical ties without particular emphasis on patrilineal or matrilineal connections

cross cousin: child of a father's sister or mother's brother

ego: the individual who forms the central reference point in a kinship diagram

endogamy: inmarriage, marriage to an individual within a defined social group, category, or range

exogamy: outmarriage, marriage to an individual outside a defined social group, category, or range

extended family: a unit composed of two or more nuclear families related by descent or marriage (may be residential or a domestic group/s)

kin group: a social group based on kinship ties

kin term: a category that groups together a unique set of kinship relationships, or kin types

kin type: a unique, uncategorised kinship relationship

levirate: a rule or custom whereby a widow preferably marries a brother of her deceased husband

matrilateral: related through a mother, mother's side

matrilineal (uterine): related by tracing common descent exclusively through female ancestors and descendants

matrilocal residence: a norm which requires the husband, at marriage, to leave his family to live with, or nearby, his wife's family

neolocal residence: establishment of an independent household

nuclear family (biological): a resident unit consisting of parent/s and offspring, as defined by English language usage

¹ Glossary sources collated from Hendry 2016, Schusky (compiled glossary) 1972, Schwimmer 2003b.

parallel cousin: child of a father's brother or mother's sister

partible inheritance: an inheritance system which subdivides a person's property amongst all his/her children

patrilateral: related through a father, father's side

patrilineal (agnatic): related by tracing common descent through male ancestors and descendants

patrilocal residence: a norm that, upon marriage, requires the woman to leave her family to live with, or nearby, her husband's family

polyandry: marriage involving one woman to more than one man

polygamy: marriage of a person to more than one spouse

polygyny: marriage involving one man to more than one woman

stem family: a family formed when only one child (usually a son) remains resident with his/her parents and the others set up new households

taboo: something prohibited, often because of association with a wider system of classification, that may be related to ideas of pollution, or to the notion of sacred in any society

uxorilocal residence: rule that, upon marriage, a man moves into his wife's household

virilocal residence: rule that, upon marriage, a woman moves into her husband's household

Ancient Egyptian Chronology

Early Dynastic Period

3000 – 2890	1st dynasty
2890 – 2686	2nd dynasty

Old Kingdom

2686 – 2613	3rd dynasty
2613 – 2494	4th dynasty
2494 – 2345	5th dynasty
2345 – 2181	6th dynasty
2181 – 2160	7th and 8th dynasties

First Intermediate Period

2160 – 2025	9th and 10th dynasties
2125 – 2055	11th dynasty (Thebes only)

Middle Kingdom

2055 – 1985	11th dynasty (all Egypt)
1985 – 1773	12th dynasty
1773 – after 1650	13th dynasty
1773 – 1650	14th dynasty

Second Intermediate Period

1650 – 1550	15th dynasty
1650 – 1580	16th dynasty
1580 – 1550	17th dynasty

New Kingdom

1550 – 1295	18th dynasty
1295 – 1186	19th dynasty
1186 – 1069	20th dynasty

Third Intermediate Period

1069– 945	21st dynasty
945 – 715	22nd dynasty
818 – 715	23rd dynasty
727 – 715	24th dynasty
747 – 656	25th dynasty

Late Period

664 – 525	26th dynasty
525 – 404	1st Persian Period
404 – 399	28th dynasty
399 – 380	29th dynasty
380 – 343	30th dynasty
343 – 332	2nd Persian Period

Ptolemaic Period

332 – 30

Roman Period

30 – AD 395

Source: Shaw, *The Oxford History of Ancient Egypt*, 2003: 481-89 (abridged). Dates are BC unless otherwise stated.

Papyri and ostraca

Abbreviations of Greek and demotic documentary papyri follow Duke University's Checklist of Editions of Greek, Latin, Coptic and Demotic Papyri, Ostraca and Tablets at: <https://library.duke.edu/rubenstein/scriptorium/papyrus/texts/clist.html>.

Deir el-Medina ostraca and papyri are indexed in the Deir el-Medina database at: <http://dmd.wepwawet.nl>. The database provides publications and a concordance for other numbers associated with each entry.

BGU *Aegyptische Urkunden aus den Königlichen (later Staatlichen) Museen zu Berlin, Griechische Urkunden.*

CPR Corpus Papyrorum Raineri

O. DeM Ostraca Deir el-Medina

O. Brit. Mus. Ostraca British Museum

P. Adl. *The Adler Papyri*, Greek texts ed. E.N. Adler, J.G. Tait, F.M. Heichelheim. Demotic texts ed. F.Ll. Griffith. Oxford 1939.

P. Amh. *The Amherst Papyri, Being an Account of the Greek Papyri in the Collection of the Right Hon. Lord Amherst of Hackney, F.S.A. at Diddington Hall, Norfolk*, ed. B.P. Grenfell and A.S. Hunt. London.

P. Ashm. Catalogue of the Demotic Papyri in the Ashmolean Museum

P. Berl. Leihg. Berliner Leihgabe griechischer Papyri

P. Bib. Nat. Papyrus Bibliothèque Nationale

P. Brit. Mus. Catalogue of the Demotic Papyri in the British Museum

P. Brux. Papyri Bruxellenses Graecae

P. Cair. Service des Antiquités de l'Égypte, Catalogue Général des Antiquités Égyptiennes du Musée du Caire. Die demotischen Denkmäler.

P. Carlsb. The Carlsberg Papyri

P. Chic. Haw. *Oriental Institute Hawara Papyri: Demotic and Greek Texts from an Egyptian Family Archive in the Fayum (Fourth to Third Century B.C.)*, ed. G.R. Hughes and R. Jasnow with a contribution by J.G. Keenan. Chicago 1997.

P. Choach. Survey *The Archive of the Theban Choachytes*, P.W. Pestman. Leuven 1993.

P. Ehevertr. *Ägyptische Eheverträge*, ed. E. Lüddeckens. Wiesbaden 1960. (Äg. Abh. 1)

P. Fam. Tebt. *A Family Archive from Tebtunis*, ed. B.A. van Groningen. Leiden 1950. (Pap. Lugd. Bat. VI).

- P. Fay.** *Fayum Towns and their Papyri*, ed. B.P. Grenfell, A.S. Hunt and D.G. Hogarth. London 1900.
- P. Flor.** Papiri greco-egizii, Papiri Fiorentini
- P. Gebelen Heid.** *Die demotischen Gebelen-Urkunden der Heidelberger Papyrus-Sammlung*, ed. U. Kaplony-Heckel. Heidelberg 1963.
- P. Gen.** Les Papyrus de Genève
- P. Giss.** *Griechische Papyri im Museum des Oberhessischen Geschichtsvereins zu Giessen*, ed. O. Eger, E. Kornemann, and P.M. Meyer. Leipzig-Berlin 1910—1912.
- P. Grenf.** II. *New Classical Fragments and Other Greek and Latin Papyri*, ed. B.P. Grenfell and A.S. Hunt. Oxford 1897. Nos. 1—113.
- P. Hausw.** *The Hauswaldt Papyri*, ed. J. Manning. Sommerhausen 1997. (Dem.Stud. XII).
- P. Hawara** *Demotische Urkunden aus Hawara*, ed. E. Lüddeckens, with R. Wassermann and for the Greek, R.W. Daniel. Stuttgart 1998.
- P. Heid.** Veröffentlichungen aus der Heidelberger Papyrussammlung
- P. IFAO** *Papyrus Grecs de l'Institut Français d'Archéologie Orientale*. Cairo. (Institut Français d'Archéologie Orientale du Caire. Bibliothèque d'Étude).
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- P. Lips.** Griechische Urkunden der Papyrussammlung zu Leipzig
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- P. Phil. Dem.** *A Family Archive from Thebes. Demotic Papyri in the Philadelphia and Cairo Museum from the Ptolemaic Period*, M. El-Amir. Cairo 1959.
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- P. Select.** *Papyri Selectae*, ed. E. Boswinkel, P.W. Pestman and P.J. Sijpesteijn. Leiden 1965.

PSI *Papiri greci e latini*. (Pubblicazioni della Società Italiana per la ricerca dei papiri greci e latini in Egitto). Florence.

P. Stras. *Griechische Papyrus der Kaiserlichen Universitäts- und Landesbibliothek zu Strassburg*, ed. F. Preisigke. Leipzig.

P. Tebt. *The Tebtunis Papyri*. London.

P. Vind. Worp *Einige Wiener Papyri*, ed. K.A. Worp. Amsterdam 1972.

SB *Sammelbuch griechischer Urkunden aus Ägypten*

Chapter 1

Ancient Egyptian marriage and kin terms, definitions of consanguinity and consanguineous marriage

Introduction

This book aims to explore and assess the potential economic and biological outcomes of marriage in ancient Egypt between kin biologically related beyond the level of sibling and half-sibling. When consanguineous marriages are discussed in Egyptological literature, studies often focus on brother-sister marriages recorded in census returns from Roman Egypt, or on royal sibling marriages amongst the ruling Ptolemies.¹ Sibling marriages in Egypt also attracted historical attention, for example, early in the 1st century AD, Philo of Alexandria claimed Egyptians were free ‘to marry any sister of every degree whether they belonged to one of their brother’s parents or both’ (*De specialibus legibus*, 3. 23). However, evidence is comparatively rare in ancient Egyptian sources for marriages between siblings (genetically first-degree relatives who share fifty percent of their genes) and half-siblings (genetically second-degree who share twenty-five percent of their genes) (see Černý 1954: 23-29). Marriages between more distant biological kin, such as first or second cousins, were likely to be more commonplace amongst non-royal families in all historical periods, but are difficult to identify in the historical record.

This is the first time that evidence for non-royal consanguineous marriage has been collated from select sources from the Middle Kingdom to the Roman Period and a process created to investigate the potential economic and biological outcomes of these unions. I argue that for some families, and under certain conditions, consanguineous marriage was a preferred economic strategy in terms of gifts given at marriage and in inheritance, and that families who married consanguineously may have received greater levels of intra-familial support without the expectation of reciprocity. Although there may have been adverse biological outcomes arising from recessive gene disorders in the offspring of consanguineous marriages, I propose that these physical or cognitive anomalies were not distinguished from other medical disorders in the general health environment of ancient Egypt. This research primarily focuses on ancient Egyptian documentary and archaeological sources, including human remains, and is informed by research on consanguinity from a range of disciplines including anthropology, demography, economics, genetics and pathology.

The working definition of consanguineous marriage used throughout this research is that defined by clinical geneticists: unions contracted between cousins biologically related as second cousins or closer biological kin (Bittles 2001b: 89; see also table 1.2). This

¹ For example, Ager 2005:1-34; Bagnall and Frier 2006: 127-34; Bixler 1982: 264-73; Hopkins 1980: 303-54; Scheidel 1996a: 9-51.

definition is a modern concept applied to biological relationships and used here as a tool to categorise marriages between close family members. Ancient Egyptian kin terms have equivalent kin types in Euro-American terminology – father, mother, son, daughter, sister, brother, husband, wife – and Egyptians used their kin terms, or compounds of them, to denote relationships equivalent to the biological relationships defined in clinical genetics. However, these kin terms were more than one-to-one equivalences due to the wide fluidity and flexibility in the use of Egyptian kin terms and the range of individuals included in kinship groups, as well as diachronic change in their application (Franke 2001: 245-48; with particular reference to the Middle Kingdom, see Franke 1983; Olabarria 2020a: 63-71). The extended use of kin terms in ancient Egypt, and the flexibility of their application for biological and non-biological kin, is one of the reasons why consanguineous marriages are not only difficult to determine, but also open to misinterpretation to a modern reader. While this research specifically examines the potential outcomes of consanguineous marriage, there is no evidence to suggest that Egyptians categorised marriages as specifically consanguineous or otherwise. However, most families are likely to have been aware of marrying individuals with whom they had a close biological relationship.

Bureaucratic requirements sometimes dictated the naming of family and household members and by the time of the Roman Census returns the names, ages, parentage and professions of all household residents were listed, led by the declarant, although the amount of details given varied according to locality (Bagnall and Frier 2006: 22-25).² In comparison, the data in the Ptolemaic tax-lists refers back to the household-head (predominantly a male) who is identified by his patronymic, so that the father’s relationship to the children is attested, but a woman is named as his wife, and not as mother of the children (Clarysse and Thompson 2006: 324, 328).³ Even though these administrative documents are potentially valuable for constructing genealogies (albeit limited by the information requested), the fragmentary nature of the finds still challenges the identification of consanguineous marriage. Sometimes, there is the fortuitous survival of a family archive, such as the Archive of Horos, son of Nechouthes, who lived in Ptolemaic Pathyris, which allows the prosopographic construction of a family and their economic transactions (see chapter three). Beyond the administrative and legal texts, some individuals or families displayed preferences for recording genealogies, for example, in the tombs at Deir el-Medina discussed in chapter four, and used in combination with surviving formal and informal documentary sources, probable biological relationships between families in the village can be identified.

Exploring non-royal consanguineous marriage: aims, limitations, and hypotheses

The idea for this research arose from the high number of consanguineous marriages reported in the Roman census returns from Egypt. The quality of the evidence indicating sibling marriages, the estimated scale of the unions, and their apparent social acceptability has attracted scholarly debate since the late 19th century. Two major pieces of research on the census returns by Hombert and Préaux (1952) and Bagnall and Frier (2006, 1994)

² Bagnall and Frier (2006: 57) use Kertzer’s (1991: 156) definition of a household: ‘group of coresidents, people who live under the same roof and typically share in common consumption’.

³ Clarysse and Thompson (2006: 301) found that 49 out of 427 households were headed by women.

are part of the extensive literature on this rarely documented practice.⁴ While sibling marriages constitute 16.5% of 121 marriages listed in the census returns, there are also four half sibling marriages and two first cousin marriages, although Scheidel (1996b: 322) believes the incidence of first cousin marriage is probably ‘massively underestimated’ as the parents of the spouses would need to live in the same house to be listed.

Surviving sources from the historical periods reviewed in this study suggest marriage predominantly amongst first cousins, although this assessment is affected by the limitations discussed above. However, the existence of non-royal consanguineous marriages led me to question why marriages between close relatives were preferable amongst some families and, in particular, what economic advantages and adverse biological outcomes may have resulted from these unions?

The research presented in the book examines the following three hypotheses:

- i. consanguineous marriage mitigates the fragmentation of moveable and immoveable property, and alleviates pressure on families in terms of the timing and amount of gifts given in marriage and in inheritance – examined in the context of economic transactions in family archives from the Ptolemaic garrison town of Pathyris.
- ii. families related consanguineously have more flexible terms of reciprocity and a greater willingness to act altruistically than non-consanguineous families – examined in the context of economic transactions in the New Kingdom workmen’s village of Deir el-Medina.
- iii. congenital anomalies and morbidity in infancy and childhood resulting from consanguineous marriage were not distinguished from other health conditions by the ancient Egyptians, and individuals with physical abnormalities or cognitive disorders were neither socially excluded nor considered ‘disabled’ – examined in the context of orofacial clefts and intellectual developmental disorders, which are recorded at increased frequency in consanguineous marriages.

Ancient Egyptian marriage

Much of the evidence for marriage settlements dates from the Late Period onwards in the form of legal documents recording economic arrangements, drawn up by some families at marriage or after marriage. Although the majority of evidence for family law appears in demotic and Greek documents from the Late Period, Johnson (1996: 180) believes they reflect many of the social and legal assumptions of earlier periods, commenting that even though many scholars treat later stages of Egyptian history as ‘polluted’ by foreign contact, Egyptian culture remained strong and became more visible through post-New Kingdom documents. Johnson has also contributed extensively to studies on aspects of marriage and legal arrangements, including Middle Kingdom *imyt-pr* documents (1999: 169-72); ‘annuity contracts’ drawn up in settlement of marriage and/or marital property (1994: 113-32); private property envisioned in marriage and inheritance demotic documents (2015: 249-

⁴ For example, see Frandsen 2009: 36-60; Hopkins 1980: 303-54; Huebner 2007: 21-49; Modrzejewski 1964: 52-82; Parker 1996: 362-76; Remijsen and Clarysse 2008: 53-61; Rowlandson and Takahashi 2009: 104-39; Scheidel 2004: 93-108, 1995: 143-55, 1996a: 319-40; Shaw 1992: 267-99; Thierfelder 1960.

65); sex and marriage (2003: 149-59), and the legal status of women in ancient Egypt (1996: 175-86).⁵

In the absence of evidence for legal processes to formalise a marital union (outside economic arrangements) or religious sanctioning of marriage in ancient Egypt, marriage was the cohabitation of two people with the intention of creating a household and raising a family; it was a private matter, unrecorded by the state, although the union may have been marked by a family celebration (see Allam *LÄ*: 1162-63; Johnson 1996: 179; Pestman 1961: 6-7; Théodorides 1976: 19-21; Wilfong 2001, 340-41). In relation to Deir el-Medina in the Ramesside Period, Toivari-Vitaala (2001: 84, 90) notes that marriage was likely to be commonplace and the institution familiar enough not to require ‘elaborate written explanations’; she does, however, remark on different ways that men and women could live together rather than being descriptively polarised as formally married or informally co-habiting.⁶ Marriage could be ended by the death of a partner, or separation initiated by either partner, and subsequently, property was allocated according to customary law governing separation and inheritance, both of which could be a source of family conflict (see chapter three).

Since evidence for types of household residence for married couples is fragmentary, the summary below draws on evidence from a range of chronological periods. Although the *Instructions of Ani* (6, l. 6), a New Kingdom literary text, state: ‘Build a house or find and buy one’ (Lichtheim 1976: 139), the advice represents an elite ideal rather than an everyday guide for conduct. The marital home may have been neolocal, patrilocal or matrilocal depending on family circumstances; its domestic composition may have included biological and non-biological kin; and its structure may have been nuclear (or smaller), stem, or extended, with an inherent fluidity subject to changing conditions (Allam *LÄ*: 1167; Kóthay 2001: 349-52; Moreno Garcia 2013b: 1042-44; 2012: 4; Spence 2013: 84-86; Toivari-Viitala 2001: 86-87; Willems 2015: 467-71). Huebner (2013a: 48) notes that documents from the Roman Period in Egypt, particularly the census returns, indicate predominantly patrilocal residence, although a family without a son may choose matrilocal residence to bring a male into the household; neolocal residence appears to be the exception in this period (see also Bagnall and Frier 2006: 121-22; Rowlandson and Takahashi 2009: 122; see Clarysse and Thompson 2006: 295-96, for predominantly patrilocal marriage in the Ptolemaic tax-registers). Terms used to describe marriage and the creation of a household are well summarised by Toivari-

⁵ There are numerous other discussions on aspects of marriage and family that include Allam 1981: 116-35 (historical summary of marriage settlements and divorce terms); Allam, *LÄ*: 1162-81 (overviews of marriage and divorce), *LÄ*: 104-13 (family structure and function); Galpaz-Feller 2008: 231-53 (widows in Biblical culture and ancient Egypt); Huebner 2013a (family in Roman Egypt); Kanawati 1976: 149-60 (marriage and polygamy); Kóthay 2006: 151-64 (widows and orphans); Lesko 1996 (women’s private and public life); Lesko (ed.) 1989 (women’s records from ancient Egypt and western Asia); Lesko 1988: 163-71 (perception of women in Egyptian wisdom literature); Lippert 2013: 1-20 (overview of inheritance); Rabinowitz 1953: 91-97 (parallelisms between Egyptian marriage contracts from 4th century BC and in Jewish sources); Simpson 1974: 100-05 (polygamy in Middle Kingdom Egypt); Théodorides 1976: 14-55 (marriage status, adoption, divorce and adultery); Toivari-Vitaali 2013: 1-17 (marriage and divorce); Wilfong 2009: 164-79 (gender in ancient Egypt); Wilfong 2001: 340-45 (marriage and divorce); Wilfong 1997 (women and gender); Yiftach-Firanko 2003 (Greek marriage documents in Egypt). General publications on women that cover discussions on marriage and divorce include: Graves-Brown 2010; Janssen and Janssen 1990; Robins 1993; Tyldesley 1994; Watterson 2011.

⁶ (i) Toivari-Viitala (2001: 84-85) suggests there were different types of socially recognised unions in Ramesside Deir el-Medina, involving different rights and obligations that can be categorised as marriage.

Vitaala for the village of Deir el-Medina (2001: 70-83, for divorce, 90-95) and Pestman (1961: 9-11, for divorce 58-79); terms for marrying or marriage include:

grg pr – to found a house (or family)

'k r pr – to enter a house

hms irm – to sit with

iri m hmt – to make as a wife

iw m hmt – to be as a wife

rdi n A B m hmt – to give A to B as a wife

iri h3y – to make as a husband (used in later periods as proof of divorce, Pestman, 1961: 9 n.8).

Married couples had legal duties towards each other and their offspring in terms of property brought into the marriage, acquired during marriage, and rights over its disposal. An example of the limitations placed upon personal and shared property in marriage is illustrated in the Will of Naunakhte from 20th dynasty Deir el-Medina. Since parents could not alienate their children's right to inheritance without the permission of their offspring; Naunakhte's draws up legal documentation to exclude several of her children from receiving a share of her inheritance, although she cannot alienate the children's rights of inheritance to their father's property (Černý 1945: 29-53; Eyre 2007: 240-41; Pestman 1982: 173-81; Pestman 1961: 162-64). The economic commitment of resources at marriage, and the impact of a man's second marriage upon the allocation of these resources, is explored in detail by Eyre (2007: 223-43); as is the role of adoption as a means to secure financial security and social position in the context of the Ramesside Period Adoption Papyrus (Eyre 1992: 207-21), and legal indictments arising out of accusations of adultery (Eyre 1984: 92-105).

Families of married couples also carried legal responsibilities towards each other; for example, P. Leiden 373a, a demotic text dated 131 BC, documents a marriage settlement in which the husband's mother agrees to honour her son's obligations in relation to the repayment of the wife's maintenance contract (if the son should fail to repay):

That which he will not carry out for you in respect of them in accordance with every word which is above (and) in accordance with the documents which are above, I will carry out for you, comp[ulsorily, without] delay

P. Leiden 373a (P. Dem. Memphis 6) l. 7, Martin, *Demotic Papyri from the Memphite Necropolis*, 2009: 139.

Pestman (1961) has produced a seminal work on marriage and matrimonial property, which is a valuable source for analysis of demotic marriage settlements (as is Lüddekens (1960) classic study on these texts). Allam (1981: 116-35) provides a useful overview on the status of marriage and divorce from the Pharaonic period to late antiquity, arguing that the fundamental notion of marriage as 'un acte sociale soumis seulement au droit coutumier' was maintained in Egypt (1981: 135).⁷

⁷ See also Allam 1997a: 89-97 for civil and legal obligations of marriage.

Age at Marriage

Limited evidence suggests marriage from the age of 14 for women and around 20 for men (Pestman 1961: 4–5). *The Instructions of Ankhsheshonq*, dated to the Ptolemaic Period, advise a man to: 'Take a wife when you are twenty years old, that you may have a son while you are young (11, 1. 7, Lichtheim 1980: 168). In a petition dated to the 26th dynasty, Petiese relates how he refused to give his daughter in marriage as she was too young: 'Her time is not yet come; become a priest of Amonrasonter and I shall give her to you' (P. Ryl. 9, 8.11, reign of Psamtik I Wahibre); the following year the suitor became a priest and permission to marry was given (Pestman 1961: 8–9). A stela in the British Museum (BM EA 147, 42 BC) details the life of Tjaiemhotep, from which it is possible to calculate that she married at the age of fourteen, while P. Ryl. 16 (152 BC) documents a marriage that took place when a woman was around eighteen years of age. Based on census returns from the Roman Period in Egypt, the median age for marriage was around 17.5 years for women and early twenties for men, with a mean gap in age of 7.5 years (Bagnall and Frier 2006: 111–21).

Ancient Egyptian kin terms

There are six basic kin terms constituting the core of ancient Egyptian kinship terminology used to categorise family relationships (table 1.1) and a wider set of terms designating kin groups, many of which display diachronic development; kin terms are also used for individuals or groups who are not biologically related (see Bierbrier 1980: 100–07; Franke 2001: 245–48, 1983: 322–24; Olabarria 2020a: 63–72; 2018: 62–63; Robins 1992: 197–217; Willems 1983: 153–65). From the position of Ego, the individual to whom the kinship categories are referred, a set of relationships can be constructed using compounds of the basic kin terms, for example, *s3t nt s3t* – daughter of the daughter, *sn.f(n) mwt.f* – his brother (of) his mother (the kin terms are in juxtaposition or connected with a genitive). In addition, basic kin terms can have extended meanings, so that a daughter (*s3t*) can also be a daughter of Ego's offspring (granddaughter) or a wife of Ego's son (daughter-in-law); in certain contexts that infer rank *s3/s3t* could also be junior to Ego (Campagno 2009: 1–3; Franke 2001: 245; Lustig 1997: 45). In the New Kingdom, *s3/t* was sometimes replaced by *šri/t* in everyday use (Willems 1983: 153). Relations created through marriage were termed *hmt* (wife) and *h3y* (husband); rarely, *šm* and *šmt* were used to denote parents-in-law, and reciprocally son- and daughter-in-law (Franke 2001: 245, Willems 1983: 153). By the 18th dynasty the term *snt* had become interchangeable for wife (and reciprocally *sn* for husband) (Černý 1954: 25). There is no specific Egyptian word for parents but, as Olabarria (2018: 63) comments, the absence of a term for parents does not indicate the absence of a concept and may instead point to distinct maternal and paternal groups.⁸

Discussing the use of *sn/snt* during the Ramesside Period in Deir el-Medina, Bierbrier (1980: 104–06) found it had widespread use as a term for nephew/niece by blood or marriage as well as denoting affines in the same generation without blood-ties, but remarks that the absence of genealogical data may actually obscure blood ties. The tomb of the sculptor Nakhtamun (ii) (TT335) is an example of a kin term's multiple use: *sn* is used for a brother,

⁸ Price (2016: 493) describes the pairing on Late Period statues of *itw* and *mwwt* with the meaning of male and female ancestors, or forebears in general.

Table 1.1 Summary of basic kin terms used across historical periods, their extended meanings using Euro-American terminology, and kin types. Sources: after Franke, *Kinship*, 2001: 245-46; Lustig, *Kinship, gender and age in Middle Kingdom tomb scenes and texts*, 1997: 45; Price, *Archaism and filial piety: an unusual Late Period pair statue*, 2016: 493, note k; Robins, *The relationships specified in Egyptian kinship terms of the Middle and New Kingdoms*, 1992: 204; Willems, *A description of Egyptian kin terminology of the Middle Kingdom, c. 2000-1650 B.C.*, 1983: 153-65.

Basic kin terms*	Extended meaning using Euro-American terminology	Kin type**
<i>mwt</i>	mother, grandmother, mother-in-law, ascendant (also ancestor in the Late Period alongside <i>it</i>)	M, MM, FM, WM
<i>it</i>	father, grandfather, father-in-law, ascendant (also ancestor)	F, FF, MF, WF
<i>s3</i>	son, grandson, great-grandson, son-in-law, descendant	S, SS, DS, SSS, DH
<i>s3t</i>	daughter, granddaughter, daughter-in-law, descendant	D, DD, SD, SW
<i>sn</i>	brother (including half-brother), uncle, cousin, nephew, brother-in-law, friend, colleague (husband from 18th dynasty)	B, MB, FB, FBS, MZS, MBS, FZS, BS, ZS, ZH, WB, WMB?
<i>snt</i>	sister (including half-sister), aunt, cousin, niece, sister-in-law, friend (wife from 18th dynasty)	Z, MZ, FZ, FBD, MZD, MBD, FZD, ZD, BD, WZ, SW?
<i>hmt</i>	wife	wife to Ego
<i>h3y</i>	husband	husband to Ego
<p>Legend: M = mother, F = father, S = son, D = daughter, B = brother, Z = sister W = wife, H = husband</p> <p>* <i>s3/t</i> and <i>sn/t</i> are counted as two basic terms</p> <p>**These are the uncategorised relationships used by anthropologists when referring to the contents of kinship categories (Schwimmer: https://www.umanitoba.ca/faculties/arts/anthropology/tutor/kinterms/kinterms2.html Accessed 6.4.2016).</p>		

a brother-in-law, and three nephews (Naktamun (ii) is the father of the wife, and uncle of the husband in cousin marriage number 6, table 4.3; Nakhtamun (ii) also has a niece and nephew in cousin marriage number 4, table 4.3). It is not always possible to construct kin relationships in texts, stelae or tomb inscriptions as kin terms may not be accompanied by names, titles and scenes that help clarify relationships. Olabarria (2020a: 66) notes that in addition to missing captions, sometimes the names and titles given might be ‘indicative but never conclusive of a relationship’, and determining identity is further complicated by applying possessive suffix-pronouns to several individuals in the same inscription.

There is a body of published research on kin terms and kinship, many of which are period specific. Olabarria (2020a) has analysed the presentation of kinship in the First Intermediate Period and Middle Kingdom, focusing particularly on the changing dynamics of kinship during one's life and how forms of relatedness are communicated, with particular reference to stelae from Abydos North Offering Chapels. Olabarria (2020a: 192) points out the flexibility of ancient Egyptian kinship, noting that inclusion in kin groups was not only 'substance' (such as blood or bodily fluids),⁹ but membership of a group could be 'actively sought and constructed'. While some aspects of the kinship system may have been less subject to change than others, the result was a 'complex interplay between 'fixed' and 'variable' characteristics...the balance of these two poles may shift depending on, for example, the role played by the state' (Olabarria 2020a: 201).

Using more than two thousand primary sources, Franke (1983) conducts a detailed study on Middle Kingdom kin terms and kin groups (see 154-77 for application of basic kin terms). Willems (1983: 152-68) focuses on the Middle Kingdom in his discussion of primary kin terms and the difficulties of identifying their extended meanings. Lustig (1997: 43-65) also focuses mainly on the Middle Kingdom in her analysis of kinship, gender and age (First Intermediate Period sources are also included). Bierbrier (1980: 100-07) discusses terms of relationship used in Deir el-Medina, while Toivari-Viitala (2001: 194-201) specifically discusses terms denoting mother, daughter/female child in the context of a study on women in this workmen's village. Robins (1979: 197-217) examines terms of relationship predominantly in the Middle Kingdom with evidence drawn mostly from private monuments; her work also includes some New Kingdom material but excludes Deir el-Medina sources. Using an analysis of 93 Theban tombs, Whale (1989) examines the representation of family in private tombs of the 18th dynasty (in particular, see the study on 239-75). Allen (2009) argues in favour of a matrilineal structure in the organisation of family and society in ancient Egypt. Finally, summaries providing overviews of kin terms and kinship groups in ancient Egypt include Campagno (2009: 1-8) and Franke (2001: 245-48).

The changing pattern of relatedness in ancient Egypt means that groups cannot be fitted into preconceived and static categories. Approaches to determining relatedness are culturally specific and while biological kin are recognised and associated with certain duties and obligations, other kin groups arise, remain or and change due to specific circumstances, as Olabarria (2020a) convincingly discusses in her work Middle Kingdom kinship. Holy points out (1996: 9) that kinship is the differential between rights, duties, roles and statuses so that kinship is 'recognized as the difference that makes a difference'. Carsten's (2004: 9) also aptly describes kinship as more than 'given' with its received rights, rules and obligations, but as a 'realm of new possibilities'. In the debate between kinship defined by reproduction and kinship defined by terminological space within a culture (for example, is someone

⁹ (i) For a discussion on bodily substance and its deployment in kinship studies, see Carsten 2011: 19-35; 2004: 131), who argues for the mutability and transferability of substance that can change and accrue through life.

(ii) Olabarria (2018: 88-113) suggests that one of the ways of understanding ka, the vital essence of the living and the dead, is in the context of substance. Olabarria proposes that funerary rituals, maintained by some members of the kin group from generation to generation (traditionally by the eldest son), create and perpetuate relatedness through the provision and sharing of food and sustain the essence of the ka amongst the kinship group.

called cousin purely because he/she trades specific goods?), Read (2001: 114) believes that kinship is a question of understanding which conceptual framework is appropriate at any given time: 'not whether genealogically framed reference is somehow more real and the terminologically framed reference is 'metaphoric'". Commenting on the interpretation of kinship, James (2011: 8) notes that kin terminologies used by social anthropologists arise from ethnographic research connected to a particular imagined view of society as a whole, and that the language defining kin depends on the underlying grammar of a particular group; the result could be that kin terms used in real life might mask genetic relationships more than they reveal them. This range of possibilities exists within the interpretation of kinship in ancient Egypt – in some circumstances the biological ties of kin may not be any more real than the constructed ties of kin; duties and obligations arise, remain or change; and the fluidity of kin terms may lead to incorrect interpretations as to who or who may not be kin, although the context of the textual sources is particularly constructive in suggesting interpretations of consanguineous relationships.

Consanguinity and consanguineous marriage

This section begins with definitions of consanguinity leading into an overview of categories of consanguineous marriage and levels of biological and genetic relationships up to the level of second cousin (using Euro-American terminology).

Defining consanguinity

The condition of being of the same blood; relationship by descent from a common ancestor; blood-relationship. (Opposed to *affinity*, i.e. relationship by marriage.)

OED, 2018

A consanguine is someone who is defined by *the society* as a consanguine, and 'blood' relationship in a genetic sense has not necessarily anything to do with it, although on the whole these tend to coincide with most communities of the world...Once we accept that consanguinity is a socially defined quality, the definition of kinship holds.

Fox, *Kinship and Marriage: an Anthropological Perspective*, 1967: 34-35.

As a working definition, unions contracted between persons biologically related as second cousins ($F \geq 0.0156$) are categorized as consanguineous.

Bittles, *A Background Summary of Consanguineous Marriage*, 2001a: 2.

Consanguinity can be defined as descent from a common ancestor, or a society may define consanguinity irrespective of biological relationship, or because of biological relationship. When it is classified from the perspective of clinical genetics, the arbitrary limit of second cousin has been selected because the 'genetic influence in marriages between couples related to a lesser degree would usually be expected to differ only slightly from that observed in the general population' (Bittles 2001a: 2).¹⁰

¹⁰ A union up to the level of second cousin or closer is the most common definition equivalent to a coefficient of inbreeding (F) 0.0156 in their offspring (see figure 1.2) (Bittles 2001b: 89).

‘BLOOD IS THICKER THAN WATER’

Table 1.2 Biological relationships (using Euro-American terminology) and genetic relationships.
Source: Bittles, *Consanguinity in Context*, 2012: 6.

Biological relationship	Genetic relationship	Coefficient of relationship (r)	Coefficient of inbreeding (F)
Parent-child	First-degree	0.5	0.25
Sibling			
Half-sibling	Second-degree	0.25	0.125
Uncle-niece			
Double first cousin			
First cousin	Third-degree	0.125	0.0625
First cousin once removed	Fourth-degree	0.0625	0.0313
Double second cousin			
Second cousin	Fifth-degree	0.0313	0.0156
Second cousin once removed	Sixth-degree	0.0156	0.0078
Double third cousin			
Third cousin	Seventh-degree	0.0078	0.0039

Genetic relationships are classified in terms of coefficient of relationship (r), which measures the proportion of genes each individual has in common, and a coefficient of inbreeding (F), which expresses an individual’s level of consanguinity and indicates the risk of recessive gene disorder (Bittles 2012: 6-7) (table 1.2).¹¹

Categories of consanguineous marriage

In genetic studies consanguineous marriages are traditionally classified from the husband’s perspective. In addition to sibling and half-sibling marriages, there is a range of categories that define cousin and uncle-niece marriage. In a first cousin marriage a man can marry any of his four different cousins. They are his father’s brother’s daughter, his mother’s sister’s daughter, mother’s brother’s daughter, and his father’s sister’s daughter. Further classifications of consanguinity include marriages between double first cousins, uncles and nieces and aunts and nephews, first cousins once removed, and second cousins (Denic et al 2010a: 741). This range of consanguineous unions is shown in figure 1.1 (for more complex pedigrees of consanguineous marriages see Hamamy et al. 2011: 844).

¹¹ See Woods et al. (2006: 889-96) for examples of greater than expected levels of homozygosity in individuals with recessive gene disorders, who are the offspring of first cousin marriages in communities where consanguineous marriage is frequently practised.

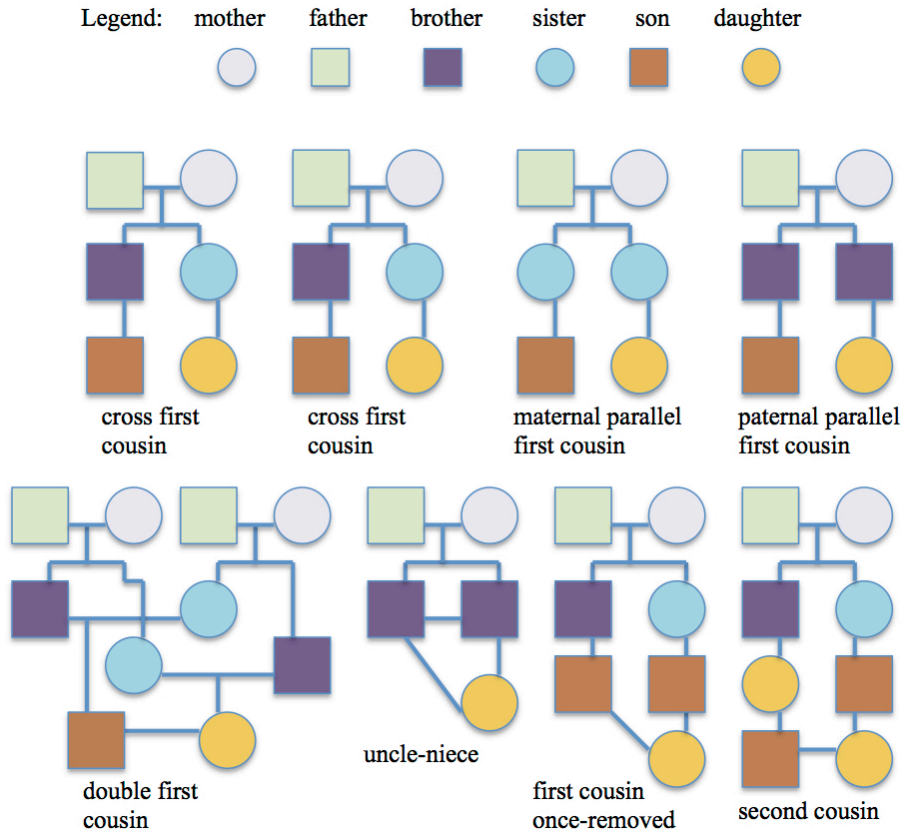


Figure 1.1: Categories of consanguineous marriage. Source: after Hamamy et al., *Consanguineous Marriages, Pearls and Perils: Geneva International Consanguinity Workshop Report*, 2011: 844.

Definitions of Incest

Incest: Sexual intercourse between two persons who are related by a real, assumed or artificial bond of kinship that is regarded as a bar to sexual relations. Where sexual relations are forbidden, but not because of kinship, they may be called mismating.

Schusky, *Manual for Kinship Analysis*, 1972: 91.

For the 'grisly horror of incest' is not a universal characteristic of all heterosexual offences with kinswomen and the wives of kinsmen. The reactions to a breach vary within and between societies.

Goody, *A comparative approach to incest and adultery*, 1956: 304.

Within anthropology, the term incest is used when a kinship bond that bars sexual intercourse is broken; what is considered incest depends on the rules of different kinship groups and, in turn, these laws are shaped by religion, law, politics, economics or other aspects of the culture (Schusky 1965: 2). The term derives from *incestum* and was used in

Rome to refer generally to polluting or unchaste behaviour, including sexual intercourse with proscribed family members and with Vestal Virgins, the Roman priestesses of Vesta (Archibald 2001: 13, see also Shaw 1992: 269-70). In a study of pollution and purification in early Greek religion, Parker (1996: 97) points out that the word *miasma* implies pollution, but incest is never referred to as *miasma*. Endogamous marriage was more common in Greek city-states and Shaw (1992: 270-71) refers to the normality of marriages between cousins, but highlights reduced levels of acceptability with closer biological kin, finally leading to sexual relations between siblings that were treated with revulsion. Greek sensitivities towards first-degree sexual relations are reflected in *The Laws* by Plato: the Athenian argues that unwritten laws and the force of public opinion restrain parents from sleeping with sons or daughters, and men from intercourse with attractive siblings (*Laws*, 8. 838a-b) (see pages 00 for further discussion on marriage prohibitions in classical Greece and ancient Rome).

In ancient Egypt there is no evidence that the term incest existed in any legal sense, and the term cannot be applied to the sibling unions for which evidence exists, for example, royal 18th dynasty marriages or sibling marriages in the Roman census returns. Frandsen (2009: 9) raises the interesting point that the category of *bwt*, incorporating evil, chaos and things taboo, did not include sexual unions between immediate family members.¹² If the term incest is used within this research, the nature of the relationship will be qualified, as will the perspective from which it is being discussed. There is also no indication in ancient Egypt for laws proscribing or prescribing specific unions; it appears, as Allam (1977: 89-97; *LÄ*: 1162-63) discusses, to be a private family matter that carried civic and legal obligations. Franke (1983: 343) also comments on the difficulty of determining rules governing marriage, noting that the range of kin covered by the term *sn/t* (brother/sister) means that virtually all collateral relatives fall into this category, thereby obscuring possible clues as to whether there were proscribed or permitted unions.

Incest avoidance: the incest taboo

Various theories have been presented to explain behaviour that avoids, or rules that proscribe, sexual relations between close biological kin.¹³ For the purposes of this section on incest avoidance, incest refers to sexual relationships with first-degree relatives (parent/child/sibling).

In a theory first presented by Westermarck (1891: 320-21), children reared together from an early age express sexual indifference leading to mutual sexual aversion (also likely to

¹² For a study on *bwt* in body in life and after death, with particular reference to Old and Middle Kingdom funerary texts, see Frandsen 2002: 141-74.

¹³ (i) Darwin (1876, 1868) propounded that natural selection instinctively favours sexual liaisons outside closely related biological groups to avoid the deleterious effects of inbreeding, while Freud (1919: 1-29) stated that the strength and danger of desire creates prohibitions against mating with close family. See Levi-Strauss (1969 [1949]) for the 'alliance theory': sexual prohibitions amongst close family members require men to find marriage partners outside their immediate family and in return women are exchanged into their group, creating alliances to reinforce kinship systems, reduce conflict and encourage trade.

⁽ⁱⁱ⁾ Alvarez et al. 2015: 474-83, assess the potential impact of inbreeding on the fertility of 30 marriages in the Darwin-Wedgewood dynasty (Charles Darwin was married to his first cousin Emma Wedgewood, and three of his wife's brothers were also married to cousins).

be exhibited between parents and offspring living in close association).¹⁴ Research carried out by Shepher (1983: 59, 1971: 295) on 2,769 married couples in 211 kibbutzim led him to conclude that children reared in a kibbutz developed sexual aversion from close proximity, but his proposals have since been challenged (for example, Shor and Simchai 2012: 1509-13, 2009: 1811-37). Similar testing of the Westermarck effect was conducted in Wolf's (2005: 76-92, 1993: 157-75, 1970: 503-15, 1968: 864-74, 1966: 833-98) extensive research on *sim-pua* (little bride) marriages in Taiwan, in which the future bride for a son is adopted into the family – the female may range from several days to three years of age. Wolf's (1993: 159, 1970: 511-14) survey of demographic records reveals that *sim-pua* marriages were more likely to result in divorce by a factor of 2.5 to 1, and exhibit reduced total fertility of twenty five percent compared to marriages arranged between adult children reared separately.¹⁵ Wolf suggests that females introduced into the household under the age of three develop sexual inhibitions, but at the time of their introduction the males were usually over three years of age, beyond the period in which they would develop sexual aversion. A study of the Westermarck effect by Walter and Buyske (2003: 353-65) focuses on first cousins raised in proximity in Morocco for the first seven years of childhood and their mate choice beyond adolescence. Their results concluded that females showed greater sexual aversion at maturity than males with whom they had co-socialised, possibly indicating that females display increased inbreeding avoidance because they bear greater consequences from inbreeding depression (Walter and Buyske 2003: 363).

Theories related to the Westermarck effect and *sim-pua* marriages have been considered in relation to the sibling and half-sibling marriages recorded in the Roman census returns, with studies noting that although the indifference theory exists in many cases, it is not always valid (for example, Hopkins 1980: 307-09; Middleton 1962: 611; Scheidel 2004: 99-101, 2002: 42-44, 1996a: 330-31; Shaw 1992: 276).¹⁶

Identifying genetic markers for consanguinity in human remains

The recovery of, and accessibility to, uncontaminated DNA that is viable for genetic testing could potentially determine whether the parents of one individual are consanguineously related. However, the availability of retrievable and uncontaminated DNA in mummified and skeletal remains is one of the main obstacles in achieving valid results.¹⁷

DNA typing can currently be used to test documentary evidence that indicates possible consanguinity in family groups; for example, Nakht-Ankh and Khnum-Nakht are two 12th dynasty males from Deir Rifeh cemetery who are now in the Manchester Museum. Their coffin inscriptions indicate that they may have shared the same mother, but an alternative

¹⁴ See Fox 1962: 128-50, for discussion on incest motivations and behaviour.

¹⁵ 'Minor marriages' were common in parts of mainland China until the mid 1940s and in Taiwan until the early 1930s (Wolf 1993: 159).

¹⁶ See Leavitt 2007: 393-419, for further debate on the Westermarck theory, arguing against close proximity as the determining factor of sexual aversion.

¹⁷ Hawass et al. (2010: 638-47) state that genetic fingerprinting allowed the construction of a five-generation pedigree of Tutankhamun's immediate lineage, enabling them to identify consanguineous links. This research, however, has drawn criticism and the reliability of the genetic data has been questioned (for example, see Lorenzen and Willerslev 2010: 2471; Marchant 2011: 404-06).

hypothesis is that they were adopted and a study reported in 2014 did initially confirm the adoption hypothesis (Matheson et al. 2014: 39-47). Following further investigation, the first successful typing in Egyptian mummies for both mitochondrial and Y chromosomal DNA was conducted on Nakht-Ankh and Khnum-Nakht. Using teeth extracted from each mummy, Drousou et al. (2018: 793-97) demonstrated that the brothers belonged to mitochondrial haplotype M1a1 and shared two private SNPs, suggesting a shared maternal relationship; although the Y chromosome sequences were less complete, they displayed sufficient variation to indicate that Nakht-Ankh and Khnum-Nakht had different paternal lineages. While mitochondrial haplotype M1a1 suggests Nakht-Ankh and Khnum-Nakht shared a maternal relationship, other degrees of relationship to each other were possible, such as cousin or uncle-nephew through the matrilineal line. However, the combination of DNA results with inscriptional evidence on their coffins relates them to the female Khnum-Aa as their mother. Drousou et al.'s study achieved its aim to identify consanguineous links between the two brothers; however, further research on their DNA would be needed to establish the viability of determining possible consanguineal links between the two fathers and the shared mother of Nakht-Ankh and Khnum-Nakht (without requiring the bodies of the parents themselves).

Although DNA studies on ancient Egyptian human remains are currently limited, for reasons described above, it is technically possible to find genetic markers of clinical consanguinity between individuals whose union produces offspring. In 2014 a complete genome sequence was determined from a finger phalanx found in the Denisova Cave in the Altai Mountains of Siberia, belonging to a Neanderthal woman thought to be at least 50,000 years old (Prüfer et al. 2014: 43-49). The DNA typing established that her parents had an inbreeding coefficient of 0.125 which suggests that they may have been half-siblings with a common mother, or possibly uncle/niece, aunt/nephew, grandfather/granddaughter or grandmother/grandson (Prüfer et al. 2014: 45, see also table 1.2, page 00). Further texts conducted by the study determined that close mating was common amongst this female's recent ancestors.

In the context of DNA testing in modern populations and reporting requirements, McGuire et al. (2012: 1040-46) discuss methods to determine consanguineal ties between the parents of children with congenital anomalies, including intellectual and developmental disorders. They report that analysis of parental samples is not required to identify consanguineously related parents. When parts of chromosome pairs are the same as each other (one copy of each pair of chromosomes is inherited from the father and the other copy from the mother) there are two possibilities:

If only one chromosome is involved, then the cause could either be uniparental isodisomy (meaning the child inherited two identical copies of a chromosome from one parent and no copy of the same chromosome from the other parent), or distant consanguinity... If multiple chromosomes are involved, then the parents must be blood relatives of one another.

McGuire et al. *Identifying consanguinity through routine genomic analysis: reporting requirements*, 2012: 1040-41.

While the quality of modern DNA samples allows for genomic sequencing, as did the specific environmental conditions in the Denisova Cave in Siberia, with advances in DNA retrieval it may be possible in future to determine levels of clinical consanguinity within ancient Egyptian families and communities.

Methodology and structure

An overarching theme in this research is the difficulty in securing firm evidence for consanguineous marriage beyond the Roman Egyptian census returns. This is further compounded by the fragmentary nature of the sources and their extensive historical spread. Allam (LÄ: 1164) believes that examination of available documents inevitably gives the impression that marriage among blood relatives was not uncommon. Franke (1983: 342-43), however, is more cautious in his conclusions, noting the lack of secure evidence for consanguineous marriage and the difficulties presented by the complicated system of kinship in determining whether certain types of kin marriages were preferred or not (with specific reference to the Middle Kingdom). In response to this, Eyre (1992: 218 and n.68) proposes that the scarcity of evidence for ‘marked exogamous practice’, the use of kinship terminology for affinal relatives and application of the term ‘sister’ for ‘wife’ (from the 18th dynasty), and the bilateral pattern of inheritance, suggest that pharaonic Egypt ‘was every bit as endogamous as mediaeval and early-modern Egypt’.

The first step in this book’s research process was to identify reported consanguineous marriages in select sources, including legal, administrative and personal documents, inscriptional evidence in funerary contexts, and sources drawn from family archives. The available evidence dictated the direction of subsequent research. I chose the Ptolemaic town of Pathyris and Ramesside Deir el-Medina not only because evidence indicated consanguineous marriage in their communities, but also because additional evidence from papyri and ostraca allowed an investigation of economic transactions and their associated networks and, for Deir el-Medina in particular, evidence of personal interactions that illustrated trust, trustworthiness and conflict.

After assessing and listing select sources for consanguineous marriages, the research develops in three stages, each accompanied by a relevant case study and the resulting discussion is informed, where appropriate, by studies on modern consanguineous marriage drawn from disciplines outside Egyptology, including demography, economics, anthropology and pathology. These studies are used to gain insight into the issues under review and introduce theoretical possibilities; the limitations of their application are addressed individually in each case study.

The first stage of the research evaluates laws and customary practice related to inheritance and gifts given at marriage in ancient Egypt, and for comparative purposes in the neighbouring regions of Greece, Rome and Mesopotamia, on the premise that partible inheritance may be one of the factors that encourages consanguineous marriage. I have used a bilingual family archive from Ptolemaic Pathyris as a case study in this first section as it not only allows an evaluation of amounts agreed in demotic marriage settlements between known consanguineous (at the level of first cousins) and non-consanguineous

relatives, but also allows an evaluation of preferences within consanguineous families to conduct economic transactions between each other. The discussion on the timing and amount given at marriage and in inheritance is informed by demographic and economic studies on modern consanguineous marriage.

The second section uses prosopographic research from Deir el-Medina to analyse interrelationships of marriage and affinity between couples thought to have married consanguineously. Occupations of males within consanguineous families are explored to examine whether status and wealth may have been consolidated within these families. Numbers of offspring are also calculated (as far as is possible given the extant sources) to assess whether consanguineous families may have had more or less offspring than families not known to be consanguineous. Once the scope of probable networks of interrelated families has been established, this section examines the participation of consanguineous families in known economic activities within the village, such as gift-giving, ‘open credit’, and barter, on the premise that families related consanguineously are more likely to behave altruistically towards each other, or with reduced expectations of reciprocity. The resulting discussion is informed by studies in anthropology and experimental economics.

The third and final research section uses clinical studies on current biological outcomes of consanguinity to establish the most frequently reported congenital outcomes of consanguineous marriage. Using these results, I surveyed congenital outcomes reported in palaeopathological studies of ancient Egyptian human remains to determine if any of the congenital anomalies identified in the ancient record are amongst those most frequently reported in modern clinical studies. Allowing for the rarity of congenital anomalies in skeletal or mummified remains (for reasons detailed in chapter five), cleft lip and palate, and cleft palate, were identified as case studies from ancient Egypt.

Intellectual and developmental disorders (IDD) are also reported at increased frequency amongst the offspring of consanguineous marriage, however, conditions included in this category and their interpretation is debatable in a modern context, and cannot be applied as a blanket term in ancient Egypt (or in other ancient societies). I have, however, used definitions of conceptual, social and practical skills classified under IDD to investigate limitations that may have been placed on an individual’s functioning and adaptive abilities. A bioarchaeology of care methodology has been applied to determine what inputs of care, if any, might be needed or given by families and/or communities, and to question whether families related consanguineously had the resources and support networks to meet any increased requirements of caring.

In this work I am not arguing for consanguineous marriage to be the consistent marriage of choice within some families or communities, or for it to have an unbroken historical continuity as a culturally preferred practice; nor am I suggesting that powerful clans were created through non-royal consanguineous marriage to create a ‘republic of cousins’ whose interests and influence overrode those of the state (see Tillion 1983), although at different social levels influential interrelated families did exist. I argue that at certain times and under certain conditions – occupational, medical, political and environmental – consanguineous marriage was a preferred choice by some families, and within some communities, for its economic outcomes and social support networks.