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Leah Rebecca Neiman March 15, 2018

It is a Child for Her: Medical and Magical Treatments of Reproduction in the Middle Kingdom of Egypt

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Abstract

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Reproduction is of great concern to all societies, however, the way in which each addresses the issue, and manages its inherent anxieties and risks is unique. The physical and emotional reproductive experiences of women in ancient Egypt were greatly prescribed by their culture, and specifically their religion. Treatments of reproduction can be split into two collaborative modalities: medical and magical. This study explores how both modalities contributed to the female reproductive experience during the Middle Kingdom (c. 2050-1750 BCE) through a textual analysis of the Kahun Medical Papyrus (c. 1850 BCE) and contemporary material culture from the archaeological record. The Kahun Medical Papyrus is both the earliest known medical treatise and solely concerned with women's medicine. Through the description of 34 medical cases it provides a wealth of information on medical perceptions of the female body. Here, five of those cases regarding diagnosis of conception are retranslated with a close analysis of the grammar and diction to arrive at a clearer understanding of the physical experience of pregnancy during the Middle Kingdom. The emotional and spiritual components of reproduction are elucidated by magically potent objects such as birthing wands and decorated birth bricks. A cohesive analysis of both modalities produces an image of a deeply spiritual reproductive experience, defined by pleas for divine intervention, and in which medicine plays a purely diagnostic, not curative, role.

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INTRODUCTION

In contrast to the numerous texts that survive from the Greek medical tradition focusing on women's health, evidence of ancient Egyptian gynecological practices is sparse and scattered. One exception to this is the Kahun Medical Papyrus, the oldest known medical treatise, and the only one devoted solely to women's medicine surviving from the ancient Egyptian world. The papyrus offers a wealth of information, despite its fragmentary nature, and warrants close study and analysis. Yet, there exist only two published English translations of the Kahun Medical Papyrus.[1] Whereas Soranus, writing in the first century C.E., dedicates eleven sections of his first book to a medical discussion of contraception, contraception, and abortion, only one fragmentary case survives from ancient Egypt: *ṯm… ḥs msḥ wgp ḥr ḥsꜣ ʿwyt tḫb….* (For preventing [denying the existence of]...excrement of a crocodile, which is crushed upon a *HsA* [pellet] and *awyt*-liquid, moisten...)[2]. The diagnosis of pregnancy is better attested in the archaeological record, including five mostly complete cases from the Kahun Medical papyrus. The creation of such document during the Middle Kingdom (c. 2050-1750 BCE), demonstrates the ancient Egyptian preoccupation with reproduction.

The connection between agricultural production and human fertility was prominent in ancient Egypt. The annual inundation of the Nile deposited fertile silt along its banks, allowing for agricultural productivity. In ancient Egyptian conception thought, this process of depositing reproductive material was analogous to human reproduction, in which males produce semen and

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[1] Francis Llewellyn Griffith and William Matthew Flinders Petrie, *The Petrie Papyri: Hieratic Papyri from Kahun and Gurob (Principally of the Middle Kingdom)*, vol. 1 (B. Quaritch, 1898); Stephen Quirke, "Manuscript for the Health of Mother and Child: "The 'Kahun Medical Papyrus' or 'Gynaecological Papyrus' (Translation by Stephen Quirke)," University College London, http://www.ucl.ac.uk/museums-static/digitalegypt/med/birthpapyrus.html (2002).
[2] Kahun Medical Papyrus, Column 3, line 6.

deposit it into the woman. The Egyptians were also keenly observant of the flow of blood from women's bodies during menstruation and its connections with the ability to reproduce, as evidenced extensively in the Kahun Medical Papyrus, as well as later medical papyri, discussed below. The Kahun Medical Papyrus speaks to the medical experience of women during the Middle Kingdom, and especially elucidates the physical experiences of pregnancy and perspectives on conception in the cases which address diagnosing pregnancy. Previously, this medical text and material culture evidence concerning reproduction have been treated separated in scholarship. Integration and analysis of these two essential components provides a much clearer understanding of the female experience of reproduction from conception to birth in ancient Egypt and contemporary conceptions of the process.

There is an established interest in ancient Egyptian medicine in scholarship. Scholars such as J. F. Nunn and J. Worth Estes have discussed the broad principles and practices of ancient Egyptian Medicine and the state of evidence concerning it.[3] Both of these authors also devote a lot of attention to medical practitioners, a topic that was also explored at length in the 1983 monograph *The Physicians of Pharaonic Egypt*, by P. Ghalioungui.[4] R. Ritner has commented on the state of scholarship on ancient Egyptian medicine as recently as 2000, critiquing the custom of treating it as a stagnant, rather than evolving, tradition.[5] J. P. Allen published the catalog from an exhibition at the Metropolitan Museum of Art on the art of

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[3] John F. Nunn, *Ancient Egyptian Medicine* (London: British Museum Press, 1996). J Worth Estes, *The Medical Skills of Ancient Egypt* (Massachusetts: Watson Publishing International, 1993).

[4] Paul Ghalioungui, *The Physicians of Pharaonic Egypt*, vol. 10 (Al-Ahram Center for Scientific Translations, 1983).

[5] Robert K. Ritner, "Innovations and Adaptations in Ancient Egyptian Medicine," *Journal of Near Eastern Studies* 59, no. 2 (2000).

medicine in ancient Egypt, in which he includes a translation of the Edwin Smith Papyrus, the most complete surviving medical papyrus.[6]

Many scholars have also taken an interest specifically in the gynecological perspectives in ancient Egyptian medicine, however none have attempted to connect it with the embodied experience of female patients. Most of these studies draw primarily from information in the text of the Kahun Medical Papyrus, in addition to isolated spells from other medical papyri.[7] Dr. Eric Jauniaux wrote "An Introduction to Reproduction in Pharaonic Egypt" for the modern medical community,[8] while the clinical aspect of ancient Egyptian gynecology has been examined through experimental approaches, as, for example, in a 1963 study testing ancient Egyptian methods of predicting fetal sex.[9] Although these studies all focus on the medical skill and merits, and they contain little, if any, discussion of the patient's experience. Perhaps one exception would be Paul Frandsen's study of the social taboos associated with menstruation through

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[6] James P. Allen, *The Art of Medicine in Ancient Egypt* (Metropolitan Museum of Art, 2005).
[7] John M. Stevens, "Gynaecology from Ancient Egypt: The Papyrus Kahun: A Translation of the Oldest Treatise on Gynaecology That Has Survived from the Ancient World," *The Medical Journal of Australia* 2, no. 25-26 (1975); Lesley Smith, "The Kahun Gynaecological Papyrus: Ancient Egyptian Medicine," *Journal of Family Planning and Reproductive Health Care* 37, no. 1 (2011); Carole Reeves, "Wandering Wombs and Wicked Water
the 'Gynaecological' Papyrus," in *Petrie Museum of Egyptian Archaeology*, Characters and Collections (UCL Press, 2015); Ronit Haimov-Kochman, Yael Sciaky-Tamir, and Arye Hurwitz, "Reproduction Concepts and Practices in Ancient Egypt Mirrored by Modern Medicine," *European Journal of Obstetrics & Gynecology and Reproductive Biology* 123, no. 1 (2005). Gregg S. Nelson and J. Szekrenyes, "Ancient Egyptian Obstetrics and Gynecology," in *The Proceeding of the 10th Annual History of Medicine Days* (Calgary: 2001).
[8] Eric Jauniaux, "An Introduction to Reproduction in Pharaonic Egypt," *Reproductive biomedicine online* 2, no. 2 (2001).
[9] Paul Ghalioungui, SH Khalil, and AR Ammar, "On an Ancient Egyptian Method of Diagnosing Pregnancy and Determining Foetal Sex," *Medical history* 7, no. 3 (1963). Janesh K. Gupta, Eileen M. Brayshaw, and Richard J. Lilford, "An Experiment of Squatting Birth," *European Journal of Obstetrics & Gynecology and Reproductive Biology* 30, no. 3 (1989).

evidence from the New Kingdom workmen's town of Deir el-Medina.[10] His research is particularly interesting in its focus on the lived experiences of both men and women dealing with the monthly disruptions menstruation brings to their normal routines.

In this study, I focus on the Middle Kingdom (2040 – 1650 B.C.E.). Many books have been written on women in ancient Egypt, where authors tend to take a cultural approach that range widely over different aspects of life. There are fewer publications that delve deeply into one aspect, such as the medical experience of female patients. Gay Robins provides an in-depth exploration into the multi-faceted lives of women her 1993 book, *Women in Ancient Egypt.*[11] She takes a diachronic approach, synthesizing evidence from many time periods to stitch together a general outline nonspecific to any point in Egyptian history. Emily Teeter compares human and divine maternity in her paper, "Earthly and Divine Mothers in Ancient Egypt."[12] Quirke's 2007 article "Women of Lahun" in *Archaeology and Women: Ancient and Modern Issues*, provides a brief description of evidence from the Middle Kingdom town and its insights into the lives of women there.[13] Kasia Szpakowska's book *Daily Life in Ancient Egypt: Recreating Lahun*, discusses the evidence for various aspects of life in the Middle Kingdom workmen's town, and in which she introduces each chapter with a quotation from a fictional Egyptian woman.[14] These

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[10] Paul John Frandsen, "The Menstrual "Taboo" in Ancient Egypt," *Journal of Near Eastern Studies* 66, no. 2 (2007).
[11] R. Gay Robins, *Women in Ancient Egypt* (Harvard University Press, 1993). See also: Elizabeth Theresia Koen, "Women in Ancient Egypt: The Religious Experiences of the Non-Royal Woman" (University of Stellenbosch, 2008).
[12] Emily Teeter, "Earthly and Divine Mothers in Ancient Egypt," in *Motherhood in Antiquity* (Springer, 2017).
[13] Stephen Quirke, "Women of Lahun (Egypt 1800 BC)," *Archaeology and Women: Ancient and Modern Issues* (2007).
[14] Kasia Maria Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun* (Wiley-Blackwell, 2008).

sources draw on both textual and material evidence to knit together a more complete image of daily life, similar to the approach I take here.

The material evidence related to fertility has also been well studied. Magical birthing wands are well known in the archaeological record and compiled in a mammoth compendium by Quirke.[15] Fred Vink also wrote significantly on the magical properties of the birthing wands.[16] In addition, the scholarship on magical bricks is relatively extensive.[17] These bricks are frequently found in tombs, but are clear allusions to bricks used in childbirth. Scholars such as Ann Macy Roth and Catharine Roehrig have provided a comprehensive discussion of the connection between mudbricks found in tombs and birthing bricks[18]. Particularly relevant to this study, is the Middle Kingdom birthing brick found at Abydos, together with Josef Wegner's discussion of the associated iconography. The brick was found in a domestic setting and preserves magically potent imagery on five sides.[19] Amulets are also a rich source of fertility and apotropaic imagery, e.g. a uterine amulet at the Oriental Institute intended to prevent miscarriage, discussed by

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[15] Stephen Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC* (London: Golden House Publications, 2016).
[16] Fred Vink, "The Principles of Apotropaic Magic on Middle Kingdom Wands," *Ancient Egypt* (2017); "Boundaries of Protection. Function and Significance of the Framing (Lines) on Middle Kingdom Apotropaia, in Particular Magic Wands," in *The World of Middle Kingdom Egypt (2000-1550 BC)*, ed. Gianluca; Grajetzki Miniaci, Wolfram (London: Golden House, 2016).
[17] David P Silverman, "Magical Bricks of Hunuro," *Studies in Honor of William Kelly Simpson (Boston, 1996), II* (1996); Foy Scalf, "Magical Bricks in the Oriental Institute Museum of the University of Chicago," *Studien zur altägyptischen Kultur* (2009); M Heerma van Voss, "An Egyptian Magical Brick," *a JEOL VI/18* (1964); J Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom," in *Archaism and Innovation. Studies in the Culture of Middle Kingdom Egypt*, ed. David P; Simpson Silverman, William Kelly; Wegner, Josef (Charleston, Massachusetts: Sawyer Printers, 2009).
[18] Roth, Ann Macy, and Catharine H Roehrig. "Magical Bricks and the Bricks of Birth." *The Journal of Egyptian Archaeology* 88, no. 1 (2002): 121-39.
[19] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom."

Robert Ritner.[20] However, there is no comprehensive study that I have found examining all of these objects, along with others, as a cohesive corpus of reproductive artifacts, and their cooperative functions in antiquity. Additionally, the study of magic and medicine has traditionally been separated in the field of Egyptology.

A thorough examination of the process of reproduction from before conception until the birth of the child is noticeably absent in the literature. While discussions of how iconography connects to the greater cosmology, and the principles guiding medical practices are undoubtedly important, they fail to recognize the real impact that the ideas would have had on an individual. When textual and material evidence of medicinal and magical practices are integrated the result is a much better understanding of the female experience of reproduction during Middle Kingdom Egypt which suggests that medicine and magic did not exist independently but worked together cooperatively within a larger religious framework.

Too often the voices of women are lost to time as they are poorly preserved in the archaeological record. Thus, the instances in which their lives can be read and interpreted are all the more valuable. In the case of the physical experience of women in ancient Egypt, the textual evidence has been especially marginalized. One clear this dismissal is clearly demonstrated through a discussion of the Kahun Medical Papyrus as "disappointing to the medical reader. It contains very little which relates to present concepts of gynaecology, and nothing at all about obstetrics."[21] This statement is not only dismissive of the text's medical merits and the value in ancient perspectives of the female body, but also fails to recognize the immense insight it provides into the female experience during the Middle Kingdom. The disregard for the Kahun

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[20] Robert K Ritner, "A Uterine Amulet in the Oriental Institute Collection," *Journal of Near Eastern Studies* 43, no. 3 (1984).
[21] Nunn, *Ancient Egyptian Medicine*, 35.

Medical Papyrus is also evident in the dearth of annotated translations. The text has only been translated into English two times since is discovery in 1889, with some of the terms left incompletely deciphered. These translations also fail to explain the grammatical reasoning and lack analysis of the diction; I will demonstrate that the text cannot be fully understood in its societal context without a close examination of both.

A focus on the individual's experience is appropriate for a study in the Middle Kingdom, during which a religious trend began towards what Jan Assmann describes as "a new and more personal conception of deity, of gods intervening in life and history, manifesting a personal will, intention and purpose."[22] The Middle Kingdom was a "period of deep disquiet and reorientation in religious consciousness" following the politically unstable First Intermediate Period and set the foundations for new emphases of religious thought in New Kingdom.[23] A trend that carried on into the New Kingdom, and is apparent in parallel iconography, e.g. the motif of Hathor as a cow nursing the ruler in tomb reliefs.[24] Assmann is careful to distinguish it as an "undercurrent" the Middle Kingdom, not fully realized until the New Kingdom, though it manifests in many places, including the Tale of the Birth of the Divine Triplets in the Westcar Papyrus (Tale). In the Tale "Re does not install the institution of kingship, but individual kings,"[25] which is a more intimate involvement with human affairs. The birthing scene on the birthing brick from Abydos visually represents divine interaction as the women take on the identity of Hathor during the

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[22] Jan Assmann, "State and Religion in the New Kingdom," *Religion and Philosophy in Ancient Egypt, Yale Egyptological Studies* 3 (1989): 69.
[23] Roberts, *Hathor Rising: The Serpent Power of Ancient Egypt*, 73, 128.
[24] Alison M Roberts, *Hathor Rising: The Serpent Power of Ancient Egypt* (Great Britain: Northgate Publishers, 1995), 44-45.
[25] Assmann, "State and Religion in the New Kingdom," 69-71.

process of childbirth.[26] This connection and continuity in religious thought supports the use of spells and iconography from the New Kingdom as analogies for holes in the archaeological record of the Middle Kingdom.

There are two modalities of treatments that I will examine here: medical and magical. For the purposes of this study I will define medical as that which physically intervenes with the body in an effort to alter its state or alleviate symptoms through earthly means. The boundaries of these two modalities can be blurred at certain moments. For example, birthing bricks perform a magical function through their imagery and connection with the goddess Meskhenet, however they are also a physical support to women in labor. Thus they have a foot in the medical realm, not necessarily as a treatment, but as a form of medical equipment. The conception of medical treatment is fairly well clarified in modern western thought, however, the definition of magic is more abstract, and fluid between cultures. Before considering the functions of magical objects, one must first arrive at an understanding of the notion of magic as it figured in ancient Egyptian culture.[27]

Magic was functional religion in ancient Egypt, a tool through which religious beliefs could be used to affect action in the mundane world. It was the "pursuit of technical and utilitarian ends"[28] within the framework of religious beliefs. Much of the theoretical discussion

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[26] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom." 456-58.

[27] For a discussion of how the conception of magic differs between ancient Mediterranean cultures see: Kimberly B. Stratton, "Magic Discourse in the Ancient World," in *Defining Magic: A Reader*, ed. Bernd-Christian; Stausberg Otto, Michael (Abingdon, New York: Routledge, 2014). For a general discussion of the definition of magic see: Marcel Mauss, Translated by Robert Brian, *A General Theory of Magic* (London, Boston: Routledge and K. Paul, 1972 [1950]).

[28] Emile Durkheim, Translated by Karen E. Fields, "Definition of Religious Phenomena and of Religion," *The Elementary Forms of Religious Life* (New York: Simon & Schuster, 1995 [1912]), http://girardianlectionary.net/res/durkheim_1-iv.htm.

of magic from the 19th and 20th centuries treats magic as illicit, and at points even criminal. Magic was viewed as antagonistic to religion, as it can draw upon established religious powers, and "takes a kind of pleasure in profaning holy things."[29] This ideology is evident in Mauss' description of the practice of magic:

> "Magical rites are commonly performed in woods, far away from dwelling places, at night or in shadowy corners, in secret recesses of a house or at any rate in some out-of-the-way place. Where religious rites are performed openly, in full public view, magical rites are carried out in secret."[30]

The view of magic in opposition to religion is not applicable to the ancient Egyptian world, in which magic was a very legitimate extension of religious practices.[31] Durkheim views religion as reflection of a society's "collective needs,"[32] expressed through "beliefs and practices which unite [the society] into one single moral community."[33] That is to say, a religion's recurrent themes illuminate that which is of most concern to the people adhering to it. The abundance of fertility motifs, both as they pertains to the Nile and the female body, in ancient Egyptian religion reflects the cultural anxiety concerning it. The abundance of magical spells and objects that survive in the archaeological record demonstrate the functionality of magic in addressing religious concerns. The notion of magic as a sequestered practice in the writing of Durkheim, Mauss, and Hubert, is reflected in the focus of ancient Egyptian magic on the individual. Ancient

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[29]Ibid. Belier identifies this dichotomy in Henri Hubert's work, commented that "magic is placed in a marginal position by society, [while] religion is founded in society." Wouter W. Belier, "Religion and Magic: Durkheim and the Année Sociologique Group," *Method & Theory in the Study of Religion* 7, no. 2 (1995): 166.
[30] Mauss, *A General Theory of Magic*, 23.
[31] E. A. Wallis Budge, *Egyptian Magic*, 1st Carol Pub. Group edition. ed. (New York: Carol Pub. Group, 1991), vii.
[32] Belier, "Religion and Magic: Durkheim and the Année Sociologique Group," 166. Citing Durkeim, Emile, "Les études de science sociale," *Revue philosophique,* 22 (1886): 67, 68.
[33] Durkheim, "Definition of Religious Phenomena and of Religion."

Egyptian spells, a few of which are provided in Part III, speak from the perspective of a singular individual and are focused on helping a singular recipient. Thus, while religious rites are practiced collectively, magic is collectively used by individuals, in particular, individuals who need not attain a certain social status to utilize them.[34]

Magic is manipulative, it aims to coerce the real world into specific outcomes.[35] In the context of this study, those outcomes are successful birth, quick delivery, the health of the mother and child. The use of iconography is especially important to the practice of ancient Egyptian magic. As discussed later, the depiction of deities and other powers, serve not only as representations but manifestations of those forces. Mauss comments on the distinction between arts and crafts and magic; while the products of technical skills achieve a result "through the co-ordination of action, tool and physical agent, a magically imbued object must have a "special kind" of another nature entirely.[36] Ancient Egyptian reproductive magic utilized objects that combine both the mechanical purpose of craft and high order of effectiveness of magic: magic wands draw physical boundaries in the sand and portray processions of apotropaic deities, amulets in form of fertility deities make contact with the woman and serve as foci of divine power in spells,[37] a birthing brick from Abydos both supported a woman in labor and displays a visual spell for a successful delivery.[38] Thus, we arrive at the understanding of ancient Egyptian magic as a tool of religion.

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[34] Durkheim comments on the use of magical rituals by a "broad strata" of the population. Ibid.
[35] Mauss and Hubert claim "the most important aspect of magic is the notion of force." Belier, "Religion and Magic: Durkheim and the Année Sociologique Group," 176.
[36] Mauss, *A General Theory of Magic*, 20.
[37] J. F. Borghouts, *Ancient Egyptian Magical Texts*, ed. M. S. H. G.; Hoens Herma van Voss, D.J.; Knappert, J.; Kramers, R. P.; van Proosdij, B. A.; Waardenburg, J. D. J., Relgious Texts Translation Series Nisaba (Leiden: E. J. Brill, 1978), 39.
[38] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom."

A woman could use magic in the effort to ensure her own safety and that of her child, by drawing on the power of deities with well-established protective and reproductive functions according her culture's collective religious beliefs. The entire reproductive process was framed by religious sentiments, as her efforts to conceive would have hinged largely on divine pleas. She could rely on a medical test to determine whether those pleas had been successful. Thus, an Egyptian woman from the Middle Kingdom would have been well-acquainted with both the medical and magical aspects of pregnancy as key tools in her mission to reproduce.

PART I: CONTEXT

Setting

The social context in which texts are written becomes an integral part of the text itself. Therefore, an understanding of the environment in which the Kahun Medical Papyrus, considered below, is essential to its study. The reunification of Upper and Lower Egypt in c.2025 BCE after the first intermediate period, under the reign of Mentuhotep II, marked the start of the Middle Kingdom of Egypt, as well as the inception of the 11th Dynasty.[39] Amenemhat I (r.1991-1962 BCE), the first king of the twelfth dynasty, returned to the tradition of tomb construction for the royal tomb,[40] a decision that would have demonstrated a command over all the resources necessary to build monumental architecture, something only possible in times of peace. Thus, return to pyramid construction indicated the return of order and an end to the civil war, the two halves of Egypt reunited under one rule once more. Dubbed Egypt's golden age of literature, the Middle Kingdom produced for a proliferation of texts, including the epic, "The Tale of Sinuhe,"[41] and treatises on medicine, mathematics, and literature.[42] Sir William Matthew Flinders Petrie recovered some of these texts, recorded on papyrus, in his 1889 excavations at Medinet el Fayyum.

The rule of the 12th Dynasty was characterized by major economic investment in agricultural growth and infrastructure.[43] Senusret II, the fourth king of the twelfth dynasty, and

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[39] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 4.
[40] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahu*n, 4-5.
[41] William C. Hayes, "The Middle Kingdom in Egypt: Internal History from the Rise of the Heracleopolitans to the Death of Ammenemes Iii," in *The Cambridge Ancient History*, ed. C. J. Gadd, I. E. S. Edwards, and N. G. L. Hammond, The Cambridge Ancient History (Cambridge: Cambridge University Press, 1971), 523.
[42] William Matthew Flinders Petrie, *Illahun, Kahun and Gurob, 1888-90* (D. Nutt, 1891), 48-9.
[43] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 5.

Amenemhat I's great-grandson, devoted a particularly large amount of energy to developing the arid Fayum into an agricultural powerhouse, digging canals and irrigating the land. He was so dedicated to this region that he chose to construct his pyramid complex there, which necessitated the founding of a town to house the workers and their families. Thus, he founded *Hetep Senusret*, "Senusret is satisfied" – known today as Lahun.[44] Senusret's decision to break from tradition, i.e. building in Memphis, to build his pyramid complex in the Fayum highlights not only to his commitment to the area but also the geographical benefits of the locale. Lahun sat along the *Bahr Yussef,* known as *mr-wr* in antiquity, a natural canal that splits from the Nile near Amarna in Upper Egypt and creates Lake Fayum in a natural depression (Figure 1). The town was also not far from the banks of the Nile, the sustaining power of ancient Egypt. By placing Lahun close to both bodies of water, Senusret set himself to be able to control the movement, and therefore trade, along both the Nile and *Bahr Yussef* via Lahun. Additionally, Lahun was midway between irrigation connection for the Fayum and *ỉtꜣ twꜣy* ("[Amenemhat is] he who takes possession of the Two Lands"), the capital during the twelfth dynasty, founded by Amenemhat I.[45]

[44] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 5.
[45] Marc Van de Mieroop, *A History of Ancient Egypt*, vol. 2 (John Wiley & Sons, 2010), 101.

Figure 1. Map of Egypt. Szpakowksa 2008: courtesy of JJ Shirley: Figure 1.1.[46]

Lahun was a thoroughly planned city, laid out according to social status and wealth. A wall separated the Western and Eastern quarters, the former of which was a neighborhood of small to medium sized mudbrick homes and latter is defined by palatial estates, situated advantageously along the north edge to take advantage of passing breezes.[47] Despite being a vibrant center, Lahun was abruptly abandoned during the thirteenth Dynasty[48] – leaving many objects used in daily life untouched in their homes until Lahun was excavated in 1889. The reason for the seemingly sudden evacuation is unclear as the Middle Kingdom ended rather gradually and without much blood shed; the *Heqau-khasut* (now called Hyskos) lived alongside Egyptians for over a century, slowly gaining power, and eventually taking control of Lower Egypt.[49] However, there are no later occupation layers above the Middle Kingdom deposits at Lahun.[50] Whatever the cause, royal funding certainly must have ceased.

[46] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, fig. 1.1.
[47] Marc Van de Mieroop, *A History of Ancient Egypt*, 101.
[48] Van de Mieroop, *A History of Ancient Egypt*, 2, 105.
[49] Van de Mieroop, *A History of Ancient Egypt*, 126.
[50] Van de Mieroop, *A History of Ancient Egypt*, 105.

The Text

The Kahun Medical Papyrus was found fragmented along with the pieces of many other documents at Medinet el Fayum, approximately 60 miles south of Modern-day Cairo[51] and ~19 miles northwest of Lahun. The excavation was led by Sir William Matthew Flinders Petrie, who called the site Kahun, a corruption of the town's true modern name.[52] This misnomer, while no longer used in most scholarship, has remained eponymous for the medical papyrus, excavated by Petrie in 1889. Petrie and Francis Llewlyn Griffith reconstructed the papyrus, revealing three columns of hieratic script, forming the oldest known treatise on women's health issues.[53] The text, which contains large lacunae, even in its reconstructed state, is comprised of 34 spells addressing menstruation issues, conception, contraception, and other ailments believed to result from problems with the womb. The use of papyrus is indicative of the value of the text. The production of papyrus was costly and time consuming.[54] As such, it was generally reserved for religious texts and secular uses of great importance, while ostraca and wood could be used for more mundane and daily purposes at lower expense.[55] Thus, the contents of the text must have

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[51] Stevens, "Gynaecology from Ancient Egypt: The Papyrus Kahun: A Translation of the Oldest Treatise on Gynaecology That Has Survived from the Ancient World."

[52] "When I first discovered the town in 1887, I asked an old man whom I met, what the name of it was, and he replied at once 'Kahun,' and so it has been since called." William Matthew Flinders Petrie, Guy Brunton, and Margaret Alice Murray, *Lahun Ii* (British School of Archaeology in Egypt, 1923), 1.

[53] A recent (2017) discovery of a 4,000-year-old cuneiform tablet in Kültepe, Turkey records a diagnosis of infertility a few centuries earlier than the Kahun Medical Papyrus. The tablet also includes the solution to hire a female slave as a surrogate if a couple was unable to conceive after two years of marriage. Interestingly, this differs from the Kahun Medical Papyrus, which provides no solutions for infertility, only methods to diagnosis it. "First Infertility Diagnosis Made 4,000 Years Ago Discovered in Cuneiform Tablet in Turkey," *Daily Sabah*, November 9, 2017 2017.

[54] For outline of production process see A. Rosalie David, *Handbook to Life in Ancient Egypt* (New York: New York : Facts on File, 1998), 200.

[55] David, *A Handbook to Life in Ancient Egypt*, 200.

been very valuable to the owner to make them worth recording on papyrus. The back of the papyrus bears the date "the 29th year of the reign of Amenemhat (III)" – presumably contemporary with the use of the text – translates to approximately the year 1825 BCE.[56]

The presence of this medical text leads to three inferences about the town of Lahun. First, both scribal education and physician (*swnw*) training systems were in place concurrently. As Szpakowska points out, the vast majority of the population was illiterate,[57] however the *swnw* must have known how to read as well as the necessary contextual knowledge to interpret the spells, indicating that they had received both forms of schooling. This follows the trend towards centralized education in the Middle Kingdom.[58] Likely both were housed in the temple, as scribal school was known to be taught there, and the *Per Ankh* (house of life) was the temple structure in which the medical texts were likely written and consulted by *swnw* in Ptolemaic Egypt.[59] Additionally, the title *sš swnw*, scribe physician,[60] held by some *swnw* indicates their literacy.

Second, these systems – and the temples they were likely based in – would have required financial support from the state and investment in infrastructure. Thus, the texts indicate governmental support of the town. This further supports notion that Senusret II was invested in

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[56] Smith, "The Kahun Gynaecological Papyrus: Ancient Egyptian Medicine," 54.
[57] Literacy rates in antiquity are difficult to calculate, and the term "literate," itself, can encompass a range of facilities with language. Scribal positions were not restricted to certain social classes, and could even be a mechanism of upward social mobility. For non-royal children, boys began schooling around the age of four, and girls most often never received a formal education. Boys intended for scribal or civil service positions were sent to temples or administrative centers to learn to read and write. Women could hold a number of positions outside the home, but the vast majority did not require literacy, with the exception of vizier and scribe, which are attested titles for women in the Old Kingdom and decrease during the Middle Kingdom. How women learned to read remains uncertain, it does not seem to have been in an institutionalized setting. Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 11, 102-10. Robins, *Women in Ancient Egypt*, 111-14. David, *Handbook to Life in Ancient Egypt*, 205-6.
[58] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 5.
[59] Estes, *The Medical Skills of Ancient Egypt*, 19; Nunn, *Ancient Egyptian Medicine*, 131.
[60] Ghalioungui, *The Physicians of Pharaonic Egypt*, 10, 8.

the success of the town. Third, though Senusret founded Lahun to house workmen for his pyramid, the Kahun Medical Papyrus has nothing to do with the workmen and everything to do with their female relations. Lahun was not only populated by workmen, but also by priests, officials, craftsmen, soldiers, weavers, cooks – people from every walk of life that could be found in a Middle Kingdom city[61] – and medicine would have impacted them all.[62] Thus, medicine was without gender or class exclusions – at least relatively to other practices, such as education – and was essential to the functioning of the city.

Griffith published the first translation of the papyrus in 1898 in *The Petrie papyri; hieratic papyri from Kahun and Gurob*. Most recently Stephen Quirke retranslated the text in 2002, which is digitally available online on a website hosted by the University College London, which also houses the original papyrus. Other medical texts known to address women's health issues include the Ebers Papyrus, Berlin Papyrus, Carlsburg Papyrus, and the Edwin Smith Papyrus. Though all of these post-date the Kahun Medical Papyrus by a few hundred years, many include parallel cases to those found in the Kahun Medical Papyrus, and will be discussed later. Following is a case from the verso of the Edwin Smith Papyrus to treat irregularity in a woman's menstrual cycle.

> Edwin Smith Papyrus, Prescription 1, Verso 3.13-15
>
> If you examine a woman suffering in her stomach and for whom nothing comes as menstruation, and you find something in the upper side of her navel, then you say about her: "It is a blockage of blood at her womb."[63]

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[61] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 8.

[62] Lahun can be compared with the workmen's town of Deir el-Medina, in the New Kingdom. Deir el-Medina housed craftsmen of Thebes and the tomb-builders for the Valley of the Kings and Valley of the Queens. For an in-depth examination Deir el-Medina, and analysis of tomb-builder city mechanisms, see: Morris Leonard Bierbrier, *The Tomb-Builders of the Pharaohs* (British Museum Publications London, 1982).

[63] Allen, *The Art of Medicine in Ancient Egypt*, 111.

Clearly the ancient Egyptians understood that menstruation should have regularly each month, indicated that the phenomenon had been well observed, and that doctors were interested in understanding the female body.

Though these texts were recorded centuries after the Kahun Medical Papyrus and in a different societal context, they are still useful as points of comparison. The reproduction of certain treatments, almost verbatim – e.g. the insertion of an onion into the vagina as a pregnancy test is first found in the Kahun Medical Papyrus, but repeated in the Carlsberg Papyrus, and then later in a Hippocratic text – indicates a certain level of continuity, despite the temporal distance between them. Certainly I do not propose that ancient Egyptian medical practices stagnated for 300 years, only that the longevity of traditions, with minimal variation, suggests that evidence from both earlier and later periods of Egyptian history can reasonable be suggested as potentially analogous to Middle Kingdom practices.

The Doctors

The Middle Egyptian lexeme[64] for a healer, the modern equivalent of a physician, was *swnw*. *swnw* were summoned to tend to a patient upon a patient falling ill, rather an operating out of an office. Just as the medical texts vary in their remedies along a spectrum between magical and medical, so do the types of healers in ancient Egypt, ranging in their practice from physician-priests to lay *swnw*.[65] Physician priests operated out of temples – In the New Kingdom the priest-physicians become associated with the *House Per Ankh* – while lay *swnw* operated in a more

[64] Defined as a meaningful linguistic unit that is an item in the vocabulary of a language. "Lexeme." Merriam-Webster.com. Merriam-Webster, n.d. Web. 3 Mar. 2018.
[65] Ghalioungui, *The Physicians of Pharaonic Egypt*, 10, 1-15.

mundane realm.[66]

Those wishing to become *swnw* would have needed access to a high-quality education to become literate and learn medicine. Estes speculates an apprenticeship-like system of learning on the job, or a patrilineal passage of information, but neither theory is well-substantiated.[67] A model for understanding an education system that integrates both apprentice and patrilineal mechanisms appears in the Hippocratic oath:

> ὄμνυμι…διδάξειν τὴν τέχνην ταύτην, ἢν χρηΐζωσι μανθάνειν, ἄνευ μισθοῦ καὶ συγγραφῆς, παραγγελίης τε καὶ ἀκροήσιος καὶ τῆς λοίπης ἁπάσης μαθήσιος μετάδοσιν ποιήσεσθαι υἱοῖς τε ἐμοῖς καὶ τοῖς τοῦ ἐμὲ διδάξαντος, καὶ μαθητῇσι συγγεγραμμένοις τε καὶ ὡρκισμένοις νόμῳ ἰητρικῷ, ἄλλῳ δὲ οὐδενί.
>
> I swear…to teach this [medical] skill, [to] whoever wishes to learn, without pay or contract, sharing the precepts and lectures and the rest of all the teachings with my sons and the sons of those who taught me, and with students having signed contracts and those having sworn the doctorly custom [i.e. oath], and to no one else.

In the Hippocratic model, patrilineal education is free, but other wishing to learn must pay for their education. The ancient Egyptian model was likely not identical to this, but it may have integrated students from multiple sources in a similar manner. Szpakowska notes that the Middle Kingdom characterized by "an increase in controlled bureaucracy and centralized education."[68] Lahun's careful design and written documents are a testament to this organization and intellectual vitality.

The noticeable absence of women from the list of known *swnw* – save Peseshet and Tawe, discussed below –and exclusive use of the masculine second person enclitic pronoun *=k*, suggests that these were resources more commonly available to men than women. There are only

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[66] Estes, *The Medical Skills of Ancient Egypt*, 19.
[67] Estes, *The Medical Skills of Ancient Egypt*, 18.
[68] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 5.

twenty-one known *swnw* from the Middle Kingdom, a sharp decrease from the sixty-two recorded from the Old Kingdom.[69] The Middle Kingdom also sees a reduction in the range of titles awarded to *swnw*, preserving only three out of the ten known from other time periods.[70]

There is evidence that the *swnw* enjoyed a certain status as healers. *swnw* in the royal court could expect to be paid handsomely in gold and other riches, but most were not so lucky and operated on a barter system, exchanging their services for everyday goods.[71] An account of the treatment of Wesh-Ptah, the vizier and Chief Architect of pharaoh Neferirike (2446-2426 BCE) who after fainted during a royal inspection connects *swnw* directly to the use of medical texts:

> "Then the king had Wesh-Ptah carried to the palace, and summoned the royal children, the lector priests and the physicians. The books were brought and consulted. But the verdict was hopeless and Pharaoh, full of sorrow, repaired to his apartment to pray to Re daily for the life his beloved vizier."[72]

Here we see direct evidence of a *swnw*'s capability to read a medical text and use it in the field, as well as the combined use of prayer and medicine.

The high regard for *swnw* was not limited to the land around the Nile, kings from around the Mediterranean were known to call upon the services of an Egyptian *swnw* in particularly dire cases. A letter from Nimqad, and Ugartic King from the 14th century BCE asks Akhenaten to send him a physician because of a lack physicians in his own country.[73] A correspondence between Hattusili, a Hittite King, and Rameses II a century later also demonstrates the

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[69] Nunn, *Ancient Egyptian Medicine*, 117.
[70] Nunn, *Ancient Egyptian Medicine*, 117.
[71] Estes, *The Medical Skills of Ancient Egypt*, 21-24.
[72] From the Death of Wesh-Ptah, James Henry Breasted, *Ancient Records of Egypt: Historical Documents from the Earliest Times to the Persian Conquest: The First to the Seventeenth Dynasties*, vol. 1 (Kessinger Publishing, 2006).
[73] Ghalioungui, *The Physicians of Pharaonic Egypt*, 10, 77.

international desire for Egyptian *swnw*, and the advanced medical understanding of the ancient Egyptians. Hattusili has requested a *swnw* to help his aged sister become pregnant, to which Ramesses replies:

> "…Is she fifty years old? Nonsense!
> She is sixty.
> And see, a woman fifty years old,
> No! one who is sixty,
> One cannot prepare for her a drug
> To let her be with child
> Indeed, the Sun god and the Weather god may – to pleaser her –
> Issue an order and the dispositions thereof
> Will be lastingly dispensed to her
> And I, the King, your Brother,
> Will send you an able exorciser priest and an able physician
> And they will prepare to her intent drugs
> So that she be with child…"[74]

Just as we see specialists today for ailments in different parts of the body, *swnw* often specialized in particular regions of the body.[75] On the Egyptian way of dividing up the field of medicine Herodotus (484-485 BCE) remarked:

> Herodotus 2.84
> ἡ δὲ ἰητρικὴ κατὰ τάδε σφι δέδασται: μιῆς νούσου ἕκαστος ἰητρός ἐστι καὶ οὐ πλεόνων. πάντα δ᾽ ἰητρῶν ἐστι πλέα: οἳ μὲν γὰρ ὀφθαλμῶν ἰητροὶ κατεστᾶσι, οἳ δὲ κεφαλῆς, οἳ δὲ ὀδόντων, οἳ δὲ τῶν κατὰ νηδύν, οἳ δὲ τῶν ἀφανέων νούσων.
>
> The practice of medicine is divided amongst them in this way: Every doctor exists for one disease and no more. Everywhere is full of doctors. For some doctors are appointed for eyes, some for the head, some for the teeth, some for the things in the [body] cavity, some for unseen [internal] diseases.

[74] Ghalioungui, *The Physicians of Pharaonic Egypt*, 77.
[75] Specialist titles have not been preserved from the Middle Kingdom, but are known from the Old Kingdom and the Third Intermediate period, suggesting a continuity of this practice. For table of specialists in different periods see Nunn, *Ancient Egyptian Medicine*, 119.

Though Herodotus writes at a much later time, and has a tendency to sensationalize his reports, his evaluation of Egyptian practices is still useful. He is known to have travelled to Egypt and interviewed inhabitants as sources for his ethnography. Thus despite his flair for embellishment and exaggeration, today we should read his writings critically, sorting out the kernels of truth. While it is unlikely that *swnw* were as specialized as he claims, they definitely were broken into areas of focus. This would have seemed strange to a Greek accustomed to the Hippocratic tradition.

Two specializations that are notably absent from the records are obstetrics and gynecology.[76] There are no words in Middle or Late Egyptian known to mean midwife, gynecologist, or obstetrician.[77] Yet there were undoubtedly physicians who treated women, evidenced by the existence of the Kahun Medical Papyrus. So where do women fit into ancient Egyptian medicine, as both caregivers and patients?

Certainly there were midwives to assist with birth, even if the only evidence of them exists in depictions of childbirth. For example, a Middle Kingdom birthing brick found in Abydos, with one woman poised to catch the infant, while the other provide support to the expectant mother from behind (Figure 2).

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[76]The decision to split obstetrics and gynecology into two different fields here is a meant to recognize that are distinct in their goals and foci, with some overlap around the point of conception. The term "OBGYN" is often used to refer to a doctor who practices in both fields today, but to project that into antiquity is dangerous. These fields would have been even more distinct in Egyptian antiquity, when gynecology was medical, but the pre-natal care is firmly set in the magical realm. While the existence of the Kahun Medical Papyrus definitely suggests that there were doctors practicing gynecology, it is plausible that no *swnw* practiced obstetrics, but rather left maternal care to magical practitioners and midwives.

[77] Nunn, *Ancient Egyptian Medicine*, 191.

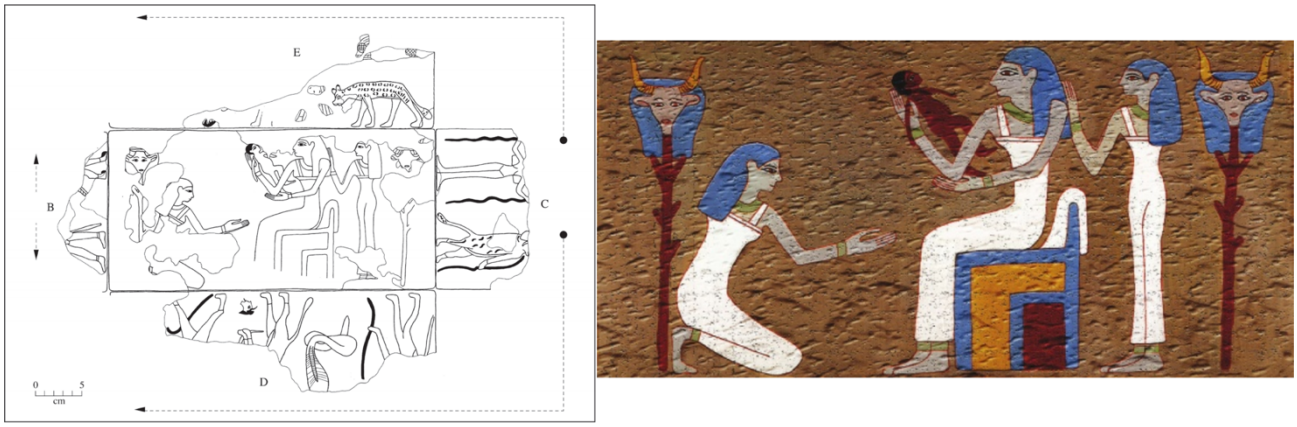

Figure 2. (Left) Line drawing of the orientation of iconography on a mud-clay birthing brick from Abydos; (Right) Reconstruction of the scene of mother and child (Side A), painting by Jennifer Wegner. Wegner 2009: Figures 6 and 7. Reproduced with Permission.[78]

Textual evidence of female caregivers is scarce, and nonexistent in the Middle Kingdom. However, the stele of Peseshet (figure 3) from the Old Kingdom records Peseshet as the *ỉmyr-ɜ swnw.t*, the "(female) overseer of (female) physicians."[79] From these two words we can infer both that Peseshet was a female *swnw* and that she was not alone in that category. The next record of a female *swnw* does not come until the 4th century BCE, when the name of Tawe is recorded.[80] Just as men who become *swnw* must have come from well-off families who could afford schooling, the obstacles to education must have been greater for women. Peseshet was not only the mother of *Akhet-hetep* a prominent officer of the 4th dynasty, but was also possibly married to his father, who was also an important official.[81]

[78] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom," 454, 457.
[79] Ghalioungui, *The Physicians of Pharaonic Egypt*, 10, 18.
[80] Ghalioungui, *The Physicians of Pharaonic Egypt*, 92.
[81] Ghalioungui, *The Physicians of Pharaonic Egypt*, 65.

Figure 3. Line drawing of the Stele of Peseshet. Her title *ỉmyr-ɜ swnw-t* appears in three places: (1) in front of the seated figure (the owners of the stele) in the upper register, (2) above the figure in the right jamb, (3) the left middle of the lowest register. Ghalioungui 1983: Figure 8.[82]

Egyptian Medical Texts in Practice

Ancient Egyptian medical texts seem to be compilations of practices from various sources based on previous experiences. One piece of evidence for these texts as anthologies is the phrase *ky sp*, "another occasion," which precedes alternative methods for diagnosing or treating an ailment under the same rubric. For example, in the cases from the Kahun Medical Papyrus considered later (Column 3, lines 12-20, 23-24), five methodologies for "Determining a woman who has conceived from she who is not conceiving" are provided under that heading, with the final four being introduced by *ky sp*. An alternative translation for the Middle Egyptian lexeme *sp*, is "case," rather than "occasion."[83] This connotation further exaggerates the

[82] Ghalioungui, *Physicians of Pharaonic Egypt*, Fig. 8.
[83] Raymond Oliver Faulkner, *A Concise Dictionary of Middle Egyptian* (Printed for the Griffith Institute at the University Press by V. Ridler, 1962), 221-22.

impression of medical texts as lists of case studies by previous doctors that would provide *swnw* with different options for how to treat a patient, based on previous anecdotal evidence.

The anthological nature of ancient Egyptian medical texts invites the question of how they were meant to be used. We are accustomed to think of medical treatises as textbooks that build from broad descriptions of human anatomy and physiology to explanation of how that physiology can elucidate the symptoms and condition of a patient, as well as how it should inform treatment procedures. Modern medical texts treat medicine as a manipulation of the human body, and thereby provide the possibility allow for creative treatment practices based on deep understandings of that body. This modern practice of extrapolating from observations to anatomy and bodily (mal)function is rooted deeply in the Greek medical practice. The Hippocratic corpus is built upon the foundation of explaining the human body via case studies. In contrast, ancient Egyptian medical texts are targeted at specific symptoms and ailments, without any explicit concern or discussion of general anatomy.

Ancient Egyptian medical texts are tightly structured to guide a physician through the process of diagnosing and treating a patient. The texts make no larger claims about the human body than are directly pertinent to the situation being addressed. Each case begins with a rubric, demarcated in red ink, that introduces the case, e.g. “determining a woman who has conceived from she who is not conceiving” (Kahun Medical Papyrus, column 3, line 2). This is then followed by an explanation of a symptom, such as swelling, an odor, or pain from contact, and a remedy or spell to treat the ailment. However, it should be noted that the texts recognize that treatment is not always possible, at times explicitly stating that nothing can be done for a patient.

For example, in case 5 from the Edwin Smith Papyrus, the condition is classified as *mr ỉrỉ.ny,* "an ailment for which nothing is done."[84]

Thus, ancient Egyptian medical texts read more like field guides for *swnw* than modern medical school textbooks. They are a compendium of knowledge gathered from various sources and pulled together into one reference text that can be consulted in action. The use of the *sḏm.ḫr=f*[85] ("he should hear") construction, discussed below, has an authoritative sense, instructing the *swnw* was he *should* do in a given case. The assortment of cases would allow the physician to pick a remedy that best suits the circumstance and available resources. The Kahun Medical Papyrus was an active text, not stored away in a library. Its ancient owner(s) clearly valued the document, and used it heavily, repairing it with a patch visible on the back of the papyrus.[86]

Questions concerning the efficacy of treatments, guided by seemingly wholly incorrect conceptions of human anatomy,[87] also arise. The inclusion of magical elements in medical texts has also led many to discount the legitimacy of ancient Egyptian medical practices. However,

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[84]Allen, *The Art of Medicine in Ancient Egypt*, 111.

[85] The formula for this grammatical construction consists of a verb stem, here *sḏm*, the preposition *ḫr*, and then the enclitic relative pro for in the relevant gender and number – *k*, the 2nd person singular is used in the Kahun Medical Papyrus. The position of *ḫr*, "before" or "in front of" between the verb and enclitic pronoun, suggests action that follows, will happen, or *should* happen (Gardiner §§430-1). Sir Alan Henderson Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum* (Oxford University Press, 1969), 346.

[86] Lesley Smith, "The Kahun Gynaecological Papyrus: Ancient Egyptian Medicine," *Journal of Family Planning and Reproductive Health Care* 37, no. 1 (2011): 54.

[87] Some example of these misconceptions will be presented in Chapter 2. The misinterpretations of anatomy persisted for so long due to the lack of contradictory evidence. Human Dissection did not become common practice until Vesalius, though evidence of interpreting analogous structures observed in animal dissections stretches back to the Hippocratic authors in the Greek Medical tradition. Though Egyptians certainly had intimate knowledge of the body from embalmment procedures, they seem not have used it as opportunity to make medical observations about internal anatomy.

this is a disservice to the very complex world of ancient medicine and invalidates the very legitimate bond ancient Egyptians saw between their health and the gods, evidenced by their combined use of prayer and health. The presence of gods at high-risk moments suggests the direct involvement of gods with people's health, e.g. Hathor's depiction in birthing scenes.[88] The job of the modern scholar, is not to dismiss ancient Egyptian medical texts as pre-logical or entirely incorrect, as has happened in the past,[89] nor to dismiss magical components of medicine and religion as nonsense, as they serve a very real psychological and social function.[90] Rather, she should consider ways in which the remedies could have caused an observable difference. For example, one method for determining if a woman had conceived was to place an onion inside of her vagina and check for the scent of onion on her breath the next day.[91] While it does confer a fundamentally incorrect understanding of anatomy, it is possible that a trace scent of onion could have been perceived on a woman's breath if the sulfuric compounds were absorbed into her blood through the vaginal sub-mucosal blood vessels.[92]

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[88] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom."
[89] Tasha Leigh Dobinn-Bennett, "Rotting in Hell: Ancient Egyptian Conceptions of Decomposition" (Diss., Yale University, 2014), 8-10.
[90] T. DuQuesne, "The Raw and the Half-Baked: Approaches to Egyptian Religion," *Discussions in egyptology*, no. 30 (1994): 31-32. In search for the origins of "science," Gordon recognized magicians as the earliest experimenters; Andrew Andrew Hunt Gordon, *The Quick and the Dead: Biomedical Theory in Ancient Egypt*, vol. 4 (Brill, 2004), 2.
[91] Kahun Medical Papyrus 32057 Column 3, lines 17-19; Carlsberg Papyrus VIII, IV. See: Erik Iversen, *Papyrus Carlsberg No. Viii: With Some Remarks on the Egyptian Origin of Some Popular Birth Prognoses* (Munksgaard, 1939).
[92] Haimov-Kochman, Sciaky-Tamir, and Hurwitz, "Reproduction Concepts and Practices in Ancient Egypt Mirrored by Modern Medicine," 5.

Magic in Medicine

Magic and medicine were inseparably intertwined for the ancient Egyptians. While magic and medicine may be used contemporaneously in other fields of medicine, they are not used concurrently in reproductive treatments. Additionally, they are distinct modalities in that the efficacy of medical intervention comes from the physical manipulation of natural materials, whereas the magical relies on harnessing powers beyond that of humans.

Quirke identifies a "tripartite approach" within medical texts that allows both medicinal and magical remedies to be considered with equal value, as they likely would have been in antiquity. The three components are: "(1) manual treatments/prognoses/diagnoses; (2) prescriptions and instructions for application; and (3) incantations to reinforce/restore health."[93] This breakdown elegantly shows how the medicinal and magical serve jointly to compound the healing effects of one another. The Edwin Smith Papyrus seamlessly flows from medical diagnoses to magic spells on the verso. Magic was another resource to be harnessed – just as a physician may go gather an herb for an ointment, he could employ magical tools to aid in treatment. These texts make it clear that magic and medicine are complementary approaches not competing alternatives.[94] For example, as I will discuss, in the treatment of reproduction, medical tests were useful for diagnosing pregnancy, while magically imbued objects and spells provided protection for the mother and child.

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[93] Quirke, "Women of Lahun (Egypt 1800 BC)," 258.

[94] The verso of the Edwin Smith Papyrus just such juxtaposition: the recto is entirely based on observation and treat, while the first 2.5 columns of the verso contain eight spells for curing anything from swallowing a fly to disease. Edwin Smith Papyrus, Verso 1.1-3.12).

Quirke sees the strict structure of the texts as a healing strategy as well.[95] Ancient Egyptians were very interested in how *maat*, the order of the universe was maintained. They believed that the world naturally wanted to descend into chaos, and that in creation the gods had brought order to our world, and it was the king's job, being semi divine himself, to maintain it.[96] Thus, the structure of the medical text itself helped bring order into situations of illness, where *maat* was not maintained; the text represented the desired state of order that the patient's body was not in. Hieroglyphs forming the structure of the cosmos is an idea well developed by the New Kingdom. Jan Assman writes:

> "If we consider the iconic character of hieroglyphs, the analogy between writing and cosmos become obvious. It is much more evident to postulate a correlation between the iconic signs of the hieroglyphic script and the things of reality than between the words of language and the things of nature. The relationship of hieroglyphic signs to the world seems much more direct than the the relationship of words to what they denote."[97]

The Middle Egyptian term for hieroglyphs (which itself comes from Greek words ἱερος, "sacred," and γλυφος, "sign") is *md.t nṯr*, which literally means "divine speech,"[98] indicating the sacred nature of the written word. Assman also asserts that grammatical structure of the language paralleled the strict *maat* of the cosmos.[99] Thus we can understand the written text to help bring order into the world, as the spoken word is a force of a creation. As such, it follows that the structure of medical texts is providing a framework for the orderly structure of the body.

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[95] Stephen Quirke, "Reading a Passage from an Ancient Egyptian Healing Manuscript," http://www.ucl.ac.uk/museums-static/digitalegypt/med/healthexample.html.
[96] John Baines, Leonard H Lesko, and David P Silverman, *Religion in Ancient Egypt: Gods, Myths, and Personal Practice* (Cornell University Press, 1991), 70.
[97] Jan Assmann, "Creation through Hieroglyphs: The Cosmic Grammatology of Ancient Egypt," in *The Poetics of Grammar and the Metaphysics of Sound and Sign* (Brill, 2007), 29-30.
[98] Assmann, "Creation through Hieroglyphs: The Cosmic Grammatology of Ancient Egypt," 32.
[99] Assmann, "Creation through Hieroglyphs: The Cosmic Grammatology of Ancient Egypt," 33.

Conclusion

The Kahun Medical Papyrus represents a compilation of knowledge accrued through a long tradition of ancient Egyptian medicine, beginning long before its composition and lasting for centuries beyond it. It is, however, unique in the archaeological record for its sole focus on the female patient. As I narrow in on the issue of conception and then childbirth in the following chapters, it is important to keep in mind that the text contains methods for contraception and treatments for ailments unrelated to reproduction (except in the way that ancient Egyptians regarded the womb as the cause for almost all ailments in women). The papyrus would serve to treat women in a variety of roles and stages of life, reflective of the diverse population, and by prospective patients, living in Lahun in the 19th century BCE.

Health would have been a concern for each one of those citizens of Lahun, and therefore the practice of medicine would have been an integral part of their lives. As a means of restoring order to their bodies, medicine would have been inseparable from customary practices of appealing to the gods for maintaining order in their lives. Thus, religion, and its practical applications accomplished through magic, must be considered together with medical practices. In the chapters that follows I aim to highlight interplay of the use of medical texts and magical objects in accomplishing fertility, and delineate how their uses map onto the timeline of human reproduction.

PART II: FIVE CASES FROM THE KAHUN MEDICAL PAPYRUS

I will now turn my attention to the text of the Kahun Medical papyrus, considering the construction and content of five cases for diagnosing pregnancy. This text has been understudied; only two scholars have translated it, in full, into English since its discovery in 1889.[100] Only the first translation, from 1898, includes cursorial grammatical commentary, and neither author provides justifications for new interpretations of Middle Egyptian lexemes. Here, I attempt to provide a more nuanced translation of a small portion of the text, with a great amount of attention paid to the grammar and diction of the author(s). All of the translations of Middle Egyptian and Greek below are my own, unless otherwise cited.

My second main objective is to argue the medical merit of the text. Though ancient Egyptians may have held incorrect conception of human anatomy and physiology, there are medically sound explanations for how the diagnostic tests could have produced insightful results. Thus, ancient Egyptian medicine could have functioned effectively, even if the practitioners misunderstood why it worked. It is important to consider the timing of gynecological medicine.

Ancient Egyptians clearly understood that conception happened as a result of sex. In the Middle Kingdom "Tale of the Doomed Prince," the king goes to bed with his wife, and "when she [had become] pregnant and had completed the months of childbearing, a son was born."[101] The temporal relation of coitus to conception, however, is slightly amorphous – it only indicates

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[100] Griffith and Flinders Petrie, *The Petrie Papyri: Hieratic Papyri from Kahun and Gurob (Principally of the Middle Kingdom.* Quirke, "Manuscript for the Health of Mother and Child: "The 'Kahun Medical Papyrus' or 'Gynaecological Papyrus'".

[101] Robert Kriech Ritner and William Kelly Simpson, "The Tale of the Doomed Prince," in *The Literature of Ancient Egypt: An Anthology of Stories, Instructions, Stelae, Autobiographies, and Poetry* (Yale University Press, 2003), 76.

that it occurs after, but without any indication of how long after. Diagnosis of conception must have occurred much further along into the pregnancy than we are accustomed to today.[102] Most of the Diagnostic symptoms in the Kahun Medical Papyrus, which include vomiting, swollen breasts, and clitoral pain may start as early as four weeks after conception[103], and cessation of menses may be recognized even earlier. However, definitive diagnosis would only be possible towards the end of the first trimester, when the stomach begins to swell noticeably, and just before the mother will begin to feel the fetus move.[104] The idea of conception being a prolonged process, which ends only once a pregnancy can be positively diagnosed, is echoed in heading for the following five cases, which distinguishes between patients who are "at the result of conceiving," i.e. pregnant, from "she who is not conceiving," who is thus still engaged in the ongoing process. This represents a fundamentally different attitude towards conception than other medical issues. Instead of identifying an issue to correct, the *swnw* is assessing the patient's status in the process of conception. If she is not at the result, i.e. pregnant, she is still continuing attempts to conceive.

CASE 1:

Kahun Medical Papyrus 32057 Column 3, lines 12-14
sḏꜣ ntt r ỉwḏ r ntt nn ỉwr
[*ỉr/rdỉ*].*ḫr=k mrḥ*(*w*)*t mꜣt ḫr* [...] *ḫr=k sy*
ỉr gm(*ỉ*) *mtỉ.w n ḳꜣb.t=s ḫꜣsꜣ*
ḏd.ḫr=k r=s ms.t pw
ỉr gm(*ỉ*)*=k ỉt knkn*
ḏd.ḫr=k r=s ỉw=s r mst wḏf

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[102] Some modern pregnancy tests are effective within one week of conception.
[103] Festin, Mario. "Nausea and Vomiting in Early Pregnancy." *BMJ Clinical Evidence* 2009 (2009): 1405, 2.
[104] Personal correspondence with Dr. Eric Jauniaux, MD, PhD, FRCOG
Professor in Obstetrics and Fetal Medicine, EGA Institute for Women's Health, Faculty of Population Health Sciences, University College London.

ỉr swt gm=sy mỉ ỉn […][105]

Determining/recognizing[106] she who is pregnant [at the result of conceiving[107]] from she who is not conceiving[108] […]
You should[109][do/give] fresh oils upon […][110] You should […]
If you find the vessels of her breasts[111] distended you should say it is a child for her.[112]
If you find it deflated you should say regarding it,[113] "she will have birth, which is delayed.[114]
If you find her like […]

The rubric for these spells from the papyrus Kahun has previously been interpreted as "Determining a woman who will conceive from one who will not,"[115] where the translators have understood *r ỉwỉ* as a future construction.[116] This translation carries the connotation of placing a woman into one of two categories: fertile or barren. It addresses potentiality of reproduction

[105] The transliteration here has been formatted with a grammatical emphasis to indicate main and subordinate clauses. This does not follow the line structure of the original text because the scribe constructed the lines aesthetically, unconcerned with the format of grammatical constructions.
[106] See discussion of use of *sỉɜ* in medical context below.
[107] *r* + infinitive as a result clause.
[108] negation of infinitive (*ỉwỉ*, 3rd radical has been replaced with *r*) to indicate non-existence.
[109] *sḏm.ḫr=f* construction, see discussion below.
[110] Translated here as "upon" because it infers at least as to where the oil was placed on the body, but due to the loss following *ḫr* it is impossible to tell if this was meant as the ideogram for face or as the preposition "upon," followed by the body part to be anointed.
[111] For *ḳɜb.t* as breasts see: Louvre C 100, praise of Princess Mutirdis (line [4]); The Scorpio Magic of pChester Beatty VII = pBM EA 10687, vs. 1.4-6.7 (line vs. 4.1). Swollen breasts are a common symptom experienced by pregnant women, further supporting the assertion that this spell concerns women who have already conceived.
[112] Seated child determinative excludes the possibility of the phrase being read *r sms.t*, "she will give birth."
[113] *r=s, s* here referring back to the *ḳɜb.t*
[114] *r* to indicate future, *ỉw* indicates a new main clause, and *wḏf* is acting as a virtual relative. Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 148.
[115]Quirke, "Manuscript for the Health of Mother and Child: "The 'Kahun Medical Papyrus' or 'Gynaecological Papyrus' (Translation by Stephen Quirke)".
[116] Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 97-98.

rather than actualized pregnancy. If instead, *r ỉwỉ* is read as a result clause,[117] as suggested in my translation, the following section becomes about diagnosing a woman as pregnant, having reached the result of conception.

sỉꜣ as a higher level of determination

The role of the divine in enabling conception is made evident by the very first word of the rubric: *sỉꜣ*. The verb *sỉꜣ*, to recognize or perceive,[118] is a religiously and magically charged verb. The verbal form is derived from the nominal form of the name of the god Sia, who was born from the blood of Ra's mutilated phallus,[119] an intrinsically potent creative material, and represents divine intellect and the perceptive mind. *sỉꜣ* appears four times in the extant text of the papyrus Kahun; three of these instance are the first word of a title that relates to the diagnosis of conception or birth.[120] The use of this verb in the context of reproduction is best understood through Sia's association with creation.

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[117] Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 126, 66.
[118] Faulkner, *A Concise Dictionary of Middle Egyptian*, 212.
[119] George Hart, *The Routledge Dictionary of Egyptian Gods and Goddesses* (Psychology Press, 2005), 147-8.
[120] The fourth instance is read by Quirke (2002) as "she observes" (*sỉꜣ=s*), however the glyphs here do not appear clearly.

Figure 4. Atum travelling across the underworld, accompanied by Hw and Sia, the divine personifications of wisdom and creation, from the Tomb of Ramesses VI at Thebes. Teeter 2011: Figure 4.[121]

Sia, together with Hu, is usually depicted as a man in a fringed headdress accompanying Ra, the creator god (Figure 4**)**; PT 250 places Sia in an immediate relationship with Ra that evokes an association of Sia with the production of life (Figure 5).

Figure 5. From the Pyramid of Unas, Antechamber West Gable, Utterances 247-253. Brown 2002: http://www.pyramidtextsonline.com/AntewestGH.htm.[122]

The boxed glyphs highlight the phrase *sꜣ ỉmn.t Rʿ*, "Sia at the right [or west] of Ra." Immediately preceding that the placement of Sia is the phrase "the great one who is in possession

[121] Teeter, Emily. *Religion and Ritual in Ancient Egypt.* Cambridge University Press, 2011, Fig. 4.
[122] "Ante Chamber West Gable," Vincent Brown, accessed October 30, 2017, http://www.pyramidtextsonline.com/AntewestGH.htm.

of the divine book" (*wr ḫr nṯr-mdw*).[123] Thus together the pyramid text is providing the image of Sia as a deity both possessing divine knowledge and in close communication with Ra, the creator god.

The succeeding set of phrases further establishes Sia's creative powers through an association with *nwn*, the primeval creative waters from which the world was born.[124]

PT 250, Column 21
wnỉs pỉ wnỉs pỉ
sỉꜣ ỉmn.t Rᶜ,
ỉnb(?) ỉb ḫnty pḥt n Nwn

It is Unas, It is Unas,
Sia (is) at the right/west of Re,
strong? of heart, he who is foremost of the cavern of Nun.[125]

In addition to his physical manifestation, depicted as man in a fringed headdress, Sia was a force to be harnessed for its power. The ability to perceive divine knowledge holds a lot of power; the king depended on Sia to aide his assessment of the state of the land, and to help maintain *maat.*[126] This study is interested in the power of Sia in conjunction with human body.

Coffin Texts (CT) indicate an individual gained magical power through the ingestion of Sia and Hu.[127] Sia and Hu inside the body act as creative forces. CT 321 describes the realization of Hu and Sia through the word of Atum, as it travels along a circuit of windings (*ḳꜣbw*).[128] CT

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[123] PT 250, Column 21.
[124] Shafer E Byron, "Religion in Ancient Egypt: Gods, Myths, and Personal Practice," *Ithaca &* (1991): 34.
[125]Vincent Brown, "Antechamber, West Gable, Utterances 247-253," Pyramid Texts Online, http://www.pyramidtextsonline.com/AntewestGH.htm.
[126] Jan Assmann, *The Search for God in Ancient Egypt* (Cornell University Press, 2001), 4.
[127] Rune Nyord, *Breathing Flesh: Conceptions of the Body in the Ancient Egyptian Coffin Texts*, vol. 37 (Museum Tusculanum Press, 2009), 369.; *CT* V, 391 e-j [469]; *CT* V, 3191-n [689].
[128] Rune Nyord, *Breathing Flesh: Conceptions of the Body in the Ancient Egyptian Coffin Texts*, 372.

IV, 147f-r outlines the relationship between Sia, Hu, Shu, and Atum, all of whom circulate the "windings" (*ḳꜣbw*), which "seem to be the path by which the word of Atum goes from his *ỉb*-interior, a circuit which is also travelled by Shu, Hu, and Sia."[129] Nyord underlines a connection between *sỉꜣ* with *ḳꜣbw* in reference to creation. In this case from the Kahun Medical Papyrus, *ḳꜣb.t* appears in the line following *sỉꜣ*; though not in direct conjunction as the coffin text examples, but the stem of the word – *ḳꜣb* – in the same phrase introduced by *sỉꜣ*, would certainly recall this association.

Nyord recognizes a parallel in the paths wandered by Sia and Hu to the secret paths travelled each day by a she-cat in CT 759. He argues that the fact that the she-cat repeats her journey each day confirms that she travels the same daily path of the sun, and therefore, the process of creation that begins each day at dawn is "parallel to the one connected with Hu and Sia."[130] Nyord's argument rests upon an important premise, the notion that ancient Egyptians viewed the process of procreation as microcosmically analogous to the creation of the universe. Sia is identified as one of three powers required for creation to occur,[131] but also promote creation from within the body. Thus Sia is both a creative and procreative power.

An examination of the use of *sỉꜣ* elsewhere supports the reading of it in the papyrus Kahun as incorporating a magical element to the medicinal treatment of fertility. *sỉꜣ* is used on the walls of the Opet temple at Karnak to discern a newborn's fate:

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[129] Rune Nyord, *Breathing Flesh: Conceptions of the Body in the Ancient Egyptian Coffin Texts*, 371.
[130] Rune Nyord, *Breathing Flesh: Conceptions of the Body in the Ancient Egyptian Coffin Texts*, 376.
[131] Baines, Lesko, and Silverman, *Religion in Ancient Egypt: Gods, Myths, and Personal Practice*, 33.

Karnak, Opettempel, external south wall, basement, 2nd register, 264.7[132]
sḏꜣ ḫnt ḥ.t
n prḏ=f m swḫ.t
tnḏ s(w) šᶜw [ḥr?] msḫn.t
ḏwᶜ mnḫ

…discerning in the belly,
while he was not yet out of the egg,
which Shai (fate) distinguished on the brick of birth,
the excellent heir…

Here the action is occurring during the process of procreation; the fetus is still in utero. It appears again in a spells for mother and child in the papyrus Berlin:

pBerlin P. 3027 line vs. 1.2-4[133]
ḏd=s ḏw=k ḥr sjꜣ nb mꜣᶜ t ḥr nn
ḥrr.w ḫftḏ pf mwt mwt.t ḥmw t-r r ḥrt.t bᶜᶜ=ḏ

She said, "You recognize the Lord of the Maat in this,
whose enemy, a male dead person, a female dead person, (and) a spell are acting against the milk, my childhood illness"

In this case, *sḏꜣ* is a part of the relationship between mother and child even after the creation process is complete. However, a child of nursing age would still have been vulnerable and possibly warranted protection from deities associated with reproduction.

Out of 66 attestations captured by the *Thesaurus Lingua Aegyptica*, twenty attestations of *sḏꜣ* occur in overtly religious contexts (tombs and temples) and fourteen uses refer to divine knowledge. The religious weight of the word is clear – but *sḏꜣ* appears to represent more than just that which the gods know; it is divine knowledge that can be acquired, or perceived, by

[132] Thesaurus Linguae Aegyptiae, Ptolemaic and Roman Hieroglyphic Texts, Karnak, Opettempel, external walls, south wall, basement, 2nd reg, headband: Augustus. Ed: A. Paulet, Leuven Online Index of Ptolemaic and Roman Hieroglyphic Texts.
[133] Thesaurus Linguae Aegyptiae, Magical Papyri New Kingdom, pBerlin P. 3027: Spells for Mother and Child, saying O. Ed: K. Stegbauer, Project "Digital Heka", Univ. Leipzig.

mortals as well. Both *Teachings of Ptahhotep* (Middle Kingdom) and the *Teaching of Amenemope* (Ramesside period) use *sḏ3* in an instructive format, i.e. something that the reader should come to understand through reading this text.[134] The Kahun Medical Papyrus parallels this use of *sḏ3*; the whole document is meant as a guide to *swnw*, providing instruction on how to proceed in various medical situations. Thus, Sia is divine knowledge and *sḏ3* is the perception of that knowledge by people. Conception only occurred with the consent of the gods, and therefore the knowledge whether a woman had successfully done so was information held by the gods. By using *sḏ3* in the title of this spell, the author of the Kahun Medical Papyrus in implicating the perception of this information by a human physician. Other cases in the text provide treatments to solve a patient's ailment,[135] cases concerning fertility only seek to understand a woman's state of being – not alter it. Thus, the invocation of his name in the case of the Kahun Medical Papyrus suggests a higher level of determination by the *swnw* in the case if pregnancy than used for other diagnoses.

ḏr or rdḏ

I suggest two possible verbs to complete the *sḏm.ḫr=k* in the line 12 lacuna: *rdḏ*, "to give," or *ḏr,* "to make." *rdḏ*, which I make a stronger argument for, would follow the pattern established in the subsequent two spells under the same rubric. A set of three cases using the term would reinforce the strong sense of order and repetition in the text -- the *maat,* discussed

[134] Thesaurus Linguae Aegyptiae, pPrisse = pBN 186-194, The Teaching of Ptahhotep (line [6,9]); pPrisse = pBN 186-194, The Teaching of Ptahhotep (line [11,2]); pBM EA 10474, Rto: The Teaching of the Amenemope (line [8.1]); pBM EA 10474, Rto: The Teaching of the Amenemope (line [14.19]); pBM EA 10474, Rto: The Teaching of the Amenemope (line [23.2]).
[135] For translation of whole papyrus see Quirke, "Manuscript for the Health of Mother and Child: "The 'Kahun Medical Papyrus' or 'Gynaecological Papyrus' (Translation by Stephen Quirke)."

above, may have played a role in healing as well. The use of *ỉr* would create a pleasing aesthetic and grammatical complement to the use of *ỉr* in the condition in the follow lines. This would be a very visually pleasing arrangement, which would also contribute to a sense of balance within the text.[136]

ḳɜb.t and knkn

The decision to translate *ḳɜb.t* as "breast," rather than the more general, and common, translation of "innards" (*ḳɜb*), is supported by its spelling and other attestations. The feminine *.t* ending suggests that the word is referring to a specifically female body part; *ḳɜb* may indicate gender neutral organs, in so far as they are found in all bodies irrespective of sex, whereas *ḳɜb.t* refers to breasts, a defining feature of the female body. The following are two New Kingdom attestations of *ḳɜb.t* to refer to a woman's bosom.

pLondon BM 9900 (pNebseni) [137]
mn ꜥ.wj =kj ḥn.t m ɜḫ.t
nfr.t pw ḥn.t
ḥbs.n st ms.w n.(t)<w> nw.w
mɜs.t =kj pḫr(.w) jy(.w) m nbw
ḳɜb.t =k šɜb.w<.t> n.w sš.w(.t)
ṯb.t.=kj mn(.w) rꜥ.w-nb
jw sɜḥ. =k sšmỉ =sn <ṯ>w r wɜ,t nfr.t
NN ḥs.t ꜥ.wj =kj ḥnw. ḥr mnw.
ḏbꜥ=k nšɜ.w n.w nbw

Your arms last, a body of water at the time of inundation.
The waters are beautiful.
The children of Nun have "clothed" it.
Your knees are wandering around because they came from the gold.
Your breasts are plants of the thicket.
Your soles continue daily.

[136] Henry George Fischer, *Ancient Egyptian Calligraphy: A Beginner's Guide to Writing Hieroglyphs* (Metropolitan Museum of art, 1988), 4-5.
[137] Thesaurus Linguae Aegyptiae, pLondon BM 9900 (pNebseni) (1), Tb 172. Ed: B. Backes, Book of the Dead Book, Egyptology Department of the University of Bonn.

Your toes, they guide the beautiful way.
NN, vase (s) are your arms, jugs on saucers.
Your fingers are grains gold.

pBM EA 10687, vs. 4.1[138]
nn ʿḥʿ=ṯ m ḳɜb.t=f nw.t r=ṯ nb.t ḳɜb.t ḥnw.t ms.t nṯr.w dd.t snḳ n [*rʿ.w*]

You will find no support in his breast, Nut is against you, the mistress of the breast, the lady who bore the gods, who gave the breast to the [Re (?)]!

Both of these recitations connect *ḳɜb.t* with creation. The first describes them naturalistically as the thicket, enabled to live by the fertile flood waters of the Nile. The second recitation places the female breast in relation with reproduction. Nut is given ownership of the breast and the role of progenitor. She described in the position of deciding whether or not to pass on the breast – she has done to the male god, Re, but will not to the male (*=f*) subject of this recitation. This further indicates that reproduction was only something that could occur with divine permission. In addition to bearing the gods,[139] Nut gives birth to the sun every day,[140] allowing the existence of the world to continue. Thus, this recitation closely associates the ability to reproduce and command of the breast.

There is another lexeme, *bn.tt* (*bn.tỉ* = dual), which translates more literally as "nipples" or, more generally, "breasts,"[141] however it is a less anatomically clinical term. The decision to use *ḳɜb.t* further strengthens the interpretation of the word as belonging to a distinctly female

[138] Thesaurus Linguae Aegyptiae, Magical Papyri New Kingdom, The Scorpio Magic of the pChester Beatty VII = pBM EA 10687, vs. 1.4 to 6.7. Ed: K. Stegbauer, Project "Digital Heka", Univ. Leipzig.
[139]Baines, Lesko, and Silverman, *Religion in Ancient Egypt: Gods, Myths, and Personal Practice*, 92.
[140] Baines, Lesko, and Silverman, *Religion in Ancient Egypt: Gods, Myths, and Personal Practice*, 118.
[141] Wb. I, 457.11,13

organ. As found in the description of the female form *bn.tt* seems to refer to the external appearance of the breasts. One attestation is found in the Westcar Papyrus, dated to the Middle Kingdom, uses *bn.tt* in an overtly sexual description of women.

> Papyrus Berlin P 3033, lines 5, 9-12[142]
> *ỉmỉ ỉnỉ(.t)=tw n=ỉ s.t-ḥm.t* 20 *m nfr.t. n.t ḥ^{c}.=sn m bn.tt. ḫnsk.ytt n.tỉ n wpỉ.t=sn m ms.(w)t ḥn^{c} rḏỉ.t ỉnỉ(.t)=tw n=ỉ ỉɜd.t* 20 *ḥn^{c} rḏỉ.t nn ỉɜd.t. n nn ḥm.t. wɜḥ ḥbs.w.=sn*
>
> Cause 20 women be brought to me in perfection with respect to their bodies, (and moreover) with breasts and curls of hair, and who have not yet been opened at birth; and get them to bring me nets, 20 (pieces), and give these nets to these women after their clothes are discarded.

In the context of a medical treatment, it follows that the author of this text would use a more clinical term in reference to the vessel of the breasts. The National Institutes of Health (NIH)[143] lists tender, swollen breasts as a typical phenomenon for pregnant women to experience. This would result from the distention, or expansion, of the vessels (*metu*) in the breasts, as described in this spell. Thus, the context of this spell also supports this reading of

ḳɜb.t.

The translation in the following line of *knkn* as "collapsed" or "deflated" also depends on context. There is a clear dichotomy being established by the author: if you observe X then she is pregnant, if that symptom is absent she is not. Thus, as I have argued for this symptom being swollen breasts, the translation of *knkn* must be in direct opposition. The Wörterbuch provides

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[142] Thesaurus Linguae Aegyptiae, pBerlin P 3033, The stories of pWestcar, 5.9-5.12. Ed: V. Lepper, Altägyptisches Wörterbuch / Strukturen und Transformationen des Wortschatzes der ägyptischen Sprache, Sächsische Akademie der Wissenschaften, Leipzig.
[143] "What Are Some Common Signs of Pregnancy?," Eunic Kennedy Shriver National Institute of Child Health and Development, https://www.nichd.nih.gov/health/topics/pregnancy/conditioninfo/Pages/signs.aspx.

"krankhafter zustand der… weiblichen brust" ("morbid condition of the vessels of the female breast") as a translation of *knkn* with the pustule determinative.[144] TLA records only one attestation of the word, translating it as "annoyed."[145] Thus, without an abundance of external evidence, we must construct the definition of from its context. Throughout the cases presented in the Kahun paprus, discussed below, the diagnosis of infertility is based on the negation of symptoms indicating conception. In light of this, the description of the breast of a non-pregnant woman as *knkn* should be understood as the opposite of *ḫ3s3* (distended/swollen), i.e. deflated.

The need to rely on context to produce exact translations of the passages speaks to the problematic way in which scholars have previously treated words related to the female anatomy and health. Dictionaries, such as the Wörterbuch and *Faulkner's A Concise Dictionary of Middle Egyptian*, provide vague circumlocutions, instead of direct translations, or provide no definition specific to the feminine context. This necessitates that new connotations for the existing translations of lexemes be developed in order to translate the Kahun Medical Papyrus. In some cases, scholars have so wholly marginalized lexemes as to not translate them at all, providing only a transliteration of the hieroglyphs. This occurs in translations by both Quirke and Stevens of the Kahun Medical Papyrus with the word *mnỉ3*, which I will later argue is the anatomical term for clitoris.

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[144] Wb. V, 134.10

[145] Thesaurus Linguae Aegyptiae, pMoskau o.No. + pMoskau 167, Mythological History, Fr. 21.5. Ed: L. Popko, Strukturen und Transformationen des Wortschatzes der ägyptischen Sprache, Sächsische Akademie der Wissenschaften, Leipzig.

sḏm.ḫr=f

The *sḏm.ḫr=f* construction is used to indicate future action, and in the medical texts takes on an imperative connotation. The incorporation of the preposition *ḫr*, independently translated "upon," here indicates the next action in a sequence.[146] Consider line 13:

Kahun Medical Papyrus 32057 Column 3, line 13
ỉr gm(i) mtỉw n ḳɜbt=s ḫɜsɜ
ḏd.ḫr=k r=s ms.t pw

If you find the vessels of her breasts distended,
you should say it is a child for her

This is a clearly delineated process that follows a well-established method and understanding of female anatomy. Depending on what the *swnw* observes, he is to give the patient a corresponding diagnosis.

This construction not only appears in all of the spells considered here from the Kahun Medical Papyrus, but is prevalent in other medical texts as well. It appears consistently throughout the Edwin Smith Papyrus, in both the medical cases on the recto and the incantations of the verso. Its use in the Kahun Papyrus to delineate the diagnosis of gynecological problems parallels its use in the gynecological prescription from the verso of the papyrus Edwin Smith cited above:

[146] Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 346.

Edwin Smith PapyrusVerso 3.14

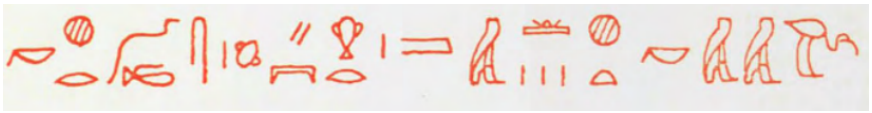

Figure 6. Glyphs from prescription one on verso of papyrus Edwin Smith. Breasted 1930.[147]

…gmm=k ḫt ỉm ḥry=s ḏd.ḫr=k…
…you find something in the upper side of her navel, you [should] say…[148]

The imperative nature of the *sḏm.ḫr=f* construction further supports the interpretation of medical texts instructional manuals to *swnw*.

CASE 2:

There is a nuanced switch in the following three cases from determining whether a woman has conceived at the time of treatment to whether the patient is *capable* of ever conceiving, i.e. if she is infertile. However, as I will demonstrate in chapter 3, infertility does not have to be a permanent state, and can be rectified through divine pleas. The phrase *nn ms=s r nḥḥ*, "she will not give birth forever," that concludes each of the following cases, indicates that the women, in her current state will never give birth (*ntt r ỉwỉ*). The cases also differ in their less defined time frames. The first case considered is the only one to make mention of the timeline of the pregnancy, and attempt to predict the timeliness of the birth. The succeeding three cases seem to indicate childbirth at a more abstract time in the future.

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[147] James Henry Breasted, *The Edwin Smith Surgical Papyrus: Published in Facsimile and Hieroglyphic Transliteration with Translation and Commentary in Two Volumes*, 2 vols., vol. 2 (The University of Chicago, Oriental Institute Publications: The University of Chicago Press, Chicago, 1930).
[148] Allen, *The Art of Medicine in Ancient Egypt,* 111.

Kahun Medical Papyrus 32057 Column 3, lines 15-17
ky sp rdi.ḫr=k ḥms=s ḫr sꜣtw sḫr m tḫˁ.t n.t ḥnḳt nḏm.t rd(i) dḳ[*r*] *…ḥw…*
[*ir*][149] *ḳis ỉw=s r ms.t*
ỉr grt tnw[150] *ḳis nb nty r prt m r=s tnw ms*[*.t*]
grt ṯm [*ḳis*] *nn ms=s r nḥḥ*

Another case. You should cause her to sit[151] upon the ground, stroke with dregs of sweet beer, fruit, put fruit…
[if you find she] vomits she will give birth,
if, moreover, every time vomit goes forth from her mouth, each is a birth
furthermore [if she does] not [vomit,] she will not give birth forever [=she will never give birth][152]

Nausea and pregnancy

There are underlying medical elements that help to explain the efficacy of the practices outlined in each of the cases considered here. In this case, we can see that the ancient Egyptians recognized nausea and vomiting – today known as, "morning sickness" – as a phenomenon commonly experienced during pregnancy. Between 50-80% of women experience vomiting during the early stages of pregnancy.[153] The pungent odors that the dregs of beer (*tḫˁ.t n.t ḥnḳt nḏm.t*) and fruit (*dḳr*) must have produced likely contributed to their patient's condition. Pregnancy-related hyperosmia, i.e. heightened sensitivity to odors, is anecdotally well-attested,

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[149] *ỉr* gm be supplied here on the basis of comparison with the other cases under the same heading (line 12). Each case outlines a test and then observation of results, often introduced with a conditional "if…" and then an apodosis that explain how to interpret that behavior.
[150] *tnw…tnw* in line 16 establishes a correlative construction between each vomit and every birth, i.e. there should be a 1:1 relationship between the two.
[151] infinitive as subject of *rdi*; Gardiner identifies *rdi* as a verb that commonly takes an infinitive as an object. The negative verb *ṯm* also frequently takes an infinitive, as seen in line 18 where *kjs* (vomit) is supplied.
[152] Line 17 juxtaposes two different kinds of verbal negation: a negative word (*nn*) + verb to negate and action or circumstance, and the negative verb (*ṯm*) to negate existence. Gardiner, *Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum* 262). *ṯm ḳis* is used to indicated that the patient is never in the state of vomiting, whereas the *nn ms=s* is suggesting that she will not perform the action of childbirth.
[153] Jeffrey D. Quinla and D. Ashley Hill, "Nausea and Vomiting of Pregnancy," *American family physician* 68, no. 1 (2003).

however a 1991 study of olfactory sensitivity found that the condition was more commonly perceived than quantifiably experienced.[154] The authors suggest that the aversion to odoriferous food is an evolutionary mechanism to prevent mothers from ingesting substances potentially harmful to the fetus.[155]

The interest in diagnosing a multiple pregnancy and its connection with more severe nausea and vomiting is also of note. Three pairs of twins are known from Egypt in antiquity: The brothers Niankhkhnum and Khnumhotep, who share a tomb from the Fifth Dynasty (Old Kingdom), Suti and Hor, the twin architects of the Amun Temple under Amenhotep III (New Kingdom) who "'went forth…from the womb on the same day," and a possible set of female twins shown embracing on a Twelfth dynasty stela (Middle Kingdom).[156] Niankhkhnum and Khnumhotep are depicted, as the sisters from the Middle Kingdom, in intimate embrace, a pose usually reserved for couples, likely to denote the close relationship that often develops between twin siblings.[157] There is a certain religious weight placed on multiple pregnancies, possibly due to their rarity and decreased chance of survival. Janssen and Janssen estimate a survival rate of 0.3% for twins,[158] and certainly that number would have been even lower in pregnancies with more children. The Westcar Papyrus recounts the fictional birth of Royal triplets, considered in-depth in chapter three, the religious import of which is conveyed through divine intervention. In

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[154] Avery N. Gilbert, Wysocki, Charles J., "Quantitative Assessment of Olfactory Experience During Pregnancy," *Pyschosomatic Medicine* 53, no. 6 (1991).
[155] Gilbert and Wysocki, "Quantitative Assessment of Olfactory Experience during Pregnancy."
[156]Rosalind M Janssen and Jac. J. Janssen, *Growing up and Getting Old in Ancient Egypt* (Golden House Publ., 2007), 10-11.
[157] Janssen and Janssen, *Growing up and Getting Old in Ancient Egypt*, 10.
[158] Janssen and Janssen, *Growing up and Getting Old in Ancient Egypt*, 10.

the tale, Re directs the goddesses Nepthys, Hathor, and Heket, to assist Queen Ruddedet in her delievery of triplets.[159]

The increased risk and rarity – and therefore religious significance – of multiple pregnancies, explains the desire to diagnose one early on. Dr. Eric Jauniaux, a specialist in the management of twin pregnancy, confirms as "clear association between multiple pregnancy and rate of nausea and vomiting due to the increase production of the placental hormone hCG," which impacts thyroid function and metabolic rate.[160] Thus, when the author of the Kahun Medical Papyrus writes, "moreover, every time vomit goes forth from her mouth, each is a birth," he is demonstrating that *swnw* had observed, and were well aware of, the association of multiple pregnancy and worse nausea and increased vomiting.

CASE 3:

Kahun Medical Papyrus 32057 Column 3, lines 17-19
ky sp rdi̯.ḫr=k ṯ3 n ḥḏw r m ḫt…f im
s…gmy=k sw i̯m=f
ḏd.ḫr=k r si̯w=s r ms.t
ir tm=k gm [*sn*] *r=s nn* [*ms=s r nḥḥ*]

another case you should give a bunch[161] of onion [in] the mouth[162] on the belly[=vagina]…it there…
…[if] you find it there[163]
you should say she will give birth,
if you do not find [a smell] she will not give birth forever [=she will never give birth][164]

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[159]Miriam Lichtheim, *Ancient Egyptian Literature: A Book of Readings*, vol. 1 (Berkeley: Berkeley : University of California Press, 1973), 220.
[160] Personal correspondence with Dr. Eric Jauniaux.
[161] Wb. V, 341.4. "From small onions of garlic" is provided for an alternative spelling for *ṯ3*, further supporting this translation as referring to a piece of onion (Wb. 342.1).
[162] line indicating ideogram
[163] *f* refers back to a masculine noun, likely *sw*.
[164] Supplied in the same format as the one used in the cases immediately preceding and following this one. Additionally, this phrase ("she will never give birth") follows the dichotomy between pregnancy and infertility established in each case.

"mouth on the belly" as vagina

This case directs the *swnw* to insert a small quantity of onion into the patient's "mouth on [her] belly," which we should understand to mean vagina. The view of the mouth and vagina as analogous orifices reflects the ideation of female internal anatomy as a long vessel that connected the face and genitals, and is mirrored in the Hippocratic corpus.[165] In fact, ancient Egyptians believed that menstrual blood could leak from the mouth, ears, and nose if not diverted for other purposes.[166] The imagery of the vagina as the mouth of the uterus is explored by Ritner in his examination of a Greco-Egyptian uterine amulet from Hellenistic Egypt (Figure 7). The obverse depicts three deities – Isis, Osiris, and Nephthys – above a stylized uterus (the circle and semi-circle) accompanied by a stylized key.[167]

Figure 7. Greco-Egyptian uterine amulet. Ritner 1984: photograph by the Oriental Institute, University of Chicago; drawing by W. Raymond Johnson, Figure 1.[168]

[165] Frandsen, "The Menstrual "Taboo" in Ancient Egypt," 84.
[166] Frandsen, "The Menstrual "Taboo" in Ancient Egypt," 85.
[167] Robert K. Ritner, "A Uterine Amulet in the Oriental Institute Collection,", no. 3 (1984): 209.
[168] Ritner, "A Uterine Amulet in the Oriental Institute Collection," Fig. 1.

The amulet functioned to help close the womb, in an effort to cease menstruation and retain a pregnancy, by symbolically locking the uterus.[169] The conceptualization closing the vagina as a shutting of the mouth is seen in P. BM. 10059, spell 45:

> The Inundation falls within to close (*ḥtm*) the mouth of the vulva as Lower Egypt is closed (*ḥtm*) on the southern edge, as the mouth of a valley is closed (*ḥtm*).[170]

This interpretation is further supported by a similar case from the verso of the papyrus Carlsberg:

> Papyrus Carlsberg, No. VIII, IV.
> Another to distinguish a woman who will give birth from one who will not give birth.
> You shall let an onion bulb (moistened? with…) remain the whole night (on her vulva?) until dawn.
> If the smell passes through? her mouth, then she will give birth, if (…) she will not give birth.[171]

The reproduction of this method in both the Kahun Medical Papyrus and Carlsberg Papyrus, and its appropriation into the Hippocratic corpus,[172] suggests there must have been some merit to it. Haimov-Kochman et al. propose that "absorption of the onion's sulfuric compounds into the woman's blood via engorged sub-mucosal blood vessels may result in 'onion breath.'"[173] Thus, the contemporary conceptions of female anatomy and slightly younger, but parallel, texts support the interpretation of the mouth on the patient's belly as her vagina.

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[169] Ritner, "A Uterine Amulet in the Oriental Institute Collection," 210, 12.
[170] Ritner, "A Uterine Amulet in the Oriental Institute Collection," 212.
[171] Iversen, *Papyrus Carlsberg No. Viii: With Some Remarks on the Egyptian Origin of Some Popular Birth Prognoses*, 21-22.
[172] Jacques Jouanna, "Egyptian Medicine and Greek Medicine," *Greek Medicine from Hippocrates to Galen: Selected Papers* (Leiden/Boston: Brill, 2012) (2012): 5.
[173] Haimov-Kochman, Sciaky-Tamir, and Hurwitz, "Reproduction Concepts and Practices in Ancient Egypt Mirrored by Modern Medicine," 5.

Provision of sn (*smell*)

The provision of *sn*, "smell," in the loss is prompted by the nose, eye, and cheek determinative, as well as the comparative material discussed above. Gardiner lists *sn* with this determinative, meaning smell, among the most common uses of the sign,[174] which is all that survives of the word on the papyrus fragments. Additionally, the loss is fairly small, and could not comfortably fit more than two narrow or one broad glyph, thus the spelling of *sn* as the folded cloth and two-barbed arrow-head over ripple of water fills the space perfectly. A section from the Hippocratic treatise *The Nature of Women* (section 96), also provides a parallel test, clearly directly influenced by ancient Egyptian medicine, that confirms the observation of a diagnostic odor.

> *On the Nature of Women*, section 96:
> Πειρητήριον· μώλυζαν σκορόδου ἀποξύσας, προσθεῖναι πρὸς τὰς μήτρας· τῇ δ᾽ ὑστεραίῃ τὸν δάκτυλον ἐσαφάσας σκοπεί· καὶ ἢν μὲν ὄζῃ τὸ στόμα, εὖ ἔχει· εἰ δὲ μὴ, πάλιν προστιθέσθω.
>
> Test: Insert into the mother a peeled head of garlic. on the next day, feeling inside with her figure, observe: and if the mouth produces a smell, she holds well [i.e. she has conceived]; if it does not, insert again.

The diagnosis of fertility in this case depends on the ability to detect onion on the patient's breath. Yet, if *sn* is not supplied, there is no clear description of the symptom the *swnw* should check for. Therefore, it is imperative to fill the loss in order to produce a cohesive reading of the case.

[174]Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 452.

CASE 4:

Kahun Medical Papyrus 32057 Column 3, lines 19-20
ky sp nḏrỉ.ḫr=k r=s ḫr sp.t=s ḥnt ḏbʿ=k ḥr ḥrw mnỉɜ=s
[*ỉr*] *nhḳ* [*ỉw=s ms.t ỉr*][175]
tm nhḳ nn ms=s r nḥḥ

Another case. You should hold fast to her upon her lip, the tip of your finger upon the top of her clitoris
[if] it is in a painful condition [she will give birth,
if] it is not in a painful condition, she will not give birth forever [=she will never give birth]

nhḳ as "painful condition"

The crux of this case whether or not the patient displays the symptom ascribed to the verb *nhḳ*. The exact definition of this word is elusive; the Wörterbuch lists it simply as a verb "of condition of woman before pregnancy" (von zustand einer frau vor der schwangerschaft),[176] however, Quirke translates *nhḳ* as "hurt," and the two attestations captured by the TLA translate the verb as "painful" or "damaged."[177] Interestingly, both attestations come from the papyrus Leiden, a magical papyrus from the New Kingdom.

pLeiden I 348, saying 18 (line 11,3)

nhḳ mtw n(*.ỉ*) *mɜʿ*
… the vessels of the temples are painful[178]

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[175] *ỉr* and *ỉw=s ms.t ỉr* have been supplied in area of loss based on analogy with the other cases considered here. Additionally, the conditional construction and prediction of childbirth are necessary to establish the dichotomy between fertile and infertile symptoms.
[176] Wb. II, 288.1
[177]Quirke, "Manuscript for the Health of Mother and Child: "The 'Kahun Medical Papyrus' or 'Gynaecological Papyrus'" (Translation by Stephen Quirke).; Thesaurus Linguae Aegyptiae, Magical Papyri New Kingdom, pLeiden I 348, saying 18 (line 11,3). Ed: K. Stegbauer, Project "Digital Heka", Univ. Leipzig.; Thesaurus Linguae Aegyptiae, Magical Papyri New Kingdom, pLeiden I 348, spell 16, Ed: K. Stegbauer, Project "Digital Heka", Univ. Leipzig.
[178] This is an adjectival predicate sentence. A construction which gives the adjective – here, *nhḳ* – priority, placing it at the front of the phrase, thereby emphasizing the painful condition of the

pLeiden I 348, spell 16 (line 10,3)

mtw nḥḳ mtw nḥḳ
The vessel is damaged, the vessel is damaged![179]

Thus, there is precedent for interpreting the case as an observation of vaginal pain or irritation. Increased vulvar and vaginal discomfort during pregnancy is prevalent among women.[180]

mnỉɜ and *sp.t*

sp.t, here, refers not to the lips of the mouth, but the labia. This translation for the spelling of *sp.t* as the crescent moon over bread *t* and single stroke determinative, follows the second possible translation given in the Wörterbuch," lips of the female vagina" (Lie lippen der weiblichen scheide),[181] after lips of the mouth. Nunn identifies the complete anatomical name as *spty šd,*[182] literally "lips of the *šd*," the opening of the vagina. Thus, *sp.t* securely locates the area of examination in this case as the vagina. *mnỉɜ*, however, is a more enigmatic word; defined in the Wörtbuch as "body part of a woman" (körperteil einer frau),[183] there are no attestations of the

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vessels. Gardiner, *Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum,* 108-9.

[179] Thesaurus Linguae Aegyptiae, Magical Papyri New Kingdom, pLeiden I 348, spell 16, Ed: K. Stegbauer, Project "Digital Heka", Univ. Leipzig. In contrast with the previous statement, the AB nominal sentence construction is more balanced in its emphasis on the vessel and the damage, is more focused on the vessel that is damaged, than the damage itself. Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum,* 102.

[180] Colleen M. Kennedy, Anne M. Turcea, and Catherine S. Bradley, "Prevalence of Vulvar and Vaginal Symptoms During Pregnancy and the Puerperium," *International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics* 105, no. 3 (2009).

[181] Wb. IV, 100.7

[182] Nunn, *Ancient Egyptian Medicine*, 47.

[183] Wb. II, 77.9

word recorded in the TLA. However, the body part is specified as female, suggesting that it is part of the reproductive system or a secondary sexual characteristic, i.e. sex-determinant anatomy. Nunn does not identify any sex organ as the *mnḏꜣ*, but the text suggests that it is in close proximity to the *sp.t*, and externally observable.

I propose that *mnḏꜣ* refers to the clitoris – anatomy only found on female bodies, near the labia, and visible on the outside of the body. Pregnant women can experience swelling of the clitoris and pain radiating out to the labia.[184] In an informal interview, Dr. Alex Polyakov, an Australian gynecologist, speculates that the increased sensitivity is due to additional blood flow to the area and venous congestion.[185] Though the phenomenon is poorly documented in modern scholarship, an online search for accounts of clitoral pain in conjunction with pregnancy returns a slew of personal anecdotes in forums for expecting mothers. The dearth of modern medical research on the topic, despite the phenomenon being a prevalent experience among pregnant women, is reflective of the lack of scholarship on the experience of pregnant women in antiquity. In a personal correspondence with Dr. Eric Jauniaux, he has explained that at during pregnancy, "the pressure of the uterus is sufficient to provoke a general pelvic pressure and displacement of organs that could explain the clitoris pain/hypervascularity."[186] He also postulates that any historical accounts of clitoral pain likely disappeared due to the puritanical attitude of the Victorian era.[187] Whether one accepts clitoris as the translation of *mnḏꜣ*, the underlying physiological phenomenon in the spell is clear – genital pain as a symptom of pregnancy.

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[184] Viola Polomeno, "Sex and Pregnancy: A Perinatal Educator's Guide," *The Journal of Perinatal Education* 9, no. 4 (2000).
[185] Jennifer Hartnett, "5 Ways Your Clitoris May Change During Pregnancy!," Healthy Mummy, https://www.healthymummy.com/5-ways-clitoris-may-change-pregnancy/.
[186] Personal correspondence with Dr. Eric Jauniaux.
[187] Personal correspondence with Dr. Eric Jauniaux.

CASE 5:

Kahun Medical Papyrus 32057 Column 3, lines 23-24
ky sp ỉr mɜɜ=k ḥr=s wɜḏ m wɜḏ swt gmỉ=k ḫt ḥr=s mỉ […]
[…]*y ỉr grt mɜn=k ḫt ḥr ỉrty.sy nn ms=s r nḥḥ*

Another case. If you see her face green with greenness[188] and[189] if you find things on her face like…
…if, furthermore, you see things upon her two eyes, she will not give birth forever [=she will never give birth]

The discoloration of the patient's skin is the critical symptom in this case. Ancient Egyptians paid close attention to changes in the color of one's complexion, as indications of a change in one's state of being.[190] Physicians observed a greenish hue, termed *wɜḏ*[191] that could afflict the lips, skin, and/or eyes of patients suffering for a variety of ailments.[192]

wɜḏ m wɜḏ

This case describes the face of the patient as *wɜḏ m wɜḏ*, "green with greenness." This discoloration is likely representative of the nausea associated with pregnancy, as discussed earlier. The idea of feeling so sick one "turns green" is a common idiom even today. Dobbin-Bennett posits that Papyrus Ebers 191a (=194a) references a greenish skin color of a man with a stomach ache:[193]

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[188] i.e. nauseous
[189] *swt* is an enclitic particle, without the rest of this sentence it is hard to know whether this meant as "but" or "and," I have taken it as "and" because at the very least the following phrase is another symptom.
[190] Dobinn-Bennett, "Rotting in Hell: Ancient Egyptian Conceptions of Decomposition," 166.
[191] Faulkner, *A Concise Dictionary of Middle Egyptian*, 55.
[192] Dobinn-Bennett, "Rotting in Hell: Ancient Egyptian Conceptions of Decomposition," 166-7.
[193] Dobinn-Bennett, "Rotting in Hell: Ancient Egyptian Conceptions of Decomposition," 169-70.

Papyrus Ebers 191a (=194a)
ỉr ḫɜỉ=k z ḥr mn rɜ-ỉb=f
ỉw=f mn=f gɜb=f mnḏ=f gs n rɜ-ỉb=f
ỉw ḏd.tw r=f wɜḏ pw

If you examine a man who is suffering in his stomach
He is suffering in his arm and his chest and the side of his stomach
"He is green" should be said concerning it.

I posit that the suffering the patient is experiencing in his stomach is, in fact, nausea. Thus relating Cases 2 and 5, considered here, as observations of morning sickness in pregnant women.

Quirke translates the phrase *wɜḏ m wɜḏ* as "green with freshness,"[194] based on the verbal form of the color term, *wɜḏ*, "to be green" and by extension through agricultural analogy, "to be prosperous," as the plants growing along the Nile.[195] The connotation of "fresh" is derived from the notion of new growth, which could be connected to the fetus growing inside of the womb. However, I believe that there is not enough evidence within the text definitively conclude that it is not just a description of the patient's skin tone. As *wɜḏ*, in its most basic sense, means to present as the color green, and physical descriptors are the primary basis for diagnosis throughout these cases, it is more conservative to translate it simply as "green with greenness."

Affliction of the eyes

This case relies not only the symptom of an unusual skin tone, but an affliction of the eyes as well. What that affliction is precisely is not clear in the text, however, it is possible that

[194] Quirke, "Manuscript for the Health of Mother and Child: "The 'Kahun Medical Papyrus' or 'Gynaecological Papyrus' (Translation by Stephen Quirke)".
[195] Wolfgang Schenkel, *Color Terms in Ancient Egyptian and Coptic* (Amsterdam, Netherlands: Benjamins, 2007), 218. John Baines, "Color Terminology and Color Classification: Ancient Egyptian Color Terminology and Polychromy," *American Anthropology* 87 (1985): 284.

the *swnw* was meant to look for a green discoloration in her eyes as well as her skin. Papyrus Ebers 877a (109, 18-22) recognizes green-tinged eyes as a side effects of swellings in the limbs:

> Papyrus Ebers 877a (109, 18-22):
> *šsꜣw.w ꜥnw.t n.t šꜥ.t-ḫnsw*
> *ỉr wpỉ=k ꜥnw.t n.t šꜥ.t-ḫnsw m ꜥ.wt nb.t n.t z*
> *gmm=k tp spd kfꜣ s:mꜣꜥ*
> *ỉr.ty=fy wꜣḏ šsm.tỉ*
> *ỉw ỉwf=f sꜣm ḫr=s*
>
> Necessary knowledge and skills of swellings of the carnage of Khonsu.
> If you discern swellings of the carnage of Khonsu in all the limbs of a man,
> you finding the head being sharp and the hinder-parts being correct,
> his two eyes are green and bloodshot,
> His flesh is burning up under it.[196]

The use of the dual in both Papyrus Ebers 877a (109, 18-22), *ỉr.ty=fy*, and Case 5 considered here, *ỉrty.sy*, may suggest that discoloration was only a valid predictor if both eyes showed the symptom. While an observable discoloration of the eye is not a known symptom of pregnancy today, it is a noted phenomenon that women may experience blurred and green-tinted vision while pregnant.[197]

Another possible cause of eye discoloration is maternal anemia, likely a common condition as it can be caused by malaria and other parasitic disorders endemic to Egypt.[198] Malaria is caused by parasites belonging to the genus *Plasmodium*, most commonly *Plasmodium falciparum*, carried by *Anopheles* mosquitoes. Ancient DNA (aDNA) evidence confirms that ancient Egyptians in antiquity were afflicted by the disease. A study published in 2008 of bone and tissue samples of mummified human remains from ancient Egypt, definitively identified

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[196] Dobinn-Bennett, "Rotting in Hell: Ancient Egyptian Conceptions of Decomposition," 167.
[197] Charles Graef, "Eye Conditions in Pregnancy," *Canadian Medical Association journal* 12, no. 7 (1922): 483; George L Mayo and Michael J Tolentino, "Central Serous Chorioretinopathy in Pregnancy," *New England Journal of Medicine* 353, no. 7 (2005).
[198] Personal Correspondence with Dr. Eric Jauniaux.

aDNA of *P. falciparum* in two samples, originated from different periods and location.[199] Malaria is well-known to contribute to maternal anemia and can endanger the life of the mother and child.[200] In 2001, 6.37% of maternal deaths in Africa were either primarily or secondarily attributable to anemia during pregnancy,[201] and it is likely this number was much higher in antiquity. Thus it is possible that this case is presenting not only a method of pregnancy detection, but also intended to evaluate the health of the mother and potential threats to the pregnancy.

Conclusion

In each of these cases, rests a kernel of truth concerning the physiology and experiences of pregnant women and their bodies. All represent distinctly different methodologies, and varying levels of invasiveness, but all are tied to together by the desire to recognize divine intervention in one's own life. *swnw* are not directed in the Kahun Medical Papyrus to treat women who have conceived, nor those who appear infertile, they are only meant to provide a diagnosis because the fate of a mother and her child is beyond human control.

Conception, then, initiates a different phase of life in which mother and child must be tended to, both physically and religiously. After the diagnosis of pregnancy, the safety of the

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[199] Of the ninety-one samples tested, forty-two date to the Middle Kingdom, however the samples that tested positively for *P. falciparum* date to the New Kingdom and Late period. Andreas G. Nerlich et al., "Plasmodium Falciparum in Ancient Egypt," *Emerging Infectious Diseases* 14, no. 8 (2008): 1317-18.

[200] For extended discussions of effects of malaria in pregnancy on the outcome see: RW Steketee et al., "The Burden of Malaria in Pregnancy in Malaria-Endemic Areas," *The American Journal of Tropical Medicine and Hygiene* 64, no. 1_suppl (2001): 28, 31-2; Bich-Tram Huynh et al., "Influence of the Timing of Malaria Infection During Pregnancy on Birth Weight and on Maternal Anemia in Benin," 85, no. 2 (2011): 214, 16.

[201] Bernard J. Brabin, Mohammad Hakimi, and David Pelletier, "An Analysis of Anemia and Pregnancy-Related Maternal Mortality," *The Journal of Nutrition* 131, no. 2 (2001): 607S.

mother and child was secured through the use of magical objects and apotropaic imagery, as will be explored in the next chapter. Thus, in the context of reproduction, magic and medicine work collaboratively but not concurrently during the reproductive process. Reproduction is a vulnerable process for both mother and child, the mortality rate in ancient Egypt for children under five years of age is estimated as high as 50%.[202] Thus, once a *swnw* was able to confirm that a woman had conceived, it would have been paramount to ensure the safe delivery of the highly-valued child into the world.

[202] Teeter, "Earthly and Divine Mothers in Ancient Egypt," 147.

PART III: MAGICAL PROTECTIONS OF CHILDBIRTH

The diagnosis of pregnancy may mark the end of role of the *swnw* in reproduction, but it also initiates a complex process of magical protections for the mother and fetus. As suggested in the previous chapter, it is likely that pregnancy as early as six weeks, leaving approximately seven months remaining of gestation. While the magical tools and practices explored in the chapter were most probably invoked throughout the duration of that period,[203] here I will specifically focus on the process of labor and childbirth at which all of these efforts culminate and prove either successful or devastating. Likewise, many of the objects, such as amulets and birthing wands, were surely used after childbirth to protect vulnerable neonates, but my discussion here will not extend (more than a few minutes) beyond the moment of birth.

Divine Assistance and Magical Protection for Mother and Child

As discussed previously, Quirke identifies the tripartite approach of ancient Egyptian medicine – diagnosis, prescription, incantations.[204] While this maps well onto the general practice of ancient Egyptian medicine, I argue that the approach to reproductive medicine is instead a bipartite approach utilizing medical tests for diagnosis and then skipping directly to magical methods of treatment for pregnant women. Fertility is determined by divine influence, thus prescriptions are unnecessary to aid in conception, as they would be futile. Instead prayer

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[203] A Museum papyrus contains a spell to ward off hemorrhage, an indication of miscarriage. (PBritish Museum 10059 [24] 8, 5-7. In: H. Grapow, *Gundriss*, V, 452-3.) Borghouts, *Ancient Egyptian Magical Texts*, 23. An amulet from Hellenistic Egypt also demonstrates a magical attempt to seal the womb to prevent miscarriage. Ritner, "A Uterine Amulet in the Oriental Institute Collection."

[204] Quirke, "Women of Lahun (Egypt 1800 BC)," 258.

serves as the mechanism for resolving difficulties conceiving.[205] The opening of the "Tale of the Doomed Prince" illustrates the perceived mechanism by which conception occurred:

> "Once upon a time there was a king, so the story goes, to whom no son had ever been born. [But when His Majesty…re]quested a son for himself from the gods of his time, they ordered a birth to be granted him, and he went to bed with his wife that night. Now when she [had become] pregnant and had completed the months of childbearing, a son was born."[206]

This ideology is also apparent in Ramesses II response to the Hittite king's request for *swnw*, discussed in the first chapter; Ramesses requires that the king first appease the Sun and Weather gods, and once they assent to the conception, he will send a physician.[207]

In the "Tale of the Doomed Prince" we see that fertility was not only a feminine concern. Men were equally invested in securing an heir. Two "Instruction Papyri" from the Old Kingdom advise young men to "take a hearty wife,"[208] and "love her with ardor,"[209] so as to produce a son. The "Instruction of Any" of the New Kingdom emphasizes the importance of offspring to men:

> It is proper to make people.
> Happy the man whose people are many,
> He is saluted on account of his progeny.[210]

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[205] The default remedy to infertility was to beseech the gods, however in cases where these pleas were to no avail, adoption was also considered as a solution; see Gay Robins, "Fertility, Pregnancy and Childbirth," in *Women in Ancient Egypt* (Cambridge, Massachusetts: Harvard University Press, 1993), 77-8.
[206] Though this tale comes from a New Kingdom papyrus, it can be understood to parallel older traditions. The practice of writing tales set in older periods is established in the Westcar papyrus, a Middle Kingdom record of Old Kingdom stories. Ritner and Simpson, "The Tale of the Doomed Prince," 76.
[207] Ghalioungui, *The Physicians of Pharaonic Egypt*, 10, 77.
[208] Lichtheim, *Ancient Egyptian Literature: A Book of Readings*, 58.
[209] Lichtheim, *Ancient Egyptian Literature: A Book of Readings*, 69.
[210] *Ancient Egyptian Literature: A Book of Readings*, vol. 2 (Berkeley: Berkeley : University of California Press, 1976), 136.

Excavations at Deir el-Medina and Armana have revealed evidence in the New Kingdom of household shrines to deities with close reproductive associations such as Hathor, Taweret, and Aha/Bes.[211] That these three deities, with strong reproductive associations, feature so prominently in the archaeological evidence of domestic cult worship indicates the amount of attention paid to reproduction in daily life. Also found connection to the shrines were fertility figurines – naked female figures, many with clearly demarcated pubic triangles meant to evoke the fecundity of the female body, and well known from the Middle Kingdom, as well.[212] An incomplete figurine of a bejeweled, but otherwise naked, female was recovered at Lahun, along with a host of artifacts related to domestic cults.[213]

The function of shrines to fertility deities was two-fold: to aid in conception and for protection once it occurred. The gods' relationship to human reproduction was a mutually beneficial one; the fictional account of the birth royal triplets in the Papyrus Westcar demonstrates the reciprocal nature of the relationship:

> Westcar Papyrus 9.22-927
> *ḏd.ỉn ḥm n Rᶜ nb sȝḫbw n ȝst Nbt-ḥwt Msḫnt ḥḳt ḫnmw: ḥwy ȝ šȝs=tn smsy=tn Rd-ḏdt m pȝ ḫrdw Ḥ nyt m ḫt=s nyt ỉrt ỉȝ(w)t twy mnḫ.t m tȝ pn r ḏr=f, ḳd.sn r(w)-pr(w)-tn sḏfȝy=sn ḫȝw.(w)t=tn swȝḏ=sn wdḥ.(w)=tn sᶜȝy=sn ḥtpw-nṯr=tn*
>
> The majesty, Ra, Lord of Sabkhu, said to Isis, Nepthys, Meskhenet, Heqet, and Khnum: Oh you shall travel [and] you shall[214] cause the delivery[215] of Ruddedet from[216] the three children who are in her womb, who will perform this office of

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[211] Robins, "Fertility, Pregnancy and Childbirth," 75; Anna Stevens, "Domestic Religious Practices," *UCLA Encylopedia of Egyptology* 1, no. 1 (2009).
[212] Robins, "Fertility, Pregnancy and Childbirth," 75.
[213] Stevens, "Domestic Religious Practices," 3,10,13.
[214] *šȝs=tn* and *smsy=tn* are perspectives, indicated that they will happen in a defined future, prescribed by Re.
[215] *s* causative. Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 211.
[216] There is an intentional sense of movement connoted by the preposition, *m*. Here it is emphasizing the movement from Ruddedet's womb into this world. The *s* causative in the

> excellence in this land in its entirety, they will build your temples, they will provide your altars, they will make prosperous[217] your libation vessels, and make great/increase your divine offerings.

In addition to offerings, ancient Egyptians drew on the power of a plethora of magical imbued objects to aid in the protection of mother and child. Wegner maps the role of magical in childbirth through the identification of the magical reproductive objects and then categorization by maternal ownership to ownership by a magical practitioner.[218] Included in this group are amulets, written spells, discussed later, birthing bricks, and serpent wands (figure 1). Elaborately designed birthing tusks, also referred to as wands, played a significant role in magical reproductive protection, explored later in this chapter. The unifying element of all of these objects is the protective power they derive from the apotropaic imagery that adorns their surfaces. A spell from Leiden papyrus demonstrates the use of a magical object to help hasten the birthing process in the New Kingdom. The spell is to be recited over an amulet in the form of the dwarf god Aha(t), also known as Bes, whose apotropaic power and reproductive associations are discussed below, in order to alleviate the suffering of a woman in labor.

> Leiden papyrus I 348 [30] vs. 12, 6-9
> Oh good dwarf, come, on account of then who sent you – for that is Pre, the one who is standing while Thoth is sitting, his feet on the ground, <in> the embrace of Nun, <his> hand<s> on the ceiling! Come down, placenta, come down, placenta, come down! I am Horus the conjure! And the one who is giving birth has (already) become better than she was, as if she were delivered. Oh *špr.tw-n=s*, wife of Horus, Nekhbet the Nubian one (and) the Eastern one, *Wnw.t* , lady of *Wnu*! Come place, act <for> the one

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previous clause, indicates that this is only made possibly through the help of the goddesses, as Ruddedet is having a difficult labor, as stated later.

[217] *swꜣḏ* in its most literal sense translates to "cause to make green," i.e. the way a fertile landscape turns green with plant growth. The abundance of crops is directly tied to prosperity, thus we get the connotation of *swꜣḏ* as "make prosperous."

[218] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom," 480-3.

> who is <in> your power! Seem Hathor will place her hand on her <as> an amulet of health. I am Horus who saves her!
>
> Words to be said 4 times over a dwarf of clay, placed on the vertex of a woman who is giving birth (under) suffering.[219]

The use of a clay representation of Aha to summon the god himself highlights the sympathetic nature of ancient Egyptian magic. Representations of deities and magical entities were not simply two-dimensional, but could actually function as manifestations of divine powers.

Mortality and the Process of Childbirth

Ancient Egyptians seemingly devoted exorbitant amounts of energy and resources to ensuring successful reproduction. Quirke deems the phenomenon "a necessary obsession with securing the most precious and often most elusive goal for a society: safe birth."[220] Indeed still today hopeful parents can accrue tens of thousands of dollars in medical bills seeking fertility treatments, sometimes to no avail. But exactly how risky was childbirth?

It is impossible to know exactly what percentage of children died in infancy, and how frequently mothers died in childbirth. The prevalent practice of burying infants under 12 months old under the floor of a home, and apart from the dead interred in cemeteries, is well attested at Lahun.[221] This practice suggests infant mortality was a common enough occurrence that it gave rise to a traditional, and distinct, burial treatment. Infants hearty enough to survive childbirth were still vulnerable to disease and internal health complications. Using the Coale-Demeny

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[219] J. F. Borghouts, *Ancient Egyptian Magical Texts*, ed. M. S. H. G.; Hoens Herma van Voss, D.J.; Knappert, J.; Kramers, R. P.; van Proosdij, B. A.; Waardenburg, J. D. J., vol. 9, Relgious Texts Translation Series Nisaba (Leiden: E. J. Brill, 1978), 39.
[220] Quirke, "Women of Lahun (Egypt 1800 BC)," 250.
[221] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 33-35; Stevens, "Domestic Religious Practices," 12.

Model West, Golden estimates a 33.4% mortality rate within the first year of life, and a 49.2% mortality rate within the first five.[222] Due to the nature of the skeletal evidence from cemeteries, providing a small sample size and complications in determining cause of death in women of reproductive age, it is not possible to produce an estimate of ancient maternal mortality rates.[223] Despite the many hazards, many women, of course did successfully bear children. An ordeal unlike any other in the human experience, there were very prescribed practices that dictated how it occurred.

There is no question that childbirth is a traumatic experience for women; even without complications, women can experience painful contractions, bleeding, and perineal tearing.[224] In the Tale of the Birth of the Royal Triplets, Re tells the goddesses *st pw ntt ḥr mn=s ḳsn ms=s*, "there is a woman who is suffering [because] her labor is difficult," referring to Ruddedet.[225] A woman's body excretes high levels of oxytocin during labor and the day following birth, this helps a mother forge positive associations with the experience, despite the extreme pain,[226] encouraging her to reproduce again. In a time before epidurals, ancient Egyptians called on the gods to provide a speedy and safe childbirth, an understandable reach for support during a time

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[222] Mark Golden, "Mortality, Mourning and Mothers," in *Naissance Et Petite Enfance Dans L'antiquité*, ed. Véronique Dasen (Academic Press Fribourg, 2004), 147. For extensive discussion of infant mortality in antiquity see Golden (2004). For discussion of estimated modern infant mortality rates in Africa see: Jacob A. Adetunji, "Infant Mortality Levels in Africa: Does Method of Estimation Matter?," *Genus* 52, no. 3/4 (1996).

[223] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 32.

[224] For more on the dangers of vaginal delivery see: Haimov-Kochman, Sciaky-Tamir, and Hurwitz, "Reproduction Concepts and Practices in Ancient Egypt Mirrored by Modern Medicine," 7.

[225] A statement to which the goddesses respond, *dỉ=k mɜ=n sy mk n rḫ,wyn smsy*, "may you allow us to see her, we know about birth," demonstrating their familiarity with the process of childbirth.

[226] For more on maternal recall of labor pain see Catherine A. Niven and Tricia Murphy-Black, "Memory for Labor Pain: A Review of the Literature," *Birth* 27, no. 4 (2000).

of extreme discomfort. In a spell from the Leiden Papyrus, the speaker, assuming the identity of Horus, says:

> Leiden Papyrus I 348 [31] vs. 12, 6-9
> I found somebody calling who stood weeping. His wife was nearing her time…The wife of the man had cried for a statuette of a dwarf of clay: "come, let somebody betake himself to Hathor, the lady of Dendera. Let her amulet of health be fetched for you, that she may cause the one in childbirth to give birth!"[227]

The invocation of divine help is also seen in Leiden I 348 vs. 12, 6-9, provided above, which involves Aha, Horus, and Hathor in aiding the woman in labor. Once again turning to the tale of the royal birth in Papyrus Westcar, we can see the functional role gods were seen to play in delivery:

> Westcar Papyrus 10.7-8
> *rdi ꜣst ḫft ḥr=s Nbt-ḥwt ḥꜣ=s ḥḳt ḥr sḫꜣḫ mswt*
>
> Isis placed [herself] in front of her, Nepythys behind her, Heqet hastened the birth

The goddesses are serving as midwives to Ruddedet, their physical arrangement around the woman in labor mirrored in the birthing scene on the Abydos birthing brick.[228]

As there is no written account preserved (or at least discovered as of yet), much of the process of childbirth is left to speculation. From depictions, such as that on the Abydos brick, we can be certain that midwives were involved, but the identity of those midwives remains uncertain. Szpakowska posits they could be any woman who had previously gone through the experience herself.[229] Just as the reenactment of myth to invoke divine power is a common

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[227] Borghouts, *Ancient Egyptian Magical Texts*, 39.
[228] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom."
[229] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 24.

component of spells,[230] by performing the roles of the goddesses in birth, the midwives function to summon divine help in the "delivery room."

I use the phrase "delivery room" here a bit liberally. The precise setting for childbirth in the Middle Kingdom is hard to locate. Some scholars have identified a room at the fore of the house as a space reserved for mother and newborn, however this seems unlikely as it would be rather exposed if the goal was isolation. This designation was made based on the presence of so-called mud-brick "birthing beds" in houses from Dear el-Medina and Amarna, richly decorated with religious fertility iconography.[231] Szpakowska suggests instead a reading of these objects as multi-functional altars to fertility deities, postpartum purification rites, and infant care.[232] Mammisis (*pr.w-ms.wt*) – birthing houses – are known in the Late and Ptolemaic periods connected to temples.[233] The Papyrus Westcar provides a Middle Kingdom reference to a two-week post-natal purification period,[234] presumably during which the mother and child would have needed an isolated space: *ꜥḥꜥ.n Rd-ḏdt wꜥb.n=s m wꜥb n hrw* 14, then Rudeddet became pure in a cleansing of 14 days.

The method of childbirth is less enigmatic. So-called "birthing bricks" were stacked two-high on either side of the mother for her to support herself on as she squatted to give birth. A relief from Dendera depicts such a pose in the New Kingdom, and evidence from the Middle Kingdom confirms this as the practice then, as well.[235] No bricks were recovered from Lahun,

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[230] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 24.
[231] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 25.
[232] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 26.
[233] Holger Kockelmann, "Birth House (Mammisi)," (2011): 1-2.
[234]Papyrus Westcar 11.18-19.
[235] Image is reproduced in Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom."

but a brick mold was found,[236] indicating the mass production of such mud-bricks. In their role as a physical support for the mother, the bricks function partially in the medical realm, but as medical equipment, rather than treatment. These bricks were not only functional, but religiously powerful, as well. The goddess Meskhenet is often portrayed as a brick with a female head, and plays a determinative role in the fate of the baby with regards to social status.[237] Roth and Roehrig posit that the newborn infant was placed on top of a birthing brick as a protective measure and to allow Meskhenet the opportunity to assess the child.[238] The deterministic power of the goddess is elucidated in the account of her role in the birth of the royal triplets in the Westcar Papyrus. At the birth of each son, the following process is described:

> Westcar Papyrus 10.12-14
> *iʿ.ỉn=sn sw šʿd ḫpȝ=f rdỉ ḥr ỉfdy m ḏbt ʿḥʿ.n ms.n sy Msḫnt r=f ʿḥʿ.n ḏd.n=s: nswt ỉr.ty=fy nsyt m tʿ pn*
>
> They washed him, cut the cord of his navel,[239] [and] placed [him] upon a rectangular cloth[240] as a brick. Meskhenet then[241] brought herself to him (i.e. approached him) and then she said: a king who will perform the kingship in this land in its entirety.

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[236] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 25.
[237] Ann Macy Roth, "The Pss-Kf and the 'Opening of the Mouth' Ceremony: A Ritual of Birth and Rebirth," *The Journal of Egyptian Archaeology* 78 (1992): 130, 36-37.
[238] Ibid., 131-2, 36-37.
[239] Literally, the thing of his navel, which for a newborn can be understood has his umbilical cord.
[240] Here the lexeme *ỉfdy*, usually translated simply as rectangle or brick, is determined by a fringed strip of cloth (Gardiner S28), leading to the interpretation of the term as a rectangular piece of cloth.
[241] The *ʿḥʿ.n* construction is a sequential grammatical component denoting a temporal relation of events. The verb *ʿḥʿ* originally means "arise" or "stand," thus what follows the construction is what arises next in the sequence of events. Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 392-93.

Meskhenet's name, itself, is a reference to this position in childbirth, and therefore demonstrative of its importance. *msḫnt*, can be taken either as "in front the child," or, "in front of birth," as a compound of the preposition *ḫnt* (in front of)[242] of either the lexeme *ms* (child)[243] or the roots of the verb *msi* (bear, give birth).[244] The newborn's position, *ḥr ỉfdy m ḏbt* (upon a rectangular cloth like a brick), is more ambigious than that of the goddess, however. Roth and Roehrig's proposal, that the infant was placed atop the actual birthing bricks, is in agreement with William Kelly Simpson's translation of the phrase as "upon a cushion on bricks,"[245] which suggests that cloth was used to as padding between the infant and mud brick.[246] This hinges on the translation of the preposition *m* as "upon," which does not possess its usual connotations of motion, e.g. "toward" or "from." Here, I have taken it as the *m* of predication,[247] which connotes an identity, the subject is "in the position of" X. Thus, the rectangle of cloth is not stacked on top of the birthing brick, but actually serving as a proxy, possibly so as not to lay a newborn infant on a material as harsh as mudbrick, but that is purely speculative. This would not necessarily diminish the impact of placing a baby on a birthing brick.

A Middle Kingdom birth brick excavated from Wah-Sut, near Abydos, partially preserves decoration on five of the surfaces, discussed in depth below,[248] illuminates the way in

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[242] Faulkner, *A Concise Dictionary of Middle Egyptian*, 194.
[243] Faulkner, *A Concise Dictionary of Middle Egyptian*, 116.
[244] Faulkner, *A Concise Dictionary of Middle Egyptian*, 116.
[245]William Kelly Simpson, "Narratives and Tales of Middle Egyptian Literature," in *The Literature of Ancient Egypt: An Anthology of Stories, Instructions, Stelae, Autobiographies, and Poetry*, ed. William Kelly Simpson (Yale University Press, 2003), 22-23.
[246] For a logistical and philological discussion see Ann Macy Roth and Catharine H Roehrig, "Magical Bricks and the Bricks of Birth," *The Journal of Egyptian Archaeology* 88, no. 1 (2002): 131-32.
[247] Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 40-41.
[248]Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom."

which laying the newborn on a brick for protection could have been visually potent. The sides of the brick all preserves fragments of apotropaic figures thus with the newborn set on top, he/she would have been encircled by protective forces. The ability to ward off harm through the use of apotropaia, and the potency of the act of encircling, is intrinsic not only to birthing bricks, but another magical object, magic birthing wands.

Magic birthing wands

I will now consider the magic birthing wands, that are found primarily in tombs, and have been called by many different names over the course of their study;[249] here I will use 'magic wand' or 'birthing wand,' as it is most certainly not a knife,[250] and the term wand connotes its definitively magical power well. These objects are predominantly made of ivory from hippopotami, shaved down to be flat on one side and convex on the other, preserving the arc of the tusk from which it was derived. This type of object is very abundant in the archaeological record; Quirke's compendium of birthing wands from the Middle Kingdom in 2016 attests well over 70 known wands, and it is not exhaustive.[251] Most of these wands have been recovered from funerary context, however, use-wear patterns and ancient repairs evidence an active life before burial rather than a purely symbolic, inert existence in the tomb.[252] Several are severely abraded

[249] E.g. magic knives, birthing tusks, magic wands.
[250] The lack of any sharp edge makes it exceedingly implausible that these objects could have been used as knives. Ritual knives are known from predynastic times, for a discussion of psS-kf knives in relation to childbirth and rebirth see Roth, "The Pss-Kf and the 'Opening of the Mouth' Ceremony: A Ritual of Birth and Rebirth."
[251] Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*.
[252]Small holes were drilled through the separate fragments of the wands and the laced up to bind the fragments back together. For examples, see BM EA24426, UC 35310, UC58633, UC15917, University of Pennsylvania Museum E 12912, Egyptian Museum Cairo CG 9439. All can be found in ibid.

at the broader edge, often obscuring the panther head depiction.[253] Additionally, the evidence of repair in antiquity is indicative of the wands' great value to their ancient Egyptian owners, who were willing to bear additional costs to maintain them.

While the wands themselves are well preserved in the archaeological recorded, the manner in which the ancient Egyptians used them is not. Some scholars have speculated that they could have been laid on the swollen belly of the mother based on the curvature of the objects.[254] While there is certainly no evidence that can definitively refute this claim, the nature of the original material determines the shape of the wand, which suggests to me that this use is more likely to have been a result of the shape rather than the cause of it. Another, and more clearly evidenced, suggested use of the wands is to draw protective lines in the sand around the mother and child.[255] The abrasion on the ends of some wands could easily have been caused by repeated use, scratching against the rough sand grains. The practice of encircling was a magically potent idea for ancient Egyptians. The term for "remedy" in Middle Egyptian is *pḫr.t,*[256] is derived from the verb *pḫr,* "encircle" or "surround."[257] This derivation illustrates the conception of remedies encompassing the ill and reflects the ancient Egyptian notion of the ordered world being encircled by a thin barrier, retaining the chaotic primordial soup. This idea is also reflected in the decoration of the Abydos birthing brick, which is constructed so as to encircle the scene of

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[253] E.g. UC35309, Berlin 14284, BM EA65439. All can be found in ibid.
[254] Janssen and Janssen, *Growing up and Getting Old in Ancient Egypt*, 9. Vink posits that they could have even just been placed in close proximity to those needing protection. Vink, "The Principles of Apotropaic Magic on Middle Kingdom Wands," 14.
[255] Szpakowska, *Daily Life in Ancient Egypt: Recreating Lahun*, 27. Illustrated in Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom." 481.
[256] Wb I, 549.1-12
[257] Faulkner, *A Concise Dictionary of Middle Egyptian*, 93. For more connotations see Wb. I, 545-6.

a mother and her newborn with apotropaic deities on all sides (Figure 2). Sand, itself, carried potent reproductive ideology. Yearly flood waters deposited massive quantities of productive sediment long the banks of the Nile, forging an ideological link between sand and fertility.[258] Through this association, sand came to perform many ritual functions in religion, art, and architecture.[259] Thus, in the context of childbirth, a practice which involved the movement of sand, especially a manipulation to encircle the mother and child, would have been a powerful defensive against evils.

Iconography and Apotropaia

Beyond their physically protective functions, the iconography of birthing wands adds another dimension of magical protection. The fearsome figures functional apotropaically,[260] frightening away any malevolent forces aiming to harm the mother and/or child. The apotropaic utility of these wands relies on the understanding of the iconography not as "reflect[ions] of reality, but…reality itself."[261] The figures are not simply representations of animals and deities, but manifestations, capable of actively defending the mother and child. The birthing scene on the birthing brick from Abydos provides a good framework through which to understand how imagery can contain divine power (Figure 2). The scene functions as a visual spell, depicting the desired outcome of the delivery – both the mother and newborn alive and well – in which the

[258] Robert Kriech Ritner, *The Mechanics of Ancient Egyptian Magical Practice* (Oriental Inst Publications Sales, 1993), 155.
[259] Robert Kriech Ritner, *The Mechanics of Ancient Egyptian Magical Practice* (Oriental Inst Publications Sales, 1993), 155-7.
[260] The oldest known wands are undecorated. Apotropaic, incised, iconography begins to appear ca. 1850, roughly contemporaneous with the Lahun Papyrus. Vink, "The Principles of Apotropaic Magic on Middle Kingdom Wands," 13.
[261] Vink, "The Principles of Apotropaic Magic on Middle Kingdom Wands," 15-16.

brick would have been used.[262] The blue hair of the women in the scene is an overtly divine feature, strongly linked to representations of Hathor, as is seen on the Hathor standards framing the scene.[263] By depicting the mother and midwives with blue hair the artist infuses "the process of labor and delivery…with the divine presence of Hathor," blurring the line, "both visually and conceptually between mortal mother and divine goddess."[264] The color blue is strongly associated with the both the heavens and the waters of the inundation in ancient Egyptian art; both are potently fertile concept, but especially the waters of the Nile that replenish the earth with nutrients each year and make Egypt a productive land.[265] Hathor is both a sky goddess[266] and supporter of mothers, as discussed later, so her invocation through the use of the color blue is very fitting.

The understanding of the women as Hathor, taken together with the Tale of the Birth of Royal Triplets from the Westcar Papyrus, may illuminate the etiology of the absence of a Middle Egyptian lexeme for "midwife." The women serving as midwives assume not only the same positions as the goddesses in the tale, but a divine identity, as well; in the case of the Abydos brick, both midwives and the mother have been imbued with the essence of Hathor. Thus, there is no term for midwife because women do not act as their mortal selves in the role, but rather as goddesses, and thereby allow goddesses to act through them. The assumption of another identity

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[262] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom." 456.
[263] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom." 456.
[264] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom." 456.
[265] Richard H Wilkinson, "Symbol and Magic in Ancient Egypt," *London: Thames & Hudson* 31 (1994): 107.
[266] Claas Jouco Bleeker, *Hathor and Thoth: Two Key Figures of the Ancient Egyptian Religion. With 4 Plates*, vol. 26 (Brill, 1973), 46-48.

in the recitation of a spell is common, and seen in the spells cited elsewhere in this chapter. This withdrawal from oneself allows a divine or magical agent to act through one's own body.

Wegner posits that the potency of the visual spell would have been compounded by the use of verbal spells.[267] The combined use of spoken incantations and objects can be used to magically invigorate inanimate representations with the power of those same agents. Papyrus Leiden I 348 vs. 12, 6-9, cited in-full above, direct that it is to be said "over a dwarf of clay, placed on the vertex of a woman who is giving birth (under) suffering."[268] Similarly, many birthing wands bear inscription on their backs, which could serve as incantations to "activate" their iconography on the front. One such inscription is written from the perspective of the processing figures stating:

> Recitation by the many protective deities: "We have come that we may extend our protection around the healthy child Minhotep, alive, sound, and healthy, born of the noblewoman Satsobek, alive, sound, and healthy."[269]

Here, again, the assumption of the identities of the powers to be invoked facilitate their manifestation. I speculate that the user of a birthing wand would have read such an inscription aloud as he/she drew lines in the sand, based on the analogous recitation of the Leiden I 348 vs. 12, 6-9, while the dwarf is laid on the vertex of the women. Thus, through the activation of the wand the apotropaic figures become active defenders of the mother and child.

The apotropaic function of these wands is apparent, but how are we to conceptualize the 'malevolent forces' they ward off? There was no conception of "demons" as semi-divine,

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[267] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom." 458.
[268] Borghouts, *Ancient Egyptian Magical Texts*, 9, 39.
[269] Wand New York MM 08.200.19; Vink, "The Principles of Apotropaic Magic on Middle Kingdom Wands," 14.

actualized beings in the Middle Kingdom, derived from the Greek lexeme and conception of δαιμων.[270] Rather demons existed "in the sense of cruel or hostile entities" that dwelled in the *duat* (afterlife), and who could invade the body and cause harm to the living.[271] The notion of demons emerging from the *duat* to attack their victims is especially potent for a woman carrying a child. These are creatures of death, and therefore the exact antithesis of creation. Whereas deceased ancestors contain reproductive power as souls reborn into the afterlife, these demons are entities fixed in death. Their ability to invade the body and cause bleeding[272] would be equally disturbing for an expecting mother, as vaginal bleeding is a symptom of miscarriage. While these demons could certainly incite fear, how their power was harnessed through the engraved decoration of the magic wands is discussed below.

There were many dangers in daily life of a more mundane nature as well. The natural world provided many menaces to daily life, especially on the banks of the Nile. A 1998 study of the risks of human co-existing with large carnivores in Africa found that nearly 75% of the 275 lion attacks from 1923-1924 were fatal, and that hippopotami (herbivores) actually produced a higher percentage of fatalities than lions.[273] The wands, created from hippopotamus ivory, inherently possess the raw power of the animal in its material, and can then channel that power against hostile forces. The conclusion of the tale of the birth of the royal triplets in the Westcar Papyrus demonstrates how suddenly these threats could become a reality: *ꜥḥꜥ.n=s šm.tỉ r ỉkn n=s nhy n mw ꜥḥꜥ.n ỉt.n sy msḥ,* Then she [the maid] went to draw for herself some (amount of)

[270] For greater discussion of the categories of beings, both human and demonic, see Kasia Szpakowska, "Demons in Ancient Egypt," *Religion Compass* 3, no. 5 (2009).
[271] Szpakowska, "Demons in Ancient Egypt," 799.
[272] Szpakowska, "Demons in Ancient Egypt," 801.
[273] Adrian Treves and L Naughton-Treves, "Risk and Opportunity for Humans Coexisting with Large Carnivores," *Journal of Human Evolution* 36, no. 3 (1999).

water, [but] then a crocodile snatched her. This can account for the large amount of animal iconography of apotropaic objects, as discussed below.

There is a repertoire of figures and deities that commonly appear on the wands, here I will consider a subset of these figures through the examination of a birthing wand in the Michael C. Carlos Museum (MCCM) collections (2008.055.001). The wand is a fascinating case study as it is canonical in some respects and surprising in others.

Michael C. Carlos Museum Wand

Figure 8. Magic Wand. Egyptian. Middle Kingdom, 1980-1760 BC. Ivory. Purchased by the friends, colleagues, and students of Dr. Peter Lacovara in recognition of his 10th anniversary at the Michael C. Carlos Museum. 2008.55.1. © Michael C. Carlos Museum, Emory University. Photo by Bruce M. White, 2012.

The wand is a dark brown, almost black color – not the typical color of ivory. The color may be the result of being dipped in oil; the consistency of the darkening indicates that it is not

just the result of oils from a handler's skin. The wand is reconstructed to 34cm long, perhaps a bit too closely as I will discuss later. The more pointed end terminates in the head of jackal. The arc of the wand appears straighter near the jackal head, becoming more curved as it continues in the direction of the processing figures. This is a feature seen on multiple wands, perhaps for functional purposes as a handle. From the jackal head the wand quickly broadens, and then begins to taper again before its ends in a break. This break is likely not far from the true end, however, which would have been broader than opposite side and likely terminated in a panther head. The procession of figures is enclosed by incised lines, above and below, which represent the bounds of the cosmos, thereby creating a microcosm upon the wand.[274]

Beginning from left to right, and following the direction of procession, there is a knife-bearing sun disc, a jackal head upon one paw also carrying a knife, the back half of what appears to be a calf upon a pedestal, with a sun disc between its horns and carrying a flail. The front of the calf figure has been lost, and I argue that the resulting lacuna should be longer than it is currently reconstructed to be, and would have featured an Aha(t) figure. Emerging from the other side of the lacuna is the head of feline, likely Sekhmet, and an associated knife. Next, there the fire symbol sitting upon a table, followed by a knife-bearing ram, and crocodilian-feline composite creature. There is an odd, uneven, looping pattern above the fire symbol and body of the ram. The next figure is a peculiar amalgamation of beings, however not unique to this wand; it is a winged griffin – a falcon-headed feline – with a human head positioned between its wings. The final image before the break is a Tawaret figure, the hippopotamus goddess of pregnancy.

[274] Vink, "Boundaries of Protection. Function and Significance of the Framing (Lines) on Middle Kingdom Apotropaia, in Particular Magic Wands," 158.

The figures on the wand – and the ones noticeably absent – are closely tied to the reproductive process the wand was created to protect.

Knife-bearers

The sun-disk of Re is a potent divine image, and the birth of a child is through many motifs to the daily rebirth of Re. The addition of legs to the sun disk further evokes the sense of it as an active agent. The convention of adding legs to hieroglyphic symbols to denote action is well known, for example, legs are added to biliteral symbol, "*nw,*" which represents a water pot,[275] to create a new glyph "*ỉn*," used in the spelling of the verb "bring" or "fetch."[276] Thus, the addition of legs to the sun disk on the MCCM wand demarcates the figure as an actor, not just a passive image. The one-footed jackal head is slightly enigmatic, the figure is reminiscent of a hieroglyph depicting a jack-head on a staff, which can be used to spell the word *wsr*, "powerful."[277] Quirke writes that the "choice of an animal leg rather than staff leads open the precise reference of the motif," but notes that a jackal head upon a pair of legs is used in throne names of three Tell el-Daba kings.[278]

The ability of these figures to be aggressors against malevolent forces is crucial to the utility of the wand, and their tactics are not limited to the physical attacks. The lines emerging from the mouth of the crocodilian feline indicate that it is roaring, producing what would have

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[275]Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 530-31.
[276] Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 531.
[277] Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 462. Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 347.
[278] Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 347.

been a very intimidating audial experience for any evils nearby. The iconography draws heavily on the natural power animals possess, especially that of felines. This is a logical appropriation both of the raw power and also the inherent protectiveness of lionesses over their cubs. Sekhmet, whose name is derived from the word *sḫm*, "powerful,"[279] is associated with extreme violence[280] and the near destruction of mankind.[281] However, she can also be associated with healing, as should could both afflict and rid people of pestilence, a useful trait for an apotropaic deity, and an ability considered further below. A leopard also appears as an apotropaic symbol on Side E of the Abydos birthing brick.[282]

The knives that that all of these figures carry amplify their intimidating nature. However, in addition to their apotropaic value, the knives may also be functioning allusions to the birth process, itself. *psš-kf* knives are known from Pre-dynastic times as both ritual and functional elements of the "Opening of the Mouth" ceremony, they are found primarily in funerary contexts, but appear on temple inventories, as well.[283] Roth argues that in the funerary context, *psš-kf* knives function analogously to their role in childbirth, in order to facilitate the deceased's rebirth through the "Opening of the Mouth" ceremony.[284] The concave shape and sharp edge of *psš-kf* knives would make them practically useful to cut the umbilical cord.[285] Roth also sees

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[279] Wb. III, 245.10.
[280] George Hart, *A Dictionary of Egyptian Gods and Goddesses* (London, Boston and Henley: Routledge & Kegan Paul, 1986), 187-89.
[281] Szpakowska, "Demons in Ancient Egypt," 801-2.
[282] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom." 455.
[283] Roth, "The Pss-Kf and the 'Opening of the Mouth' Ceremony: A Ritual of Birth and Rebirth," 113-16.
[284] Roth, "The Pss-Kf and the 'Opening of the Mouth' Ceremony: A Ritual of Birth and Rebirth," 117-23.
[285] Roth, "The Pss-Kf and the 'Opening of the Mouth' Ceremony: A Ritual of Birth and Rebirth," 123.

evidence for this use in the organization of the Pyramid texts, which associated with *psš-kf* knives with the moments directly following birth: "The *pss-kf* and the *ntrtj*[286] are offered in the Pyramid Texts ritual after the spells that mimic the king's passage through the birth canal and before he begins to nurse. This would imply that they were used soon after the birth of a child."[287]

The recumbent calf and Hathor

The recumbent calf sits as a representative of Hathor upon the wand.[288] Hathor, herself, is often depicted as a cow goddess, either in human form with the head of a cow or entirely bovine.[289] The portrayal of the calf with a sun disk between its horns is further evidence its connection to Hathor. The scenes of Hathor in her Bovine form nursing Amenemhat III and Hatshepsut, from the Middle and New Kingdoms, respectively, both show a sun disk resting between the horns the goddess.[290] This iconography is consistent across mediums, appearing on copper and faience votives depicting Hathor cows from the 15th century BCE.[291] It is important to distinguish that Hathor is not a representative of domesticated cattle, but rather an

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[286] Another type ritual blade associated with the "Opening of the Mouth" ceremony.
[287] Roth, "The Pss-Kf and the 'Opening of the Mouth' Ceremony: A Ritual of Birth and Rebirth," 123.
[288] Quirke identifies a very similar "wrapped cow" on four other birthing wands of a recumbent long-horned calf, seated on a pedestal and carrying a flail, which are reminiscent of Old Kingdom iconography of the *sed*-festival. However, the MCCM wand figure is clearly distinct from this motif as neither the calf, nor the pediment, appear wrapped in cloth, the defining characteristic of the wrapped cow motif. Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 395-96.
[289]Geraldine Pinch, "Offerings to Hathor," *Folklore* 93, no. 2 (1982): 139. For examples of her with the head of a cow see the Dendera relief mentioned above, for Hathor in her full bovine form see below.
[290] Roberts, *Hathor Rising: The Serpent Power of Ancient Egypt*, 44-45.
[291] Pinch, "Offerings to Hathor," 141.

embodiment of the wild cow that dwelled in the marshy Delta.[292] The association with a wild animal would imbue her with its untamed power. The recumbent calf on the MCCM wand carries a flail as its weapon of choice, rather than a knife, an indication of this power that it harnesses against malignant forces.

Here bovine origins in the Delta also imbue Hathor with great reproductive power, as the marshy delta soil is very fertile. It is this power that likely earns her a place on the MCCM wand; she is not only apotropaically protective, but a kind support to mothers. Hathor's bovine form is also an indication of her benevolence, which she assumed to nurse the god Horus as an infant.[293] Hathor could also help with the nursing of mortal children, an immediate of concern of new mothers needing to feed their children. A spell to "quench the thirst of a child" describes "the Holy Cow [putting] her teat in [the child's] mouth."[294] Thus magic allowed Hathor to help new mothers by proxy.

The relationship between Hathor, motherhood, and the process of childbirth is well established in ancient texts and iconography; she aids in the delivery of Ruddedet's triplets in the Westcar Papyrus,[295] frames the birthing scene on the Abydos birth brick,[296] and nurses infants and the deceased about to be reborn.[297] A spell from the Leiden papyrus illustrates both the reciprocal nature of the human-divine relationship and the perceived importance of Hathor's role in childbirth:

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[292] Bleeker, *Hathor and Thoth: Two Key Figures of the Ancient Egyptian Religion. With 4 Plates*, 26, 30.
[293] Pinch, "Offerings to Hathor," 140.
[294] PRamesseum III, B. 14-17. Borghouts, *Ancient Egyptian Magical Texts*, 44.
[295] Lichtheim, *Ancient Egyptian Literature: A Book of Readings*, 1, 220.
[296] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom." 458-63.
[297] Roberts, *Hathor Rising: The Serpent Power of Ancient Egypt*, 44-45.

> Leiden papyrus I 348 [28] rt. 13, 9-11
> Open for me! I am the one whose offering is large, the builder who built the pylon for Hathor, lady of Dendera, who lifts up in order that she may give birth. Hathor, the lady of Dendera is <the> one who is giving birth!
> This spell is to be said for woman.[298]

Here, the speaker invokes the help of Hathor, seemingly necessary for birth to be able to occur, but in the last line the woman in labor also appears to assume the identity of Hathor — an idea represented visually in the Birthing scene of the Abydos birthing brick, as discussed above.

Through aiding in delivery and providing nourishment for infants, Hathor plays a crucial role in the support and health of mother and child. Thus, the flail-wielding recumbent calf on the MCCM wand, definitely possesses apotropaic power, but Hathor's protective role in the reproductive process extends far beyond this purpose, alone.

Fire symbol and Sekhmet

The fire symbol is the only inanimate figure taking part in the procession on the MCCM wand, and is appears on only four other wands in Quirke's compendium of birthing wands.[299] It is the same symbol that is used as the determinative for fire in writing, and is described by Gardiner as a "brazier with flame rising from it."[300] Quirke posits that it is in conversation with the sun disk at the start of the procession, to indicate that the wand will provide protection both day and night; an interpretation that is supported by inscriptions on some wands.[301] The

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[298] Borghouts, *Ancient Egyptian Magical Texts*, 9, 39-40.
[299] Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 397.
[300]Gardiner, *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. 3d Ed. Rev. Pub. On Behalf of of the Griffith Institute, Ashmolean Museum*, 500.
[301]The phrases *sꜣ grḥ*, "protection of the night," and *sꜣ ḥrw,* "protection of the day," appear on four tusks. Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 397.

interpretation of the symbol as a temporal marker is especially relevant to the fire sign's juxtaposition with Sekhmet.

Emerging from the edge of the largest lacuna, and just before the symbol, is the head of the feline goddess Sekhmet. As mentioned above, she had the power to inflict disease as well as dispel it. She accomplished this through the manipulation of a few groups of "demons," the most relevant to this studying being the *khaty,* often translated as "demons of darkness."[302] Their subservience to Sekhmet is illustrated in a passage from the Leiden Papyrus, in which they are described as "demons of darkness who stand in waiting upon Sakhmet [sic]."[303] Thus, Sekhmet may not only function apotropaically on the wand – a role in which should would be particularly useful – but also as an allusion to the kind of forces that might be seeking to harm the mother and child at night. The fire symbol, then placed prominently in front of the goddess, serves to repel those specific evils that sneak up in the dark. The act of fire repelling darkness would have been a potent experience for the ancient Egyptians, who depended on fire as their light source after sunset. Each night they would have been able to watch as the fire burned, casting light into the area around them, and staving off just a small bit of darkness.

[302] Also translated as "murderer" and "slaughters" Szpakowska, "Demons in Ancient Egypt," 801-02.
[303] Leiden I 346 1, 102, 5. Translated and paraphrased by Szpakowska, "Demons in Ancient Egypt," 802.

Taweret

The final figure in the procession preserved on the MCCM wand is the goddess Taweret. She is a composite deity, primarily a hippopotamus, but possessing the tail of a crocodile and the breast of a human woman. Once the concubine of Seth, she deserted him in favor of Horus in the dispute over the Egyptian throne,[304] making her a model of a chaotic power turned for good. Her pendulous belly may be a reference to physical appearance of pregnant women, but could also just be reflective of the physique of hippopotami. In contrast with Hathor, Taweret is not a kind or benevolent, she embodies the raw power of hippopotami, and the danger they posed in daily life in ancient Egypt. Hippopotami are responsible for more deaths in Africa, annually, than any other large animals,[305] and their attacks on humans are more often fatal than those of leopards and lions.[306] The hunting of hippopotami was a forceful motif in the iconography of Kings, known from the Old Kingdom through the Ptolemaic period. The earliest representations occur on seal stones, and later become monumentalized in reliefs, such as those from the funerary temples of Sahure and Pepi II and Temple of Edfu.[307] Kings used images of themselves spearing hippopotami from boats, sometimes accompanied by the god Horus, to insinuate that they could over power the untamed creatures, and to maintain order (*ma'at*).[308] The birthing wands appropriate the power of hippopotami in a different manner, depicting of a goddess in the form of a hippopotamus to direct their aggression against evils.

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[304] Hart, *A Dictionary of Egyptian Gods and Goddesses*, 211.
[305] Isabel. Stünkel, "Hippopotami in Ancient Egypt," *Heilbrunn Timeline of Art History* (New York: The Metropolitan Museum of Art, 2017), http://www.metmuseum.org/toah/hd/hipi/hd_hipi.htm.
[306]Treves and Naughton-Treves, "Risk and Opportunity for Humans Coexisting with Large Carnivores," 277.
[307] Wilkinson, "Symbol and Magic in Ancient Egypt," 177-8. Roberts, *Hathor Rising: The Serpent Power of Ancient Egypt*, 103.
[308] Wilkinson, "Symbol and Magic in Ancient Egypt," 177.

Hippopotami are fiercely maternal animals that closely monitor their young, and roar forcefully at the slightest indication of a threat, before becoming violent. This behavior, and the fact that hippopotami bear only once child at a time,[309] make the hippopotamus an ideal form for the protective goddess of pregnant women. The nearly ubiquitous representation of Taweret of birthing wands is also indicative of how powerful her image was;[310] as much harm and trouble as hippopotami could cause humans, Taweret could inflict an equal amount, if not more, upon evils seeking to harm a mother-to-be.

Figure 9. Mother and child Hippopotami in the Mpala Research Centre and Wildlife Center, Laikipia County, Kenya.

Aha(t)

Notably absent, or lost, from this wand's iconography is the depiction of Aha, the fighter. Aha, sometimes also shown as the female Ahat, is a leonine dwarf god, cognate with the Bes

[309] Stünkel, "Hippopotami in Ancient Egypt."
[310] Taweret is also a popular subject of many amulets, and appears on side B of the Abydos birth brick. Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom." 454. Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 330-34.

image in later periods.[311] Due to the fragmentary nature of the MCCM wand portions of the iconographic procession are lost; I propose that an Aha(t)[312] figure once filled one of those lacunae, as a prominent apotropaic deity with strong reproductive associations. Though an Aha(t) figure does not appear on every complete wand known today, the image is present on a great many of them.[313] In order to understand why the absence of an Aha(t) figure is so surprising, first one must consider the image where it does occur.

The name "Aha(t)" itself is powerful. *ḥꜣ* is the root of the verb "fight,"[314] and, in its substantive form, "fighter," or "warrior."[315] Aha(t) possesses power and ferocity of lion, combined with an aggressive nature, suggested by his name, making him the ideal candidate to be an apotropaic deity. This unusual stance can be explained by observations of lions in nature; due to the angle of the of the pelvis in quadrupeds, in order to stand upright on their hind legs, lions must bend their knees to a near 90º angle. As a largely leonine deity, it follows that Aha(t) would display this behavior as well. Atypically for ancient Egyptian art, Aha(t) is shown in full frontal view, arms and legs akimbo. In many cases, the figure holds snakes in either fist at his hips, that arc up an away from his head. This type of Aha(t) image is typical of the Middle

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[311] Bes is typically the name given to images I am discussing here – a dwarf, leonine god. However, Bes is the New Kingdom name is of a composite god, known as Aha ("fighter"), Soped ("shrieker"), and Amam ("grasper") at other times. As I am concerned primarily with the Middle Kingdom, I will refer here to the figure as Aha, as he would have been known contemporarily to the creation of these wands.

[312] I choose to maintain the use of Aha(t), as the postulated figure could be either the male or female form of the deity. However, I will default to masculine pronouns as the predominance of known examples are of Aha, in his male form.

[313] Of the 60 Middle Kingdom representations of Aha/Bes known in 1989, 39 were on birthing wands. James F. Romano, *The Bes-Image in Pharaonic Egypt*, vol. 1 (Thesis, Ph. D., New York University, 1989., 1989), 34. Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 357-60. Examples: BM EA6178, Lisht L14, Ramesseum T2, Aswan A1. All can be found in ibid.

[314] Wb. I, 215.1

[315] Wb. I, 216.2

Kingdom.[316] A blue frit wand fragment from the Brooklyn Museum (16.580.145) provides a fascinating example of this type, in a most unusual material.

The wand end fragment if very short (~3.5 inches long), but easily identifiable by the panther head and iconography. There are no other known wands carved from frit, however the color blue carries divine suggestion and has an interesting relationship with childbearing iconography, discussed later. As mentioned, the wand terminates in panther head. Only the final two figures of the procession preceding the panther head can be discerned: an in pot with long legs, and an Aha figure, gripping snakes in either hand.

Snakes are themselves a very powerful animal in ancient Egyptian iconography and myth, as well as a very real threat of daily life. A papyrus in the Brooklyn museum is nearly entirely devoted to the treatment of snakebites of various kinds.[317] The snake was a powerful animal, not in might, as a lion, but in its stealthy ability to cause harm. The depiction of Aha(t) as the master of snakes allows the owner of the wand to harness serpentine power for their own protection by proxy. This conception is evident in Coffin Text spell 885: "The snake is in my hand and cannot bite me."

Serpentine iconography is also mythically bound to reproduction. Each night Ra must battle Apep, a giant serpent, in order to be reborn.[318] Thus, using the parallel of Re's rebirth each sunrise and human childbirth, we can understand mastery of serpents as an important element of

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[316] See Romano, *The Bes-Image in Pharaonic Egypt*, 1, 33-45. For discussion of variations within the Middle Kingdom.
[317] Sh Aufrere, "Symptomatology of Ophidian Bites According to Brooklyn Papyrus No. 47.218.48-85: Epistemological Aspects of an Ancient Egyptian Text Copied out at Ivth Century B.C.E," *Anthropozoologica* 47, no. 1 (2012): 223.
[318] Szpakowska, "Demons in Ancient Egypt," 804 (n. 13).

reproduction. Serpent wands were also part of the magical practitioner's toolkit and can be seen being used in conjunction with Magic wands in the tomb chapel of Bebi at El-Kab.[319]

Aha(t), himself, as an achondroplastic dwarf is inherently a symbol of unlikely infant survival. There is skeletal and iconographic evidence of dwarfism in Egypt from the predynastic period through the Thirteenth Dynasty.[320] Today, only ~50% of infants born with achondroplasia survive into adulthood, that number is estimated to drop to 20% for the ancient world.[321] The power of a deity that overcame an 80% chance of dying as an infant protecting a mother and fetus would have been profound.[322] The use of dwarf iconography as a good luck charm in childbirth appears in the Leiden papyrus, cited above. The practitioner of magic is instructed to invoke the dwarf (god) by reciting a spell over an amulet in his form. This also illustrates the tenet of ancient Egyptian magic that allows for representations of the divine to become manifestations with the proper magical provocation.

The Aha(t) figure, thus, earns its space on the real-estate limited birthing wands as a figure profoundly connected to successful reproduction and fiercely capable of warding off malignant forces. For these reasons, one can expect an Aha(t) to appear on apotropaic objects, and I postulate that his absence on the MCCM wand is likely do to loss rather than true absence. The object has been reconstructed so that the curve of the wand appears much more dramatic than contemporary comparanda. However, if the fill between the recumbent calf and Sekhmet

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[319] Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom," 482.
[320] Warren R. Dawson, "Pygmies and Dwarfs in Ancient Egypt," *The Journal of Egyptian Archaeology* 24, no. 2 (1938): 188.
[321] Kent R. Weeks, "The Anatomical Knowledge of the Ancient Egyptians and the Representation of the Human Figure in Egyptian Art" (Yale University, 1970).
[322] James F Romano, "Notes on the Historiography and History of the Bes-Image in Ancient Egypt," *Bulletin of the Australian Center for Egyptology9* 89 (1998): 98.

were lengthened to allow for two more figures – one vertical, and one horizontal – this would accommodate a gentler arc, maintain the alternating pattern of horizontal and vertical figures, and give an appropriate placement for an Aha(t) figure.

Enigmatic figures

There are two particularly enigmatic elements of the MCCM wand's iconography: the feline-bodied griffin with a human head perched between its wings and the loops that fill the space above the ram and fire symbol. The first of which has puzzled scholars for decades and the second has gone mostly unacknowledged. The griffin figure occurs on numerous wands,[323] but Quirke cites only one occurrence on another object: a limestone cup in the Petrie Museum.[324] Quirke primarily discusses variations in the style and composition of the figures, e.g. whether the body is a cheetah or leopard and the tilt of the head, but comments very superficially on its interpretation.[325] He essentially concludes that the figure is apotropaic in his statement, "The primary aim of such motifs would be projective, to prevent the possibility of any force becoming inimical, rebelling against the creator."[326]

The looping pattern appears on at least five other wands,[327] but Quirke does not discuss it as an iconographic motif. The pattern is quite enigmatic, resembling no creature, deity, or hieroglyph. It could possibly be a stylized form of snake, which due appear frequently in empty

[323] Quirke counts at least 30 tusks with a variation of this motif. Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 353.
[324] . Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 356.
[325] . Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 353-54.
[326] . Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 355.
[327] BM EA 24425, Ramesseum T3, Louvre AF6447, Louvre N1489, M.E. 6883. All can be found in . Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*.

space above figures, but in most instances, they have a clearly differentiated head and appear as single lines, never in intertwined pairs.[328]

Conclusion

The richness of iconography and magical practices in the archaeological record is a testament to its importance in antiquity and paints a vivid picture of the pregnancy experience. From the moment her pregnancy was positively diagnosed, a mother-to-be would have been found herself engulfed the iconography of reproductive magic and her time preoccupied with divine pleas and spells. There is no evidence as to whether working women would continue to hold their positions during pregnancy, but much of their time and energy must have been devoted to their own safety and that of their fetus. An endeavor that would have brought them in close communication with divine forces.

As demonstrated above, through the use of magical practices pregnant women interacted divinities and good invoke the help of goddesses. It seems to me doubtless that pregnancy must have been a very spiritual experience, to be so deeply entrenched in magico-religious practices. The divine pleas that survive, some of which are cited, betray that it was also a very anxious time of life. The high chance of mortality, for both the mother and child necessitated the great number of apotropaic objects and spells. Considering the high vulnerability of pregnant women, the belief that goddesses, such as Hathor and Taweret, were present and supporting them, probably brought these women great comfort.

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[328] E.g. Assassif T5. Quirke, *Birth Tusks: The Armoury of Health in Context - Egypt 1800 BC*, 105.

CONCLUSION

The richness and depth of reproductive thought in ancient Egypt manifests itself in the contemporary texts and material culture and exists primarily inside of a religious framework. This study examines the intentional interplay of those manifestations. The intentional use of the verb *sḏȝ* in Kahun Medical papyrus sets apart the cases on conception from the rest of the text. There exists at that moment a shift in mindset from the *swnw* as healer, to *swnw* as an interpreter, both of the body and divine will. The heading ("Determining a woman who has conceived from she who is not conceiving") also places the reader in the middle of the ongoing process of conception, which required both sex and divine assent. This is a distinctly new, and nuanced, reading of this rubric, which inherently alters the lens through which ancient reproductive medicine is read. It also distinguishes pregnancy diagnosis from the methodology and attitude used in treating other medical concerns. The phrase *nn ms=s r nḥḥ,* "she will never give birth," occurs at the end of three of the conception cases, and indicates that despite trying to conceive, the patient has not been able to do so. She likely would have blamed her inability to conceive on unsuccessful appeals to the gods, a sentiment shared in Ramesses' letter to the Hittite king. The title of this study, *it is child to her*, is taken from the first conception case in the Kahun Papyrus and reaffirms the notion of a pregnancy as a gift to the woman, i.e. a gift from the gods.

Religious thought also prescribed a woman's experiences from before conception until she delivered her child. She could secure pregnancy and successful delivery through the cooperative efforts of medical and magical treatments at very specific points in the reproductive timeline. Women used magic as a tool to appeal to the gods, who were involved throughout the process, to both help them conceive and later to maintain their health that of the fetus. Medicine was a diagnostic tool to determine if their initial divine pleas were successful, and to incite the

switch in focus from conception to protection, when appropriate. The survival of household shrines, medical texts, and apotropaic spells and objects all help to construct a sequence of practices that map onto the reproductive timeline, with diagnosis occurring around the three-to-four month mark.

As discussed in the introduction, ancient Egyptians used magic as a functional branch of their religion. They believed that magical objects had the power to affect change in the real world. This belief must have had a potent psychological effect on pregnant women. The placebo effect is well known in modern medicine, the phenomenon by which patients experience improved health when they are taking what they believe to be medicine but are in actuality sugar pills.[329] It is possible that through a similar mechanism magic could have benefitted expecting mothers through positive psychology; she believed her health was being protected by the gods, and she felt better as a result.[330] Thus, even if ancient Egyptian magic failed to manipulate the external world, it may not have still been functional in promoting the health of mother and child.

The notion that each and every pregnancy required divine approval speaks to the trend towards a more personal conception of religion that has its roots in the Middle Kingdom. The suggestion of divine with individual women's pregnancies is present both in text and iconography, e.g. the Abydos birthing brick. The religious thought and practices surrounding reproduction evolved over time, along with the culture. Despite the remarkable degree of cultural continuity over of the course of thousands of years, it is dangerous to think that medicine and

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[329] First described in Henry K. Beecher, "The Powerful Placebo," *Journal of the American Medical Association* 159, no. 17 (1955).

[330] Systematic research into the effects of positive psychology is still rather new, however, it has long been anecdotally connected with improvement in patients with chronic ailments. For a systematic review of research see: Anindita Ghosh and Amrita Deb, "Positive Psychology Interventions for Chronic Physical Illnesses: A Systematic Review," *Psychological Studies* 62, no. 3 (2017).

magic remained stagnant, as it is so often treated in scholarship.[331] The focus of this study in the Middle Kingdom, in contrast with a diachronic approach, allows it to speak to the experiences of a very specific subset of ancient Egyptian women. However, the consideration of evidence from other time periods is still essential. In this study, the comparison both highlights the Middle Kingdom roots of New Kingdom practices and allows for informed suggestions to fill gaps in the archaeological record.

Much of a woman's value lay in her ability to reproduce. The phrase "the one who is giving birth has (already) become better than she was, as if she were delivered," from a spell in the Leiden papyrus, cited in Part III, illustrates the appreciation of women through childbirth. As such, birth held a great deal of societal importance, and was not necessarily singular event for a person's *ka* (spirit). In addition to mothers who gave birth to multiple children, each person went through the birth process twice; once at the beginning of life and then after death, when he/she was reborn into the afterlife. A full examination of these parallels is outside the scope of this study, but it is important to recognize that fertility was a concern at all stages of a person's life, regardless of gender. The abundance of reproductive iconography and objects in funerary settings evidences the truly parallel nature of childbirth and rebirth in the minds of the ancient Egyptians. Roth and Roehrig were the first to formalize the connection between the unbaked mud bricks found in tombs and birthing bricks.[332] Both depictions of birthing wands and the wands themselves are common in tombs.[333] Both of these birth processes were also strongly

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[331] Ritner, "Innovations and Adaptations in Ancient Egyptian Medicine."
[332] Roth and Roehrig, "Magical Bricks and the Bricks of Birth."
[333] Figures brandish them in wall and coffin decoration during both the Middle and New Kingdom. For examples see, the interior of the back panel of the out outer coffin of Djehytynakht and in a wall relief from the tomb of Djehutyhotep and a wall decoration from the tomb-chapel of Bebi. Vink, "The Principles of Apotropaic Magic on Middle Kingdom Wands,"

linked to the daily solar birth. I have touched on this association briefly, but a thorough analysis of the correlation of the birth of Re and human birth is beyond the capacity of this study.[334] However due to their religious significance, it is worth noting these parallels, as their connection with childbirth certainly would have intensified the spiritual component of reproduction for women. There is much still to explore in how the experiences of women during reproduction informed ancient Egyptian conceptions of the journey of the *ka* into the afterlife, and the ways in which those experiences were informed by their cosmology.

The idea of fertility was incredibly potent in ancient Egypt, and religious practice and iconography were immersed in it. The Kahun Medical Papyrus, the Abydos birthing brick, and the abundant number of magic birthing wands, prove exactly how complex and steeped in religious thought the reproductive experience was in the Middle Kingdom. So, I contend that the Kahun Papyrus, and surviving material culture, are anything but "disappointing," as Nunn would have his reader believe. True, they may not contain much that is analogous to modern gynecological or obstetric practices, but they are something much more valuable than simply a mirror of what we are already familiar with: they are a window into a very vulnerable, but critically important, period in the lives of women four millennia ago.

13; Vink, "Boundaries of Protection. Function and Significance of the Framing (Lines) on Middle Kingdom Apotropaia, in Particular Magic Wands," 273.

[334] For more on this topic see: Wegner, "A Decorated Birth-Brick from South Abydos: New Evidence on Childbirth and Birth Magic in the Middle Kingdom." 458-63. Nyord, *Breathing Flesh: Conceptions of the Body in the Ancient Egyptian Coffin Texts*, 37, 419-78. Roth and Roehrig, "Magical Bricks and the Bricks of Birth;" Ann Macy Roth, "The Pss-Kf and the 'Opening of the Mouth' Ceremony: A Ritual of Birth and Rebirth," ibid. 78 (1992). Frandsen, "The Menstrual "Taboo" in Ancient Egypt," 100-04; Vink, "The Principles of Apotropaic Magic on Middle Kingdom Wands."; Vink, "Boundaries of Protection: Function and Significance of the Framing (Lines) on Middle Kingdom Apotropaia, in Particular Magic Wands."

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