MORE NEEDS SHE THE DIVINE THAN THE PHYSICIAN.” WILLIAM SHAKESPEARE. MACBETH, 5.1 (81).

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ABSTRACT
Ancient Roman physicians studied the anatomy and physiology of the female genital system. Women physicians were among them. They used observation, palpation, primitive diagnostic tests and patient symptoms to diagnose female genital diseases. They employed medical and surgical procedures and drugs to treat these diseases. The Medici and Medicae also monitored normal and abnormal pregnancies. Excellent medical care saved many women and babies, which inter alia, led to a large Roman population that included quantitative and qualitative components. A large population facilitated the development of a large and effective military establishment.

INTRODUCTION
Women were an integral part of the success of the Roman empire. They played an irreplaceable part of all aspects of Roman culture and civilization. Although their military role was limited, women were the center of gravity of the home front. Civilian activity in support of the armed forces was and remains critical to the morale of soldiers in peacetime and war. As a veteran of the Vietnam War I assure you that letters and packages from wives, or significant others are the most important contributors to morale.[1] Sulpicia, of Rome ((1st century B.C.) wrote to her lover, Cerinthus, a soldier fighting on the Roman frontier: “Venus kept her promise. let someone tell of my joys, someone who is said not to have had joys of his own. I would not wish to entrust anything to sealed tablets, lest anyone read it before my lover does. But to have sinned delights me, to put on a façade bores me: may I be reported as a woman worthy to have made love to a deserving man.”[2]

The main purpose of this article is to demonstrate that class and social connections were more important than social construction or gender in determining the rise of women to high social position. The key question addressed is whether class and social connections, or gender and social construction are more important to the professional success of women. This study focuses upon gynecologists and obstetricians since medical doctors have been given a high social standing throughout history. Critical source information is extracted from Greek and Roman physicians, artifacts, archaeological discoveries, coins and modern scholars. The main inference is that women physicians came primarily from the Patrician class (the noble families) rather than the Plebian class (the common families). Many women physicians practiced obstetric, gynecocratic or pediatric medicine. “Obstetrics” is the branch of medicine that concerns assistance to women during pregnancy, childbirth, and the puerperium.[3] “Gynecology” is the study of the diseases of the female reproductive organs and the breasts.[4] “Pediatricians” focus on the treatment of children's diseases.[5] It is improbable that Roman women could have become physicians without access to significant financial resources and social contacts. Following this line of reasoning, the implications are a better understanding of the status attainment of women in medicine and other fields. Failure to take this line of reasoning, leads to a lesser understanding of the status attainment of women in medicine and other fields. The main point of view presented in this article is class and social connections are more important than gender or social construction for the advancement of women in any era.

PRIMARY SOURCES
Aulus Cornelius Celsus (first century A.D.) wrote a study of medical techniques and medicines, Pedanius Dioscorides (A.D. 40-80) compiled an extensive list of drugs and other materials used in medicine. Claudius Galen (A.D, 129-205) developed a systematic approach to medical procedures, and Paulus AEgineta (625-690) wrote a medical encyclopedia, Medical Compendium in Seven Books. Flavius Renatus Vegetius (4th century A.D.) wrote a chapter on desirable physical conditioning and mental acuity. Soranus of Ephesus (1st century A.D.) wrote a book on gynecology.[6]

METHODOLOGY
The available historical materials do not permit an empirical approach to the topic of Roman women physicians (medicae). Therefore, the research design of this study employs a combination of historiography and
conceptual analysis. Historiography is an approach based on the concept that historical knowledge provides the basis and rationale for valid knowledge about human activities and achievements. Conceptual analysis is based on careful analytical evaluation of ancient literary sources, inscriptions, pictorial sources, coins and archaeological discoveries.

**OCCUPATIONS**

Women were free to enter any career field except the military. Although they could not vote women were active in politics in several ways. A woman’s career choices depended on factors which still exist today. Some of these factors included: intelligence, talent, emotional stability, determination, social and economic status and contacts, and the wealth of their families. Class mattered. Roman female citizens had an advantage over freedwomen who were not Roman citizens. Both groups had a predominate advantage over female slaves. Upward social mobility was difficult but not impossible. Slaves were limited to prostitution, gladiators, servants and menial labor. Freedwomen could own businesses, perform in the arts and entertainment, skilled labor and sales and services. Service as midwives and wet-nurses were available to both slaves and freewomen.[7]

Women of the patrician class studied and practiced prestigious professions such as medicine, law and other fields which required advanced studies. Politics and political leadership affect every aspect of the economic and social life of a people. The wives of emperors, governors, senators, generals and other high-ranking officials often were able to influence their husbands on political matters. Women took part in political campaigns and organized themselves as political interest groups. These organizations influenced policy decisions which affected women and children. For example, in 195 B.C. the conventus matronarum (Wives Assembly) successfully lobbied to repeal the Oppian Law against luxury.[8] Only patrician wives attended the conference.

During the Roman Empire women held high political offices. Priestesses such as the Oracle of Delphi, and the Chief vestal Virgin (virgo vestalis maxima) influenced public policies, including those which affected war and peace.[9] Julia Symiamira (180-222) served as a senator of the Roman Senate. Emperor Antonius Heliogabalus (203-222) appointed her to this position. Julia “issued decrees of the Senate. dealing with laws applying to married women.”[10] Although no woman served as emperor in the Western Roman Empire, four women served in this capacity in the Eastern Roman Empire (Byzantine Empire): Irene Sarantapechaina (797-802); Zoe (1042-1056) and Theodora (1055-1056) Porphyrogenita; and Yolanda of Flanders (1217-1219).[11]

**WOMEN PHYSICIANS (MEDICAE)**

There were wo ways in which a Roman physician could receive authority in practice medicine in ancient Rome. The first way was to attend one of the prestigious medical schools at Alexandria, Egypt or Cnidus or Cos near Athens, Greece. For example, Hippocrates studied at Cos, and Galen studied at Alexandria.[12] Only wealthy patrician women or men could afford the cost of studies at these medical schools. The second way to become a physician was to enter into a pupil tutor relationship with an established physician. This method required many years of study and mentored clinical practice. Although the Roman state did not issue medical licenses, significant standards for the practice of medicine can be extrapolated from: the Hippocratic Oath, Roman customs and usages, laws passed by the Roman Senate and by Roman common law found in the decisions of praetors and other judicial officials.[13]

Many medicae chose to specialize in obstetrics and gynecology or pediatrics. Women had been having children, caring for them and serving as midwives long before recorded history. They, and their female relatives, also experienced diseases and maladies common to women. Therefore, they had practical experience in these areas. Soranus gives the typical procedure for physician assisted natural childbirth practiced by female and male obstetricians.

**PARTURITION**

The medica placed the pregnant woman on a blanket on the floor of a room with a clean sheet superposed upon it. Then she placed a pillow under the patient’s hips and propped up her back during contractions. The first stage began with the onset of labor and lasted until the release of amniotic fluid and the cervix dilated to 10 cm. During the second stage the medica encouraged the patient to push as the top of the infant’s head became visible at the opening of the vagina (introitus). While the physician pressed down upon the abdomen, family members or medical aids (nurticus delegantur) held the patient’s legs in a flexed, separated position. The medica helped to remove the head, shoulders and rest of the baby’s body from the mother and placed the infant on her abdomen. Then she clamped and cut the umbilical cord with surgical instruments previously boiled in water and allowed to cool. During the third stage of labor the placenta ejected from the mother’s body.[16] In some cases, the pregnant woman received sedatives and analgesics prior to childbirth. The sedative of choice was Corn Poppy (Papaver rhoeas).[15] The analgesic of choice was a fine powder made from the bark of the Willow tree (Salix). Terentia Prima (17th/20th cent A.D.) was a medica capable of this procedure.[17]

Roman physicians performed cesarean sections only under the most extreme medical circumstances. Typically, the woman would not survive but the baby might. Blood transfusions and antibiotics had not yet evolved into medical practice. Prior to the operation the medica gave the woman a draft of wine containing powdered mandrake (Mandragora officinarum).[18] The patient was in the supine position as the surgeon or
medical assistant cleaned and applied vinegar (acetum) to the surgical site.\textsuperscript{[19]} Then the assistant applied a powder made from Henbane seeds (Hyoscyamus niger) in an ointment containing wool fat to the site.\textsuperscript{[20]}

Physicians performed preoperative and surgical procedures as quickly as possible. An assistant boiled all surgical instruments and other materials in water prior to use if time allowed. The medica made a vertical midline incision in the abdominal wall and uterus to deliver the baby.\textsuperscript{[21]} Then she sutured the openings, applied vinegar and honey to the site and her assistants applied a bandage to the wound.\textsuperscript{[22]} If the mother survived, the medical staff bleeding and infection were monitored frequently. Cold applied to the incision and analgesics helped control pain and swelling. The patient received Opium (Papaver somniferum) for severe pain.\textsuperscript{[23]}

When fever was high, even after taking salicylates, physicians ordered that the head of the patient be kept cool with ice or cold compresses and the body kept warm with blankets. Medicae changed the dressing of vinegar, honey and bandage to the sutured area on a routine basis. Diet and appropriate exercise were important considerations in the recovery process.\textsuperscript{[24]} Primilia (1\textsuperscript{1}/2\textsuperscript{21} cent. A.D.) was a medica skilled in this procedure.\textsuperscript{[25]}

Contraception and Abortion

Roman medicae advised patients of techniques designed to prevent conception during coitus. A favorite method was to insert an acidic substance such as honey or vinegar with a cervical cap in the form of a lock of fine wool into the orifice of the uterus.\textsuperscript{[26]} Induced abortion was a dangerous procedure in ancient Rome. It generally occurred only when there was a clear and present danger to the life of the mother. The procedure included cervical dilation and surgical curettage. Again, an assistant boiled the curet and other surgical instruments in water and allowed to cool prior to the procedure. Soranus stated: “After the abortion one must treat as for inflammation.”\textsuperscript{[27]}

Inflammation of The Uterus

Heat, redness swelling, fever, bleeding pain occurs with inflammation of the uterus. Soranus recommends that the physician inject warm olive oil\textsuperscript{[28]} containing powders with high emollient properties into the uterus by means of a clyster.\textsuperscript{[29]} Acacia, aloes, myrrh, Coltsfoot (Tussilago farfara) and Marshmallow (Althea officinalis) were common substances added to the oil.\textsuperscript{[30]} Physicians controlled fever with salicylic acid and cold compresses in the aforementioned manner and controlled pain with analgesics already mentioned. In this article Antiochis of Tlos (1\textsuperscript{1}/2 cent. B.C.) treated uterine diseases and worked on both male and female patients for other maladies.\textsuperscript{[31]} Soranus recommends a sitz bath or hot sponge bath as part of the treatment for inflammation of the uterus.\textsuperscript{[32]}

BREAST CANCER

In an era without modern diagnostic instruments such as x-rays, CAT scans, MRIs, etc. breast cancer was difficult to diagnose. Roman medici knew nothing about chemotherapy, radiation therapy, immunotherapy or other modern treatment options. Roman physicians depended on direct observation, examination, palpitation and symptoms to detect cancer. If the tumor was small and recently formed surgeons used excision in combination with cauterization. AEgineta stresses the common viewpoint “to cut the tumor out by the roots.”\textsuperscript{[33]}

SURGERY

Surgeons had a variety of instruments to perform surgery on the breasts. Examples are: corvus (surgical knife), volsella (tweezers, ferrum candens (cauteries), clamps, probes, curettes and several other instruments. An assistant boiled all surgical instruments, lint, fibulæ, bandages, etc. in water prior to use before every operation.\textsuperscript{[34]} Medicæe preferred rain water for all medical procedures and preparation of pharmaceutical products. Wealthy Roman homes had an opening in the roof (compluvium) which allowed rain to enter and collect in a pool (impluvium) which was kept scrupulously clean.\textsuperscript{[35]} A servant stored the water in amphoræ.

In an ideal setting four professionals served in all surgical procedures.

The surgeon performed the operative procedure for removal of the cancerous tissue.

A nutrix chiurgus (surgical nurse) provided assistance to the surgeon. An medical doctor skilled in anesthesiology administered the anesthetic. An orderly performed ancillary duties not specifically related to the surgical procedure.\textsuperscript{[36]}

ANESTHESIA

Surgery for breast cancer or other invasive procedures required general anesthesia.

Roman anesthesiologists employed the Dissociative method of anesthesia. The patient received a sedative, analgesic and local anesthetic and experienced catalepsy, amnesia and marked analgesia.\textsuperscript{[37]} The patient drank powdered opium (Papaver somniferum) in a draft of wine.\textsuperscript{[38]} However, the Romans imported opium from the East via The Silk Road and might not be available. In that case the anesthetist administered powdered mandrake (Mandragora officinarium) in a draft of wine.\textsuperscript{[39]} Mandragora grew in Italy. The sedative of choice was Corn Poppy added to the wine. (Papaver rhoes).\textsuperscript{[40]} A common local anesthetic used by Roman surgeons was a powder made from Henbane seeds (Hyoscyamus niger) and administered.
In a small quantity of wool fat to the surgical site. Prior to surgery the woman would bathe, abstain from food and drink for eight hours. Prior to the application of the local anesthetic a medical staff member applied vinegar (acetum) to the area. The surgeon (medica chiruga) performed the operation as quickly as possible. After surgery the physician sutured the wound, washed it with vinegar, and applied honey (mel) to the wound site. Then, she applied a loose-fitting dressing to the wound.

Bleeding and infection were the main issues of concern. If inflammation should occur aloe, (Aloe vera) applied as a lotion, displayed some anti-inflammatory effects. Vinegar and honey were the main external ingredients designed to prevent and control infection. The medical staff gave patients a draught of a powder made from the bark of a willow tree (Salix). When the fever was quite high, the head of the patient was kept cool with ice or cold compresses and the body kept warm with blankets. Roman physicians had an array of medicines to treat coughs, diarrhea, constipation, nausea and vomiting and other ailments. Diet was also important to patients recovering from surgery. The patient began eating light foods such as broth made from meat, poultry and seafood. As the woman’s health improved, bits of meat, legumes, leafy greens and white mushrooms supplemented the broth. Then she received nuts, prunes, olives mulberries, whole grains, thyme and finally regular food and exercise.

When a patient was strong enough the medica released her from convalescence.

HYSTERECTOMY
Cancer of the uterus could be diagnosed with the help of a vaginal speculum. This Instrument had two opposing portions that, after being inserted, could be pushed apart, for examination of the vagina and cervix. If necessary, the surgeon performed a hysterectomy. This involved surgical removal of the uterus through the abdominal wall because of the presence of benign or malignant tumors. Preoperative and anesthetic procedures were essentially identical to surgery for breast cancer. After anesthetizing the patient, she was placed in the dorsal position with her head low and her legs in an elevated and inclined plane. The surgeon made an incision through the peritoneum, and then determined the extent of diseased tissue. She decided whether or not to leave the cervix in place or remove it and the tubes, ovaries, adjacent lymph nodes and part of the vagina. To prevent excessive bleeding, she clamped and tied off major blood vessels or cauterized them. The surgeon sutured the wound. She then applied olive oil and emollients in the manner of inflammation of the uterus. The surgeon applied vinegar and honey to the wound which she then bandaged. The physician prescribed analgesics, antifebriles and anti-inflammatory medicines. The medical staff paid careful attention to the diet and exercise of the convalescing patient.

VAGINITIS
Roman physicians used garlic Allium Sativum) to combat bacterial and yeast infections of the vagina. The patient used a clove of garlic wrapped in a small piece of gauze and inserted it into the vagina overnight. The patient removed the garlic in the morning. The procedure continued until the procedure cured the patient.

CONCLUSION
Ancient Roman physicians studied the anatomy and physiology of the female genital system. Women physicians were among them. They used observation, palpitation, primitive diagnostic tests and patient symptoms to diagnose female genital diseases. They employed medical and surgical procedures and drugs to treat these diseases. The Medicae also monitored normal and abnormal pregnancies. Excellent medical care saved many women and babies, which inter alia, led to a large Roman population which included quantitative and qualitative components. A large population facilitated the development of a large and effective military establishment and Roman expansion and imperialism.

REFERENCES