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THE MIDWIFE IN HISTORY
WITH SPECIAL EMPHASIS ON PRACTICE
IN MEDIEVAL EUROPE AND IN THE ISLAMIC WORLD

by

Doris Sofie Fischer-Kamel

A Thesis Submitted to the Faculty of the
DEPARTMENT OF ORIENTAL STUDIES
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF ARTS
In the Graduate College
THE UNIVERSITY OF ARIZONA

1987
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APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

Dr. William J. Wilson
Professor of Oriental Studies

Date
I would like to express my sincere appreciation to those who have helped and encouraged me during the course of this study.

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ABSTRACT

I have examined much of the existing literature dealing with the subject of midwifery in an historical context, and I have tried to deal with the topics chosen in as much detail as the scope of this thesis permits. It does, therefore, not claim to be comprehensive.

The subject has been divided into three major parts:
1. Ancient civilizations
2. Islamic era
3. Medieval Europe

Special attention has been given to Islamic midwifery practice, as it is revealed in the original and translated texts of medieval Arab physicians, and as it is presented by Arab writers and historians of that period.

I have also investigated medieval European practice and have focused especially on Byzantium and France, where the influence of Arabic medical knowledge was felt first and foremost, and from where it was transmitted to the rest of Europe.

My thesis concludes that the prejudice against women in general, and against midwives in particular, was not an ancient or an Islamic phenomenon, but almost entirely a medieval European one.
CHAPTER 1

INTRODUCTION

This thesis focuses on women's contribution to medicine, more specifically on the midwife's position and social function through the ages. It is not meant to be an abbreviated history of gynecology or midwifery, nor is it an attempt to name every major contributor in the field of obstetrics, since experts have written many excellent books on the subject. But I will put some of the main ideas into cultural perspective and will try to point out some of the similarities and differences prevalent at different times in history, in various areas of the globe.

Since the history of medicine is the history of civilization and goes back to the beginning of time, it is difficult to separate medical history from world history. But I shall try to present a general historical outline and will focus my attention on three major periods in history:

1. Ancient Civilizations;
2. Islamic Era;

Special emphasis will be placed on the eighth through the twelfth centuries.
I have given examples of Greek ideas in the field of midwifery, since Greek medical knowledge passed into Europe through the Arabs, via the civilization of the Eastern Empire.

Since I have used medical terminology to a great extent, I have included a GLOSSARY OF MEDICAL TERMS at the end of this paper.

Original foreign language texts are reproduced in the APPENDIX.

Although opinions differ as to the beginning or end of the Middle Ages, I shall confine myself to the time period in European history between Antiquity and the Renaissance. This period is often dated from 476 A.D., when Romulus Augustulus, last emperor of the Western Roman Empire, was deposed, to 1453 A.D., when Constantinople was conquered by the Turks.

Much has been written about men's role and their contribution in the medical field, but little has been said about women in medicine, or about midwives. Their social function as healers, nurses, and counsellors has been ignored and deserves to be recognized. This neglect, as the medical historian Kate Campbell Hurd-Mead points out, may not be a deliberate anti-feminist attitude, but simply a lack of appreciation for the work that women have been doing throughout the ages. Women, she says, have been too busy to
say much about themselves and their work (Hurd-Mead 1938, p. vii). This applies particularly to women helping their sisters during childbirth, which later became known as "midwifery." But because childbirth was as much part of a woman's life as healing, nursing, and counselling, and since it seemed second nature to women, no mention needed to be made of those activities.

Through the ages, the practice of obstetrics and gynecology, to use a modern term, has been the domaine of women exclusively, so that midwives must be considered the true forerunners and pioneers of today's obstetricians and gynecologists, although one may say that midwifery began with Adam, and that he was the first "male midwife."

Furthermore, the male physician, particularly in medieval Europe, did not pay much attention to, or show particular interest in the subject of childbirth until the sixteenth century. Generally speaking, women were feared because of their reproductive power, so that the midwife, who was the confidante and helper of women in their hour of need, was often seen as a powerful sorceress, who worked magic with her herbal potions. Childbirth was a family- and social affair, where men were not welcome. This was the case in medieval Europe as in the medieval Islamic world. History seems to bear out, however, that the midwife or "muwallida" in medieval Islamic countries was less feared and more
respected than the *sage-femme*, her European sister. In fact, this difference in attitude may be seen in the name itself. *Muwallida* in Arabic simply means someone who assists in childbirth, whereas *sage-femme* means "wise woman" and seems to imply shrewdness, wisdom, intuition, and omniscience.

But unlike men, women, with very few exceptions, had no access to a medical degree and had, therefore, no formal knowledge or training. Furthermore, men guarded their medical knowledge jealously from women. Yet, in their hour of need, women showed more confidence in their untrained sisters than they placed in a trained male physician. And as much as men kept their medical knowledge from women, women, on the other hand, did not divulge the secrets of childbirth to men. In fact, the lying-in chamber was off-limits to men, and thus soon became shrouded in secrecy so that the office of midwife was viewed with suspicion. Consequently, at different times in history, midwives were called "wise women" as well as "witches." Men feared them and women revered them, and their status differed from one part of the globe to another. While some women saints practiced midwifery, other less saintly women who practiced the same art, were burned at the stake.

In order to present a more complete picture, I found it necessary to look briefly into the practice of midwifery among the ancients, where the roots are anchored. Although
the subject of midwifery, historically, has been treated as a separate item, it is closely related to medicine and alongside medicine suffered the same setbacks, or advances. Since religious beliefs, particularly during the Middle Ages, frowned upon physicians who touched the human body, dead or alive, and since the dissection of corpses was forbidden, anatomical knowledge developed rather late. Furthermore, no self-respecting physician would practice surgery, so that his art was left to the barbers. In fact, there were two kinds of patients whom the ancient physicians always tried to avoid: the near dead, and the child bearing woman. In the former case, physicians were exercising prudence. Childbirth, however, was out of bounds for a number of reasons: there were problems of morals and modesty to consider and problems of social position. And last, but by no means least, there was great ignorance about childbirth, so that the lying-in chamber was left largely to the midwives, although the doctors were often consulted in difficult cases.
CHAPTER 2
EARLY DEVELOPMENT

Si vous consultez les médecins
le mal vous pince d'un côté,
le remède l'autre
(Montaigne)

Midwifery is one of the oldest professions. As one expert puts it "no branch of medicine can claim a longer history than the art of midwifery" (Radcliffe 1967, p. v.). Paleolithic or early Stone Age man (or woman) left cave murals and fertility symbols, showing "women of generous proportions, suggesting that they had adequate gynaecoid pelves" (Towler and Bramall 1986, p. 1). According to the same source, it must be assumed that at this time in prehistory, a woman delivered her baby without help, in a squatting position, with her buttocks or knees supported by boulders. The umbilical cord would be cut with a flintstone, or by biting through it with her teeth (Towler and Bramall 1986, p. 1). The Cro-Magnon woman of 25000 years ago, is said to have been obese, with a large pelvis and gave birth to small children. For her, childbirth was not an arduous task (Leonardo 1944, p. 2).
It has further been pointed out that among the nomadic hunting people the man might conceivably have remained with his wife and assisted her during delivery (Towler and Bramall 1986, p. 2).

One source compares the birth procedure of primitive man [or woman], with that of the females in the animal kingdom. Both females, says Ploss, seek privacy at their time of suffering and may view intruders as threatening to the offspring and to the mother herself. He further points out that a woman giving birth in a forest will choose a place close to a brook where she can bathe herself and her newborn immediately after delivery. If a place close to the beach is chosen, the birth-procedure will be completed with a cleansing ritual by bathing in the sea (Ploss 1902, pp. 32-33).

As Sarton points out, man always was the child of circumstances, and since his environment varied enormously from place to place, he was bound to develop differently in different regions (Sarton 1959, p. 6, v.i). Obstetrical customs, therefore, must also have differed. The knowledge of early obstetrical or midwifery customs, according to Engelmann, may be derived from a study of the various positions occupied by women of different peoples in their labors (pp. xvii-xviii). In general, the menstruating and parturient woman occupied a prominent place in the magical
practices of primitive peoples, but was usually segregated from men during this period (Mettler 1947, p. 931).


It has also been stated that practically nothing is known of medicine and gynecology in prehistoric times, and that we must assume that man has always been concerned with personal and tribal hygiene, and that he treated himself as he treated sick or injured animals. This source also claims that medicine developed from a combination of superstition and folklore, and that primitive people of that time attributed death, disease and injury to demons, witches, spirits, magical forces and gods. (Leonardo 1944, p. 3).

In this context it must be mentioned that our prehistoric ancestors had knowledge of herbs and other drugs, and that they had managed to try and classify many plants according to their utility and danger (Sarton 1959, p. 8). Midwifery, says Sarton, was necessarily practiced,
and the more intelligent midwives improved their methods and taught them to younger helpers (p. 9). It may also be assumed that women in prehistoric times gathered and mixed herbs for painkilling concoctions, and that they administered them to women in labor, as is done among remote and primitive peoples even now. Medicine-men, says Hurd-Mead, were called only for loud noise to scare demons or when greater physical strength was needed to treat a patient (p. 2).

But with increasing social organisation, elderly and experienced women from within the family or tribe replaced the husbands as birth attendants. These "experienced women" became the first midwives. And once they assumed the right to this office, they retained it, to the exclusion of men for the next 10,000 years. But not only would they care for their sisters in childbirth, they would eventually come to care professionally for other women in disease and sickness (Towler and Bramall 1986, pp. 3-4). "And after many thousands of years there was created a human mother with skill in using her hands and her brain for the alleviation of the suffering not only in her own family, but among her neighbours" (Hurd-Mead 1938, p. xvii).
2.1 Archaeic Medicine

Archaeic medicine is the medicine of the ancient civilizations of Mesopotamia, Egypt, India and China. It would improve people's perspective of ancient science, says Sarton, if those who speak of Hippocrates as the father of medicine would bear in mind, that he comes about halfway between Imhotep and us. Imhotep, the wezir of Pharaoh Zoser, lived in the thirtieth century B.C. (Sarton 1959, p. 44). Although, according to Sarton, it is impossible to say when Egyptian culture began, and whether or not it is anterior to Mesopotamian and Chinese culture, the Egyptians and the Babylonians, he claims, are the first two peoples who have left a history. "La médecine considérée comme art ou comme science, existait longtemps avant Hippocrate. C'est des Égyptiens que les Grecs et les Romains ont pris leur sagesse et leurs connaissances scientifiques" (Cumston 1931, p. 37). The medical knowledge of Mesopotamia and Egypt influenced other peoples, and this influence was evident particularly in Syria and Palestine (Pollak and Underwood 1968, p. 28).

The Ancient Egyptians were also familiar with different female complaints, as well as with the practice of midwifery, as shown in the following:¹

¹. See Appendix B, quotation 1.
The diseases of women, gynecology, obstetrics, and the art of midwifery have occupied a special place in the medical practice of Ancient Egypt. Moreover, one is overwhelmed to see the degree of development achieved by Pharaonic science in this area. Several documents deal with menstrual problems, such as the prolapse of the uterus, and metritis [inflammation of the uterus]. It has even been claimed that the Egyptians had knowledge of uterine cancer, and that caesarean sections were performed on the banks of the Nile beginning in 3,000 B.C. (J. L. Gauthier 1955, p. 8).

This is substantiated in the Ebers Papyrus in the chapter "Diseases of Women," where remedies for menstrual problems and lactation are mentioned. For example, to regulate menstruation, the patient was doused over several days with a mixture of garlic and wine, or with a concoction of herbs, honey and sweet beer. Breastmilk was produced by mixing bread with the poppy plant and have the woman eat it while sitting cross-legged (Bryan 1974, pp. 82-83). We also find several suggestions for the correction of a displaced uterus, and advice on how to cause a woman to be delivered (Bryan, 1974, p. 86). Similar formulas to remedy female troubles, in particular the interruption of the menses, may also be found in the Edwin Smith Papyrus (Breasted 1930, p. 489). But whether or not these remedies may be called "Pharaonic Science" as Gauthier calls them, must be left to the individual.

It has been stated, that unlike her primitive sister, the Egyptian woman rarely underwent labor without
some assistance, usually a midwife and a female assistant. The delivery is said to have taken place in a kneeling position, and the mother supported by a male, holding her arms from behind. Other records show the Egyptian woman in an obstetric chair, assisted by four midwives (Mettler 1947, p. 933). When two midwives assisted at birth, the younger one would support the woman from behind, pressing and squeezing the abdomen to facilitate fetal expulsion, while comforting her. The senior midwife would carefully watch for the fetal head to appear, while commenting on the procedure, in order to teach the junior person with her words and by example (Gebbie 1981, p. 11). This is also supported by another source, which points out that "obstetrics was in the hands of midwives, at the head of whom there was a chief midwife. The birth took place in the obstetric chair, assisted by four midwives. The leader of the four squatted before the patient in labor, who was supported by a woman on each side and another from behind" (Pollak and Underwood 1968, p. 21).

Religious regulations also emphasized the cleanliness of woman. Intercourse was forbidden during the menstrual period. While there was no lack of remedies to expedite labor, the production of artificial abortion was severely punished (Mettler 1947, p. 933). This information
is supported by the chief resources in Egyptian medical literature (Kamal 1967, p. 204), such as

1. The Ebers Papyrus,
2. The Kahun Papyrus,
3. The Berlin Papyrus,
4. The London Medical Papyrus,
5. The Carlsberg Papyrus,
6. The Edward Smith Surgical Papyrus.

Confinements were often complicated as a result of bad hygiene, premature delivery, and ignorant midwives (Kamal 1967, p. 204). After an isolation period of forty days, and after the necessary purifying rituals had been performed, the parturient woman joined her family again (Mettler 1947, p. 933).

The Westcar Papyrus, dated 1700 B.C., describes the use of both simple and sophisticated kinds of birth chairs (Towler and Bramall 1986, p. 9). And according to the Ebers Papyrus, the prolapse of the uterus was known and was to be treated by pressure and fumigation. The Egyptians were also familiar with the pessary and the vaginal suppository. Both, despite prohibition, were used to bring about abortion (Mettler 1947, p. 933).

Sources on Ancient Egyptian practices do not say anything derogatory about the position of the midwife, and it must be assumed that midwifery was a respected
profession, since "gynaecology, the study and treatment, surgical and otherwise, of diseases peculiar to women, and obstetrics (or midwifery)" were taught at the women's medical school at the temple of Sais, near the Rosetta Mouth of the Nile River (Marks and Beatty 1972, pp. 41-42). It has also been mentioned that bas reliefs in the royal birth rooms at Luxor and other temples portray midwives in attendance at royal birth. One of these bas reliefs shows a queen in labor on an obstetric chair, with four midwives in attendance. Another one shows a queen squatting to give birth, assisted by five women. Further mention is made of lying-in houses and portrayals of the birth process, on walls of Ancient Egyptian temples. Here, medical male gods, who are said to have been in abundance, were conspicuously absent. But the goddess Isis, goddess of birth, can be seen in attendance (Towler and Bramall 1986, p. 9). This seems to substantiate further that midwifery in Ancient Egypt was a respected female profession.

It must also be mentioned, that the first woman doctor practiced approximately 2730 B.C., and that Egyptian queens were often students of medicine. The more famous ones are Hatshepsut (ca. 1500 B.C.), and Cleopatra (about 69-30 B.C.). Moreover, women attended the medical school at Heliopolis as early as 1500 B.C. (Marks and Beatty 1972, p. 41). Evidence of women studying and teaching at Heliopolis
can be found in the following inscription at Sais: "I have come from the school of medicine at Heliopolis and have studied at the women's school at Sais where the divine mothers have taught me how to cure disease" (Marks and Beatty 1972, p. 42). Heliopolis was a co-educational and priestly school, where Moses reportedly also studied (Mead 1938, p. 25).

While obstetrics was the domaine of midwives, diseases of women seem to have been treated by female doctors. As pointed out in the Kahun Papyrus of 2160 B.C., which might have been written for the students at Sais, women surgeons performed caesarian sections. Whether or not these were successful and saved the lives of mother and child, cannot be ascertained (Leonardo 1944, p. 20).

The position of women in medicine seems to have come full circle. An American Mission Hospital, built with money contributed by American women and children, was opened in Tanta, Egypt in 1904, where hundreds of patients are said to be treated annually. The physicians and the nurses are all women, as they were in the ancient schools at Sais and Heliopolis (Hurd-Mead 1938, p. 23).
2.2 Jewish Practice in Pharaonic Egypt

The medicine of the Old Testament clearly shows traces of Egyptian medicine. It has been shown that the Pentateuch and the Papyrus Ebers were written at approximately the same time (Leonardo 1944, p. 25).

Since the Jews later on in medieval times assumed a middle path between the Christian West and the Islamic East, a few words must be said about Jewish practices in the field of midwifery. Several references to midwives are found in the Old Testament. A midwife attends Rachel, the wife of Jacob: "Then they journeyed from Bethel; and when they were still some distance from Ephrath, Rachel travailed, and she had hard labor. And when she was in her hard labor, the midwife said to her, "Fear not; for now you will have another son" (Genesis 35:17) (ca. 1800 B.C.).

Although Rachel died in childbirth, her son Benjamin lived, as the midwife had prophesied. The midwife, presumably made a vaginal examination and was able to define the sex and discover a breech presentation (Towler and Bramall 1986, p. 6). It has also been mentioned, that Zipporah, the wife of Moses, trained at Heliopolis and that she regularly circumcized babies: "then Zipporah took a flint and cut off her son’s foreskin" (Exodus 4:25).

Further references to midwives are to be found at the birth of Tamar’s twins:
When the time of her delivery came, there were twins in her womb. And when she was in labor, one put out a hand; and the midwife took and bound on his hand a scarlet thread, saying, 'This came out first.' But as he drew back his hand, behold, his brother came out; and she said: 'What a breach you have made for yourself!' Therefore his name was called Perez. Afterward his brother came out with the scarlet thread upon his hand; and his name was called Zerah (Genesis 38: 27-30).

Another example showing the status of midwives can be found in Exodus:

Then the King of Egypt said to the Hebrew midwives, one of whom was named Shiprah and the other Puah, 'When you serve as midwife to the Hebrew women, and see them upon the birthstool, if it is a son, you shall kill him; but if it is a daughter, she shall live.' But the midwives feared God and did not do as the King of Egypt commanded them, but let the male children live. So the King of Egypt called the midwives, and said to them, 'Why have you done this, and let the male children live?' The midwives said to Pharaoh, 'Because the Hebrew women are not like the Egyptian women, for they are vigorous and are delivered before the midwife comes to them.' So God dealt well with the midwives, and the people multiplied and grew very strong. And because the midwives feared God, he gave them families" (Exodus 1: 15-21).

These passages seem to indicate that the midwife was highly valued for her skills, and that she knew how to diagnose a twin pregnancy.

The Hebrews are said to have performed postmortem caesarean sections even on the Sabbath, and they also carried out these operations successfully on living females during the Talmudic era [ca. 200-250 A.D.] (Leonardo 1944,
Whether or not this operation was carried out by female doctors is not mentioned.

Hebrew and Egyptian midwives understood the use of the vaginal speculum and knew how to perform occipital version. For further reading on the Hebrews and their medical women, Hurd-Mead suggests the Talmud and the Niddah. The Talmud mentions midwives who assist at normal birth, with the parturient woman in the sitting or squatting position (Towler and Bramall 1986, p. 8).

Although these midwives, some of whom might have been educated at Heliopolis or Sais, cannot be compared to the simple, uneducated ones, who assisted and comforted women without the benefit of instruments and superior medical knowledge. Yet, educated or not, their position and place in society seems to have been a respected one.

2.3 The Persians

Among the Ancient Persians, whose obstetric knowledge was similar to that of the Egyptians, the parturient woman was considered unclean, and had to remain isolated for 40 days, until the rites of purification had been performed. This attitude also prevailed towards the menstruating woman, who was seen as unclean and was believed to exert an unwholesome influence not only on the people around her, but also on the elements. Menstruation was seen
as the creation of evil spirits, and a menstruating woman was believed to be in the powers of evil. She was, therefore, separated from the rest of the house for four days and was confined to a room strewn with straw, away from the clean elements fire and water. Sexual intercourse during this time was forbidden and could be resumed only after the necessary purifications (Mettler 1947, p. 933).

2.4 Ancient Greece

The Greeks came to Egypt from the seventh century B.C. onwards and no doubt learned much from Egyptian medical literature and practice. When this knowledge reached Greece, it flourished and reached its zenith.

Two men in particular, among many others, achieved fame in medicine and the allied sciences: Hippocrates (460 - 377 B.C.), born on the island of Cos, off the coast of Asia Minor, and Aristotle (384 - 322 B.C.), born in Stagira, on the northeast coast of Thrace. Aristotle, although best known for his contribution in the field of philosophy, made notable progress in embryology, and his studies were the beginning of comparative anatomy (Green 1961, p. 21). Both men lived during the classic period of Greece and were contemporaries of Socrates, Plato, Sophocles, and Herodotus. Hippocrates was instrumental in separating medicine from philosophy, theology and magic. And beginning with
Hippocrates, disease was considered a natural cause of events, a theory also adhered to by the Arabs of the Middle Ages, but not believed in by the Europeans at the time, who attributed illness to the devil. Hippocrates established the laws of medical practice, and until this day, every newly hatched physician has to swear the Hippocratic Oath. By keen observation and careful recording, Hippocrates crystallized all medical knowledge into a system. He believed that disease was due to lack of harmony, or to an alteration in the four humors, blood, phlegm, yellow bile and black bile. This theory became known as the HUMORAL THEORY (Khairallah 1946, p. 19). The following shows the four humors as they were interpreted by Hippocrates:

1) **Blood** comes from the heart and represents **heat**;

2) **Phlegm** comes from the brain, generally diffuses and is **cold**;

3) **Yellow Bile** is secreted from the liver and represents **dryness**;

4) **Black Bile** comes from the spleen and stomach and represents **wetness** (Green 1961, p. 19).

These four humors, in turn, were associated with the four elements earth, air, fire, and water and were distinguished and associated with the qualities cold, dry, hot, and wet (Rhodes 1985, p. 12).

But apart from the sages in Greek medicine, some women also practiced the medical arts. Sarton points out
that in the Homeric Epics, ca. 540 B.C., women nursed patients and collected herbs to prepare drugs for anaesthetics and for soothing potions. And even Helen of Troy is said to have received these secrets from an Egyptian woman (Sarton 1959, p. 139). In fact, women of Homer's day were surgeons, midwives, and general healers of the sick (Hurd-Mead 1938, p. 3).

In Ancient Greece, the midwives were required by law to have had children themselves. Personal experience was greatly valued. This is substantiated in Plato's writings, quoted in the following translation from the French text, which also points out the many other rights and duties of a midwife:

...dispensing of medicine, special prescriptions to expedite labor and to render the birth process less painful. They were authorized to procure abortions if they deemed it necessary. Their role, therefore, was an important one, so that they were required to have many years of experience; they also needed to have been mothers themselves, but were not able to practice until the age where they were not longer able to have children. Sterile women were excluded from the profession; Human nature, said Plato, is too weak to practice an art for which it has no personal experience whatsoever (Trillat 1958, p. 7).

It has been stated, however, that Hippocrates did not influence the practice of midwifery much, since his writings on pregnancy and labor in the *Aphorisms* are said to

2. See Appendix B, quotation 2.
represent the least satisfactory parts of his works (Radcliffe 1967, p. 2). Furthermore, it has been pointed out, that his treatises on obstetrics and gynecology are generally regarded as the writings of later authors. The precise technique of delivery, it has been said, is not described in any of his treatises, but it is known from other sources that women of Ancient Greece were generally delivered in a birth chair (Mettler 1947, p. 935), as was the case in Ancient Egypt.

Although Hippocrates did not leave us much information on the subject of midwifery, Aristotle has much to say, which will be relevant material for later discussions of Islamic practice in particular, and of medieval European practice to a certain extent. I shall, therefore, quote these excerpts extensively in the following:

Directions for midwives how to assist women in the Time of their Labors and how Child bearing Women should be ordered in Time of their Lying in.

Section I

A Midwife ought to be of middle age neither too old nor too young, and of a good habit of body, neither subject to deseases, fears or sudden frights; nor are the qualifications assigned to a good surgeon improper for a midwife, viz. a lady's hand, a hawk's eye, and a lion's heart: to which may be added, activity of body, and a convenient strength, with caution and diligence, not subject to drawsiness, nor apt to be impatient. She ought to be sober and affable, not subject to passion, but bountiful and compassionate, and her temper
cheerful and pleasant, that she may the better comfort her patients in their sorrow. Nor must she be very hasty, though her business perhaps require her in another place, lest she should make more haste than good speed. But above all she should be qualified with the fear of God which is the principal thing in every state and condition, and will furnish her on all occasions, both with knowledge and discretion.

Section II

When the time of birth draws near, and the good woman finds her travelling pains begin to come upon her, let her send for a midwife in time, better too soon, than too late, and get those things ready which are proper on such occasions. When the midwife is come, let the first thing she does be to find whether the true time of birth be come. The want of observing this hath spoiled many a child, and endangered the life of the mother; or at least put her to twice as much pain as she needed; for unskilful midwives not minding this, have given things to force down the child, and thereby disturbed the natural cause of her labors;... And let the midwife often touch the inward orifice with her finger, that she may better know whether the birth will follow soon after;... If birth takes too long, let her drink a good draught of wine with ditany, red coral, juniper berries, betony, pennyroyal, and feverfew have been boiled...

Likewise the Stone Aetitis held to the privities does in a very little time draw forth the child and the afterburden; but great care must be taken to remove it gently, or else it will draw forth the womb and all, so great is its magnetic virtue (pp. 36-38).

Aristotle further describes signs of labor and seems to know the difference between labor and cholic. He advises "hot compresses on the belly for more comfort" and also describes the position of a woman in childbirth, "with her head raised, her legs spread out, and her feet stayed out.
against a log or other firm thing." Two women are to hold her two shoulders. The midwife should also encourage the woman all she can and take care that she has no rings on her hands when she anoints the part (usually with fresh butter). He also talks about the afterburden, unnatural labor, and multiple birth, and how to keep the woman comfortable after delivery (pp. 37-40).

In Ancient Greece, women practiced medicine on equal terms with men, and the art of midwifery was much respected. In the time of Hippocrates and Aristotle, midwives had social recognition and were an honored class. In fact, the mother of Socrates is said to have been a midwife. Here, as in Ancient Egypt, midwives were divided into senior and junior midwives, or those who possessed superior skill and were consulted in difficult cases, and those who only assisted in routine confinements. But generally, in difficult cases, such as a breech presentation, a male or female doctor would be asked to help (Towler and Brammall 1986, p. 12).

It must also be mentioned, that in Greek mythology Artemis and Hera in particular, are associated with childbearing, so that midwives and mothers called upon their help in difficult cases. Hera was known as Juno Lucina in Roman times and is to this day shown on the badge of British midwives (Towler and Brammall 1986, p. 14).
Although, according to the Roman writer Hyginus, superintendent of the Palatine Library under Augustus, the practice of medicine and midwifery is said to have been forbidden to women and slaves, this has not been corroborated and may be apocryphal (Donnison 1977, p. 1).

2.5 The Roman Era

Around the dawn of the Christian Era, when the decline of Greek civilization began, Egypt, along with much of the western world, became part of the Roman Empire, and the centre for medical learning moved from Athens to Alexandria in Egypt. From here it passed to Rome, just as Egyptian knowledge had passed to Greece. Rome adopted Greek medicine, and many Patrician families prided themselves of having a Greek doctor on the household staff (Radcliffe 1967, p. 2). It may be assumed, that the practice of midwifery would be similarly adopted. "In Roman times, the art of medicine was also carried out by women who were called médica. But we do not know exactly the kind of medical tasks these women performed" (Penso 1984, p. 107). Penso also points out that "after the arrival of Greek doctors in Rome, Greek midwives were numerous and took the place of the Roman midwives with the rich clients of the cities" (p. 107-108).
One of the most outstanding Roman obstetricians of the second century A.D. was SORANUS of Ephesus, who makes it clear, that midwifery was generally the domaine of women, although some male doctors are said to have practiced obstetrics and gynecology (Donnison 1977, p. i). The writings of Soranus, are said to have had great influence on medieval European medicine, particularly on the subject of midwifery. His descriptions of the fetal positions in the uterus were given in books for midwives as late as the seventeenth century (Radcliffe 1967, p. 2).

But much of what we find in the Aristotelian thesis on midwifery, rings familiar in Soranus' book De Morbis Mulierum. This is the first textbook ever to be written for midwives, and two chapters are devoted to the special qualities a midwife needs to possess. For example, she must have a good memory, must be of good character and confidence inspiring. She also must have had children and must not be too young. She ought to be cheerful and should not panic when confronted with a dangerous situation. A healthy mind, as well as a good constitution, are also needed, as well as long delicate fingers with short nails (Towler and Bramall 1986, p. 15). But as pointed out in the following
translation from a French text, Soranus' writings did not influence the actual work of the midwife: 3

The work of Soranus of Ephesus (98-130 A.D.), who may be considered the founder of gynecology and obstetrics, does, however, not influence the practice of the midwife, nor the work of Trotula, the medical woman of the school at Salerno, who is the author of the first European treatise on gynecology and obstetrics at the beginning of the twelfth century. The difference between theory and practice is still considerable. The extent of ignorance on the subject is demonstrated in illustrations (Bibliothèque Nationale 1982, p. 51).

The above-mentioned Trotula of Salerno will receive further attention in my discussion of midwifery in medieval Europe.

Soranus' claim to fame, it has been mentioned, is the internal version, which is achieved by turning the child in the womb, in cases of difficult labor. By inserting the whole hand into the vagina and the uterus, he advised to push up the baby's head and pull on its foot (Rhodes 1985, p. 20). He further advocated for the midwife to support the perininium with a linen pad, to prevent tearing during the second stage of labor (Towler and Bramall 1986, p. 16).

Roman medicine cannot be discussed without mentioning Claudius Galenus of Pergamon (130 - 201 A.D.), better known as Galen, the last of the great physicians of the Roman period, who influenced European medicine until the

3. See Appendix B, quotation 3.
seventeenth century. He, like Hippocrates and Aristotle, devoted some of his writings to the subject of midwifery (Donnison 1977, p. i). But as Sarton points out, Galen was more interest in puffing his own reputation than in publishing the truth, so that his stories are inferior in spirit and are more in the nature of self-advertisement than plain and honest reporting in the Hippocratic manner (p. 376).

Although women in Roman times traditionally worked as midwives and were called obstetrician, many practiced general medicine. To distinguish them from midwives, they were called medicae. One shining example of such a woman is Aspasia, a second-century Graeco-Roman surgeon and obstetrician (Donnison 1977, p. i).

Since the midwife examines "les parties secrètes et cachées" (Gourevitch 1984, p. 220) sources do not always agree concerning the reputation of the Roman midwife, as is apparent in the following translation from a French text: "The midwife in Rome has rather a bad reputation; she is a drunkard who often does not know what she is doing. She is also thought of as the procuress of abortions - who, like
the doctor, uses dangerous drugs which are forbidden to use even if necessary" (Gourevitch 1984, p. 220).4

Another source points out, however, that "in Rome, the midwives were highly esteemed and legally regarded as doctors" (Penso 1984, p. 107,108). In the following, the more flattering view is substantiated: "The important events in a woman's life during her period of sexual activity are pregnancy, and child bearing. The midwife, therefore, plays an important role; she acquires great influence over the morale and feelings of the parturient woman; she also makes her presence felt on other occasions or in case of illness affecting the genital area" (Gourevitch 1984, p. 217).5

2.6 Byzantium

When the Barbarians swept into Italy and destroyed Rome's ruling classes, Constantine, first Christian emperor, moved his capital to Byzantium in 330 A.D., which then became Constantinople and later Istanbul. Byzantium was also called the "Eastern Roman Empire," and lasted until 1453 A.D., when Constantinople was conquered by the Turks. With the move to Byzantium, ideas, although still Greek in character, diffused in many directions and were greatly

4. See Appendix B, quotation 4.
5. See Appendix B, quotation 5.
influenced by orthodox Christianity and Islam. Byzantium preserved Greek language, Greek culture, and Christianity. It extended from Constantinople to parts of Italy, to Sicily, and to the Caucasus mountains, into Russia, Yugoslavia, and Bulgaria.

But as far as medicine was concerned, it became a matter of faith and fell into the hands of the priests and the magicians. A sick person was regarded as a potential saint, and prayer was adopted as the best medicine. Thus, the church became the best hospital and Christ the Supreme Healer. Only the faithful were promised cures through physical and spiritual healing. Medicine was now practiced by the church fathers, who took their example from Christ, the Great Physician. Apart from prayers, charms and amulets were used (Marti-Ibanez 1961, p. 110).

The government and the church of Constantinople provided free medical care for the poor. Hospitals were frequently built. In the twelfth century, the Hospital of the Monastery of Saint Saviour Pantocrator, was divided into five wards and 50 beds. Separate wards were provided for surgical patients and for women. Ten male doctors and one female doctor attended the patients (Towler and Bramall 1986, p. 19).

In the Imperial Palace, however, children were born in the porphyry, or purple chamber, and the title
porphyrogenitus (born in the purple), was given to children of the ruling families (Towler and Bramall 1986, p. 19).

But the Church not only frowned upon science, it discouraged it. This also applied to medicine. As mentioned earlier, Christ was seen as the Supreme Healer, so that the faithful were not considered in need of a physician's care. Religion and superstition began to replace rational thought, and the soul, as well as life after death, began to occupy man's mind.

As far as midwifery is concerned, it must be assumed that midwives had as important a function as ever before. But whether or not they enjoyed the same high status is debatable. Although life in Byzantium was greatly influenced by Greek and Roman ideas, which generally allowed midwifery to flourish, the Christian Church began to wield considerable power and affected not only the position of women in medicine, but the position of women in general. I have, therefore, come to the conclusion that the prejudice against midwives is not an ancient one, but that it is almost entirely a medieval European phenomenon.
CHAPTER 3

THE ISLAMIC ERA

Seek ye knowledge
even if it is in China
(Hadith)

3.1 The Eastern Caliphate

With the decline of Rome came the Middle Ages, based on feudalism and dominated by the church. But in the East, a new nation was about to emerge and we will now look to Arabia, the great stretch of land between the Red Sea and the Persian Gulf, separated from the Mediterranean by Syria and the Holy Land. This country is mostly rough pasture land, dotted with fertile tracts, surrounding a great sandy desert. In the Middle Ages only a few clusters of houses existed here, two of which, Mecca and Medina, became of paramount importance. Mecca was the birthplace of the Prophet Muhammad, from where he fled with his followers to Medina in the year of the Hegirah, 622 A.D.

In the sixth century, the inhabitants of this area, the Beduins, lived a nomadic, tribal life and cured their various ills by primitive means. They practiced a kind of folk-medicine, with a strong leaning towards magic. The cures for their ailments were restricted to a few remedies
such as boiled camel urine, cupping and cauterization. Both were considered a beneficial treatment for rabies, headache, mental illness and open sores and remained popular until rather late into the Middle Ages, when it was used in the East and in the West.

Trained physicians do not seem to have existed at that time, but whoever practiced "healing," was calledṭābīb, or doctor. The care of the sick was mainly the responsibility of women (Ullmann 1970, p. 16).

It has been suggested that the preoccupation of the Beduin Arabs with cattle grazing over a long period of time drew them nearer to medicine based on practical experience. There was no room for witchcraft medicine, since the Beduins watched pregnancy, birth, growth, and the relevant stages of life's development. They fixed the parts of the body that needed fixing and had a fair idea of the location and the function of its organs, so that they could almost specify the disease and its remedy (al-Akkad n.d., p. 35).

In connection with the Prophet Muhammad, we hear of the first scientifically trained Arabian physician, al-Hārith ibn Kalada, who had studied at Jundishapur and had been the physician of the great Sassanian ruler Khosrow Nushirwan (531-579 A.D.). Al-Hārith became the friend and physician of the Prophet, although he was not a Muslim (Khairallah 1946, pp. 22-23).
In this context it must be mentioned that the famous school at Jundishapur, where most of the practitioners at the time of Muhammad had studied, was established by Nestorian Christians, who were influential in introducing and promoting Greek medicine in Persia. But after the Islamic conquest, Persian medicine, which was partly Greek and partly Indian, came under Arabic influence and vanished (Khairallah 1946, p. 22).

As far as the medicine of the Prophet is concerned, it was a collection of hadiths, or traditions and sayings, that related to medicine and contained rules pertaining to hygiene, drinking, circumcision, and sanitation. Most of these rules are said to be of Jewish origin, consisting mainly of potions based on honey (Khairallah 1946, pp. 22-23).

In the early days of Islam, Christian and Jewish physicians practiced medicine freely and there was little prejudice against non-Muslim doctors. Generally speaking, not much is known about medicine in early Islamic times, or about medicine during the Umayyad period (661-750), although the names of some Arab physicians are mentioned. One of them was Tiyadhuq, who was the physician to al-Hajjāj, the governor of al-Iraq (Ullmann 1970, pp. 5-6).

When proper hospitals were built later on in 'Abbāsid times (750-1258) in Bagdad, Damascus, and Cairo,
Jundishapur, which had been the cradle of Arabic medicine, soon lost its prestige (Major 1954, p. 230).

As far as women's problems are concerned, they were the domaine of midwives, who would consult a physician in more difficult cases. This, as we remember, had been the custom in Greek and Roman times (Lyons and Petrucelli 1978, p. 301).

But before long, the Arabian conquest was in full swing and Persia, Egypt, Syria, Armenia, Turkestan, the Holy Land, as well as North Africa and Spain, were brought under Arabic rule. And thus, the knowledge and wisdom of the peoples of those ancient civilizations with whom the Arabs came in contact, inspired the conquering desert-dwellers, and we soon see them embark on a zealous search for ancient manuscripts: the age of translation was about to begin.

At this point we must remind ourselves that Arabic became the language of literature and the arts and sciences, although most "Arabian" doctors were not Arabs, but Persians, Jews, Greeks, Nestorian Christians, or Byzantines. And while the Arab conquerors respected the superior cultures of their subjected peoples, Arabic became the language of learned men in their writings and communications.

Since the Arabs had no ancient learning of their own, they rapidly assimilated the remnants of Greek culture still
present in the countries they had conquered, and thus kept alive the learning of antiquity.

When the great empire split into caliphates, Bagdad in the East, and Cordova in the West, became capitals and centers of learning and civilization. Bagdad, seat of the Abbāsid Caliphate (750-1258 A.D.) became the medical center of Islam under the caliphs Hārūn al-Rashīd (786-809) and al-Ma'mūn (813-833). Here in Bagdad, under the patronage of Hārūn al-Rashīd, a hospital was built, which served as a center of learning and teaching (Hamarneh 1967, p. 20).

Before I mention the involvement of medical women and midwives during the Golden Age of Islamic civilization, it is imperative to introduce some of the great men of this era and to look at their ideas, as they relate to the subject of midwifery.

The first one who comes to mind, and a giant in the field of internal medicine—as we may call it today—is Abū Bakr al-Rāzī (860-932), or Rhazes. He was Persian by birth and after studying philosophy and music, turned to medicine rather late in life. He is remembered particularly for his association of disease and putrefaction, and it has been said that he followed Galen's methods closely but that he also dared to criticize him. He also realized that there was a difference between smallpox and measles (Fischer-Kamel 1981, pp. 19-20).
But what is of interest here, are his extensive writings on women's problems, and on pregnancy, in particular as far as his instructions to midwives are concerned. The following are translated quotes from al-Rāzī's work al Ḥawī, or Continens, and his advice to the midwife who is examining a patient for haemorrhoids and uterine tumors:¹ "place a mirror under the woman to see the shape of the matter" (pp. 19-20). He mentions this method of using a mirror repeatedly throughout the chapter on women: "...and when a fissure is visible when the mirror is placed under the woman, open the mouth of the uterus gently" (p. 41).² Here he is more specific and asks the midwife to use the same method, but also to open the mouth of the uterus.

He further speaks of women who have been widowed for a long time and who suffer from a tilted uterus. In cooperation with the midwife, who examines the woman internally, he is able to relieve her from her problems, by bringing about the expulsion of thick matter:³ "...this was the case with a woman who had been a widow for a long time. And the midwife said that the woman's uterus had been tilted. So I pointed out the appropriate thing to do for her

¹ See Appendix A, quotation 1.
² See Appendix A, quotation 2.
³ See Appendix A, quotation 3.
ailment,...and out came thick matter, so that she was relieved from her complaints" (p. 56).

Al-Rāzī also orders the midwife to put light ointment on the mouth of the uterus, before undertaking an examination and to wipe her fingers with ointment: "And he ordered the midwife to wipe the mouth of the uterus gently with some light ointment, like camomile, laurel, southernwood, and iris..." (p. 61). These instructions are also repeated throughout the chapter.

Al-Rāzī further mentions that the difference between a tumor and pregnancy is discernable by examining the firmness of the growth, or lack thereof, which the midwife is able to determine: "...the difference between the two is that there is hardness with the swelling, and in case of pregnancy there is no swelling, but it is a natural condition. The midwife will find this out during an internal examination. This is the best sign that the uterus is closed (p. 79).

4. See Appendix A, quotation 4.
5. See Appendix A, quotation 5.
In the same chapter al-Rāzī also discusses ways to diagnose pregnancy, how to predict the sex of a child, and the question of abortion. The latter will be discussed in CHAPTER 5.

I have not been able to obtain the original work of al-Kitāb al-Malikī by ʿAlī ibn al-ʿAbbās al-Majūsī (d. 994 A.D.). But since he is quoted extensively in the obstetrical literature of the time, I shall give an example of his instructions to midwives on how to deliver a dead fetus:

Order the midwife to lay the patient flat on her back on a bed, with the head low and the legs raised and held by women... If the head of the fetus is coming out first, put the special hooks used for delivering the fetus in the eyes, under the chin or under the clavicle... If the fetus is coming out by the feet put the hooks over the symphysis pubes or the ilium. The hooks should be put on both sides, at the same level, and the pull should be equal otherwise you might twist the fetus when you pull and make the delivery more difficult. Pull with pressure on both sides with an occasional pull slightly to each side. You should relax between the periods of pulling... If a hand comes out first and you cannot push it back, put a towel around it and pull it out up to the shoulder and amputate there. You do the same thing if both hands protrude and the fetus does not follow.... If the feet should come out first and the body does not follow then cut them at the groin, twist the body and pull it out.... If the head is too large, pass a scissors or knife between your fingers, cut through the vertex and then push in the special forceps and crush the head with it and pull the fetus out. If the chest should be caught, then crush it with the same instrument, cut the clavicle also and pull the fetus out.... In transverse presentations, if possible deliver by feet as above described or use embryotomy (Khairallah 1946, p. 138).
Another important contributor in the field of medicine was no other than Abū ʿAli al-Ḥusayn ibn ʿAbd Allāh Ibn Sīnā, or Avicenna (980-1037 A.D.). His writings, like Galen's works, were enormously popular. But contrary to al-ʿRāzī, who put great emphasis on hospital training and on observing at the bedside, Ibn Sīnā is known to have relied more on intelligent speculation and on theoretical propositions (Garrison 1929, p. 130).

Ibn Sīnā also removed cervical polyps, but uterine diseases in women were attended to by the mother of the patient, by a neighbor, or a midwife (Fischer-Kamel 1981, p. 25). It has also been stated that the Persians were masters at dealing with calculi of the urinary tract (Elgood 1951, p. 289).

The following is a translated excerpt from Ibn Sīnā's Qanūn fī ʿal-ṭibb about the procedures at a confinement: 7

When the moment of birth has come, one should do everything possible to make it an easy one. In a hot bath massage the hips of the child bearing woman and the genital area with oil, so that her nerves relax and she will not be tired at the time of birth. In order to give her rich nourishment, make her drink fatty broth. Protect her from noise, falling, fright, shrrieking, and blows. If the confinement is a difficult one, she should take an infusion of dates and fenugrec; choose an intelligent midwife for her who will extend [stretch] the legs without mercy.

7. See Appendix A, quotation 7.
Then make her sit at once [in the birth chair] while pressing vigorously on her abdomen (Jahier and Nureddine 1956, p. 71).

As far as the sex of a fetus is concerned, Ibn Sīnā believed that it depended on both parents and not only on the male. He says 'some people are boymakers, others are girlmakers' (Elgood 1951, p. 294).

In ʿAbbāsid times (750-1258 A.D.), women were also practicing medicine and are said to have been given long and practical courses in alchemy and in midwifery, so that they were better able to care for their sisters, particularly for those who lived in the harems (Hurd-Mead 1938, p. 105).

Although women were in charge of the birth process, there is said to have been a male teacher and obstetrician in Bagdad at the time of Hārūn al-Rashīd (786-809 A.D.) who was permitted to enter the lying-in chambers of Islamic households and assisted the midwives in difficult cases, praising them for their skill. His name was Abū al-Faraj (Hurd-Mead 1938, p. 105). But as Elgood points out, it is difficult to assess what really went on in the harem of any man, shah or peasant, since no outsider, except a woman, and occasionally a doctor, were allowed to enter (Elgood 1970, p. 193).

Elgood (1978, p. 60) states that midwifery was also practiced in Ṣafavid Persia (1500-1750 A.D.), and that a great number of midwives practiced during that time, but
that the sources on them are few. In popular stories, he says, the midwife is often described as crafty and of the lower class, as well as the supplier of poisons for unwanted husbands and wives, or as the willing vendor of abortefacients. But he adds that medical literature does not bear this out, and that the midwife was neither unscrupulous, incompetent, or a danger to her patients. He also suggests evidence that she was well-trained in her profession and a respected member of society (Elgood 1970, p. 206). He adds that even today, the midwife will take care of delivery in Persian households, while the doctor usually shows 'masterly inactivity.'

Elgood also tells us that women were often delivered before the midwife could get to them. The birth stool or kursi al-wilādab, that we remember from Ancient Egyptian times, is said to have still been in use fifty years ago. Or, instead of the birth chair, a woman would be "squatting on three or four bricks with the midwife in front and neighbors supporting her at her back and sides" (1970, p. 261).

As far as caesarean sections on a dead mother were concerned, the children born in such a manner were not considered creatures of God but of the Devil and were called 'cemetery-born.' It was the custom in certain parts of Persia to place a pregnant woman who was at the point of
death in a tomb, with a tube connected to her. This would not only make sure that the child could breathe, but also that its wailing was heard, so that the women would come to deliver the child. A child born under such circumstances was often found abnormal in later life, and simple people believed that dwarfdom was the result of such a delivery (Elgood 1970, p. 266).

The "craft of midwifery" has also been mentioned by the fourteenth-century historian Ibn Khaldūn in his *Mugaddimah*. The following, in its entirety, is the English version of the Arabic text:

Midwifery is a craft that shows how to proceed in bringing the newborn child gently out of the womb of his mother and how to prepare the things that go with that. It also shows what is good for a new-born child after it is born. The craft is as a rule restricted to women, since they, as women, may see the pudenda of other women. The woman who exercises this craft is called midwife.

This is as follows: When the embryo has gone through all its stages and is completely and perfectly formed in the womb - the period God determined for its remaining in the womb is as a rule nine months - it seeks to come out, because God implanted such a desire in unborn children. But the opening is too narrow for it, and it is difficult for the embryo to come out. It often splits one of the walls of the vagina by its pressure, and often the close connection and attachment of its covering membranes with the uterus are raptured. All this is painful and hurts very much. This is the meaning of labour pains. In this connection the midwife may offer some succour by massaging the back, the buttocks, and the lower extremities adjacent to the uterus. She thus stimulates the force pushing the embryo out, and facilitates the difficulties encountered in this connection as much as she can.
She uses as much strength as she thinks is required by the difficulty of the process. When the embryo has come out, it remains connected with the uterus by the umbilical cord at its stomach, through which it was fed. That cord is a superfluous special limb for feeding the child. The midwife cuts it but so that she does not go beyond the place where it starts to be superfluous and does not harm the stomach of the child or the uterus of the mother. She then treats the place of the operation with cauterization or whatever other treatment she sees fit.

When the embryo comes out of that narrow opening with its humid bones that can easily be bent and curved, it may happen that its limbs and joints change shape, because they were only recently formed and because the substances are humid. Therefore, the midwife undertakes to massage and correct the newborn child until every limb has resumed its natural shape and the position destined for it, and the child has regained its normal form. After that she goes back to the woman in labour and massages and kneads her, so that the membranes of the embryo may come out. They are sometimes somewhat late in coming out. On such an occasion, it is feared that the constricting muscle might resume its natural position before all the membranes are brought out. They are superfluities. They might become putrid, and their putridity might enter the uterus, which could be fatal. The midwife takes precautions against that. She tries to stimulate the ejection, until all the membranes come out.

She then returns to the child. She anoints its limbs with oils and dusts it with astringent powders, to strengthen it and to dry up the fluids of the uterus. She smears something upon the child's palate to lift its uvula. She puts something into its nose, in order to empty the cavities of its brain. She makes it swallow an electuary, in order to prevent its bowels from becoming obstructed and their walls from sticking together.

Then she treats the woman in labour for the weakness caused by the labour pains and the pain that the separation causes her uterus. Although the child is no natural limb of the mother, still, the way it is created in the uterus causes it to become
attached as if it were an inseparable limb of her body. Therefore, its separation causes a pain similar to that caused by the amputation of a limb. The midwife also treats the pain of the vagina that was torn and wounded by the pressure of the child's coming out.

We likewise find midwives better acquainted than a skilful physician with the means of treating the ills affecting the bodies of little children from the time they are sucklings until they are weaned. After the child is weaned, its need for a physician is greater than its need for a midwife.

One can see that this craft is necessary to the human species in civilization. Without it, the individuals of the species could not, as a rule, come into being... (Rosenthal pp. 323-324).

In the private sector, on the event of a child's birth, female singers were hired for the entertainment of the ladies and the new mother. The midwife attends the new mother, who is sitting in a chair which the midwife provides for these festivities. The midwife also sprinkles a mixture of salt and fennel seed on the floor of each room, to keep the evil eye away. On this occasion, presents are given to the child, but also to the midwife (Lane 1971, pp. 187-188).

While this custom seems to have been observed generally in Middle Eastern countries, I found a more detailed description of such a gala affair in Mamluk Egypt (1250-1517 A.D.), which shows the involvement of the midwife and her respected position. The following are excerpts from
In Mamluk times child bearing was an especially important event, which was celebrated with great festivities and lasted seven days and seven nights. All the wives of the princes, and all the wives of the notables gathered around the mother to congratulate her and to take part in the sumptuous reception... (pp. 199-200). The birth of a child in Mamluk time was considered to be the affair of women only, as had been the case in all previous eras.... Two or three days before the expected confinement, the midwife would be called, who would bring the traditional birth chair (Kursi al-wilada).... Upon her arrival, the midwife examined the mother-to-be, and with the help of her parents, the midwife prepared what she needed. After that she would settle the patient on the chair, while encouraging her and making light of her distress.... It also was the custom for the midwife to collect the linen [towelling] which had been prepared to receive the newborn baby... (pp. 62-63). To summarize, the festivities on the occasion of a child's birth in the military class were much like those of a wedding (Raziq 1973, p. 200).

The ordinary people also attached great importance to the birth of a child. Here, the midwife, or dawa, was not called three days before the confinement but with the commencement of the mother's labor pains. On the seventh day after the confinement, a great celebration was staged:9

Thus, the mother of the newborn baby, dressed in new clothes, walks through the house ceremoniously, surrounded by candles. The midwife, who walks in front of her, carries the baby. At the head of the procession another woman holds a plate containing a

8. See Appendix B, quotation 6.
mixture of salt and cumin, which she throws at random around the house. Apart from that, a special incense, called 'encens d'accouchement' is burned, to protect mother and child from illness and from the evil eye (Razig 1973, p. 202).

While the practice and status of midwives in the Islamic countries does not seem to differ much from one place to another, I was surprised to find that the traditional midwife of the Maghreb, specifically in Casablanca, has a more diverse function. She not only helps the expectant mother to bring her child into the world, but remains close to the family. She takes active part in marriage festivities, circumcision ceremonies and also performs the function of the ghâsilâb by performing the ritual washing at the death of a female family member. This is clearly stated in the following excerpts from Les Accoucheuses Musulmanes Traditionnelles de Casablanca:

The Moroccan midwife enjoys a certain esteem despite her usual poverty. She is an important personality in her district. Often elderly, widowed and respectable, she is part sorceress, experienced and full of wisdom. Going from house to house, she is up to date on the family life of all her clients and is invited to take part in most of the important events in their lives. Apart from the confinement itself, the midwife is present at the name-giving ceremony, and at the infant's first outing on the fortieth day of his life. She also helps at circumcisions.

10. See Appendix B, quotation 8.
She is the one who puts **henna** on the bride, who intervenes in, and tries to mediate in household quarrels, and who accommodates the wife who escaped to her mother's house after a marital dispute.

She is also the "washer of the dead" (**ghessala**). If she is called to a dying woman, she bends over her, saying the words 'la ilaha illa illah.' After death has come, she closes the eyes of the body and washes it before wrapping it in an uneven number of clothes, or pieces of cloth with fragrant herbs between the layers (Mathieu et Maueville 1952, pp. 171-172).

It has also been related that the **gābīlah** participates and receives presents on festive occasions, for example, when one of the children she delivered is able to recite the Qur'an by heart. But those friendly customs, which made life a little more pleasant, are said to be disappearing fast (Mathieu et Maueville 1952, p. 172-172).

Although it seems to be the custom generally to call a midwife before, or at the onset of labor, in some cases women deliver without her help. Ploss tells us, for instance, that "the wives of the Arabs give birth wherever they happen to be, in the field, or in the house (Ploss 1902, p. 39, vol. ii).

In the Levant women also give birth without much difficulty and frequently without help. One of the reasons given for this are said to be found in the fact that women from childhood on sit in a squatting position with their legs crossed and with their knees spread out (Ploss 1902, p. 59, vol. ii).
3.2 The Western Caliphate

The Western Caliphate was centralized in Cordova, Spain, and was at its Zenith under Abd al-Rahman III (912-961 A.D.) and under al-Ḥakam II (961-976 A.D.). Cordova at this time was a modern city with paved streets, street lights, three hundred mosques, a library with over 250,000 volumes, and fifty hospitals (Khairallah 1946, p. 26).

In this flourishing city several medical men were active, who had the advantage of having access to the accumulated knowledge of earlier pioneers in the field.

"Whatever I know, I owe solely to my assiduous reading of the books of the ancients, to my desire to understand them and to appropriate this science; then I have added the observation and experience of my whole life..." (Zimmermann 1961, p. 81). This statement clearly shows the prevailing attitude of the time and was formulated by one of the most famous of all medieval Arab surgeons and obstetricians Abū al-Qāsim al-Zahrāwī (936-1006 A.D.), known also as Abulcasis. He was born of Spanish parents in Zahrā', near Cordova, and became one of the greatest medical figures, highly esteemed both as a physician and a surgeon.

Concerning the medical treatment of women, as in the case of vesical calculus, for example, he advised to find a woman with some skill in medicine. If such a woman could not be found, he asks to employ a midwife, or a woman who knows
something about the matter. This woman should then perform the surgery under the direction of a qualified surgeon (Bettmann 1956, pp. 60-61). Since men were not permitted under Islamic Law to examine or operate on women, he also instructed midwives to carry out the operation of cranioclasty for the delivery of a dead fetus. When Abū al-Qāsim examined a woman, or when an operation had to be performed, a curtain hung between doctor and patient, to prevent a direct examination. But Abū al-Qāsim would advise and direct the midwife from the other side of the curtain.

He also described what is known as the "Walcher's position," where the woman in labor lies with her hips at the edge of the table, with her legs dangling. He furthermore invented obstetrical instruments, such as forceps with crossed blades, and dilators with screw action. It is not known, however, whether or not midwives actually used these instruments (Fischer-Kamel 1981, pp. 33-35).

Although some critics say that the Arabs were incompetent in the field of obstetrics and gynecology, the Arab physician must be considered a pioneer in this field. It must be acknowledged that great benefit was derived from the genius of Abū al-Qāsim.

Since the Greeks do not seem to have left any record of material progress in midwifery, this branch of medicine, as one authority puts it, has been built upon the basis of
works by Arabian writers on this subject (Siddiqi 1959, p. xxi). In the following are demonstrated some examples of Abū al-Qāsim's wisdom:\textsuperscript{11}

And then you should get the woman to sit in a chair having a double seat, leaning back, with her legs together and towards the back, under her abdomen, with her thighs apart and the arms joined under the knees, tied together in a suitable manner. Then the midwife should sit on the right side and use the tool [forceps] for opening the mouth of the uterus, which will be described later..." (p. 465).

Abū al-Qāsim also gives instructions to the midwife on how to bring forth a living fetus and mentions that the midwife must be experienced in all those matters:\textsuperscript{12}

Chapter Seventy-Five. On the training of midwives on how to treat a living fetus, if it is not brought forth in the natural manner.

First of all, the midwife should be familiar with normal labor. The indications of it are when you see the woman strain [her abdomen] downward and if she wants to breathe more air, and when her contractions come rapidly and she seems eager to expulse the fetus. This is a sign that it will be a natural delivery, and that the head will come out with the afterbirth, or hanging by the umbilical cord. If you see these signs, you should put pressure on her abdomen to bring the fetus forth quickly. And when the afterbirth comes down with the head, she is thoroughly cleansed of those superfluities. But a delivery different from this is unnatural and bad. The infant may come out with his legs, or with his hands, before either head or feet, or either one hand and one leg come out; or the head and one hand comes out; or it may come out twisted, possibly with the nape of the neck first, or in

\textsuperscript{11} See Appendix A, quotation 8.

\textsuperscript{12} See Appendix A, quotation 9.
other wrong positions. The midwife, therefore, ought to be skillful in all these matters to avoid failures and mistakes. I shall show her all these techniques and instruct her in those methods, so that she may be acquainted with them...

When the fetus comes out by the head in the natural manner, and if the delivery is very hard on the woman, and when you see her strength wane, then make her sit on the chair and have a woman hold her firmly, and apply moist compresses of fenugrec and oils. Then the midwife should take a small knife [scalpel] between her fingers and make an incision in the afterbirth, or cut it with her fingernail, until the waters contained in it flow out...(p. 469).

This shows clearly that midwives worked closely together with physicians and that they actually did perform operations. The examples mentioned also deflate the popular opinion that the Arabs did not concern themselves with obstetrics, even if they did leave the actual work to the midwives. Without the necessary interest, however, they would not have become as well-trained as they were to pass on their knowledge to midwives.

The Western Caliphate may also have had a completely different outlook on medicine than did the Eastern Caliphate. Although the religion was the same in both places, culture and environment were quite different. Since Ibn Sina's teachings are said to have been rejected in Spain (Gebbie 1981, p. 50), it may be assumed that obstetrical practices in Cordova differed from those in Bagdad, but to what extent this was the case, is unclear. We do know,
however, that the Western Caliphate had a very uniquely Islamic institution in common with Bagdad, Syria, and Egypt. This was the muhtasib, a common figure in the marketplace, where he made sure that merchants weighed and measured accurately and fairly. But there was a special type of muhtasib, a kind of Gesundheitspolizei, whose function it was to see to it that doctors practiced their craft ethically (Leclerc 1876, pp. 577-578).

We also learn that several women gained prominence in medicine. One of them was the sister of Ibn Zuhr. He came from a long line of medical men and women and was one of the greatest Muslim physicians of the Western Caliphate. He lived in Seville (1091-1162) and is known for having had the courage to speak out against Galen. According to Sarton, Ibn Zuhr's daughter, and her daughter later, were skillful midwives (Sarton 1927, p. 233). Whether or not they were full-fledged medicæ (doctors), or obstetricæ (midwives), is unclear. But since the lines between one and the other are not very clearly drawn, and since, as we have seen in the excerpts from the work of Abū al-Qāsim, midwives did perform operations, they may well have been both. But whatever the case, it is doubtful that these women, some of
whom were members of the leading families, who served the caliph, belonged to a disreputable profession.

Leaving Islamic Spain, we will now examine the rest of Europe, especially Salerno, where Orient met Occident.
CHAPTER 4

MEDIEVAL EUROPE

Joy, Temperance and Repose
slam the Door on the Doctor's Nose
(Regimen Salernitatum)

4.1 Byzantium

In the West, after the fall of the Roman Empire, medicine became monastic, and monasteries were often places of refuge for the sick. These monasteries are said to have been soundly built with good drainage systems and good water supply. But the monks themselves, like the ordinary people also, did not believe in the use of water for personal hygiene. They rarely washed and were vermin-infested. There were rules, however, which required that the body be washed two or three times a year, but that it was sufficient to wash the feet once a week (Leff 1957, pp. 88-89). These rules were rather progressive, since the monks considered bathing a sin because it meant exposing the body and by doing so, invite the temptation of the flesh. According to documented evidence, some monks and nuns never bathed from the day they entered the convent until the day they died. The following amusing anecdote illustrates this point: "Two monks, one old and one young, were travelling
together, when they came to a stream. In order to cross it on foot, they had to remove their shoes and socks. 'Brother, remarked the young monk, 'how terribly dirty your feet are.' And the old monk with great dignity replied, 'when you reach my age, your feet will be just as dirty'" (Marti - Ibañez 1961, p. 117).

Some monks studied medicine, but acted as a repository of the past, rather than promoting scientific progress. They performed as doctors to the best of their ability, and used as textbooks a few manuscripts that had been preserved. But they were not able to apply in practice most of the information gathered from these texts, since they lacked special schooling and thus could not comprehend the complicated works of Hippocrates and Galen. As a result of this, the monks used mainly books of recipes, herbals, and of medicinal simples, which were intended for home remedies.

Surgery was avoided at all cost, since anyone who caused the death of a patient was forever barred from priesthood.

As late as the tenth century, there was no chance at all in the whole of Western Europe for a man to obtain an education in medicine, except in the Italian city of Salerno. But even if men outside the church could have become trained doctors, they would have had difficulty
practicing their art, since times were hard, and the common people had little money to employ physicians. Also, medical professionals, as found among the Arabs, did not exist, except among the Jews, who came as immigrants from the Islamic world. But unfortunately, Christians were forbidden to employ Jewish doctors. The knights, the feudal lords, and the members of royalty were uneducated and often intolerant of failure, so that a physician who had been unable to effect a cure, sometimes had to leave town rather quickly to save his life. Many a peddler who pretended to be a doctor, is said to have lost his life, or had his eyes put out for promising a cure, which then failed. In the towns of the Frankish kingdom, strolling peddlers and mountebanks practiced their art and pretended to be doctors and dentists.

But learning was confined to church and monastery, which considered suffering a virtue and disease a visitation from God. It was also believed that faith would end suffering and bring salvation.

Although there must have been women doctors and midwives in the fifth through the eighth centuries, since laws which mentioned women doctors as well as midwives were enacted for the medical profession, their names have not been preserved (Hurd-Mead 1938, p. 104).
The midwife at this time is a shadowy figure, and it may be assumed that the old herb-gathering village woman was in charge of confinements. Some of these "midwives" would have the necessary skills, but others would be ignorant and filthy and do more harm than good.

In Constantinople, Germany, and France, however, we hear of queens who had studied medicine and who seemed to find joy in caring for the sick. One such queen was Clothilde of Burgundy, wife of Clovis I (465-511 A.D.), who spent her time caring for the sick in a monastery at Tours, in France, and who was declared a Saint for her good deeds (Hurd-Mead 1938, pp. 95-96).

Radegonde of Thuringia, wife of Clothaire (497-561 A.D.), son of Clovis I, was a queen who also needs to be mentioned. She is said to have assembled the lame, sick and blind beggars of the region, studied their diseases and prescribed treatment. She became Abbess of Poitiers, where she trained two-hundred nurses and built a large hospital, where she cared for the sick.

A third medical woman of royal birth was Julia Anicia, who was born in the palace at Constantinople in 472 A.D. She studied medicine at the court and is said to have been interested in hospitals (Hurd-Mead 1938, pp. 95-96).

One medical woman who also made a name for herself in Constantinople at a later date, was Anna Comnena,
daughter of Alexis I. She was active in the twelfth century and was not only physician in chief at the Pantocrator Hospital, but also taught medicine and wrote medical books. She is considered to be one of the great medical writers of the twelfth century (Hurd-Mead 1938, p. 168).

Hurd-Mead also mentions that many women of royal birth went about in rags and filth for humility sake, and that some wore rough garments beneath their velvet robes to mortify their flesh, devoting their lives as a *fisicienne*, to care for the sick without pay. This might have been a natural reaction to the general attitude that women were sinners and the very incarnation of evil, and that they were sensual and lacking in moral courage (Hurd-Mead 1938, p.164).

One such authority on women was the thirteenth century physician, Arnald de Villanova, a Spaniard, who treated the subject of gynecology along with the natural history of vipers, 'since women are for the most part poisonous creatures' (Bettmann 1956, p. 82). Some savants also conveniently believed that menstruation was nothing but woman's atonement for Eve's original sin, while some promoted the idea that it was a 'surplus of the four humors' (Bettmann 1956, p. 83).
Since this was the general attitude towards women, it can be seen as a natural consequence that midwifery, which dealt with the reproductive process, degenerated much from what it had been in the ancient civilizations and in the Islamic countries. The midwife, therefore, who was privy to those secrets, and who was matron of the lying-in chamber, would also fall into disrepute. Gynecology and midwifery would from now on be associated with the use of poisonous remedies to cure sterility, with barbarous operations to procure abortions, and even with witchcraft. And since God had said to the woman "I will greatly multiply your pain in child bearing; in pain you shall bring forth children" (Genesis 4:16), women's sufferings were ignored by legitimate physicians, who considered women's troubles beneath their dignity (Bettmann 1956, p. 82).

Although some hold the belief that the philosophy of the church reinforced the importance of each individual in the sight of God (Rhodes 1985, p.30), women in general, and the child bearing woman in particular, seem to have belonged to a different category. Furthermore, the physician was expressly forbidden to treat a woman, except in the presence of her father, mother, brother, children, an uncle, or other near relative. In case of necessity, the law was flexible, but it required that in the absence of relatives, the physician called honest neighbors, slaves or
servants as witnesses (Malgaigne 1965, p. 5). For labor pains, the name of the Virgin Mary, or of Lazarus, was to be written in wax and bound beneath the feet of the parturient woman (Hurd-Mead 1938, p. 110).

Since midwives, as has been stated, had very little practical knowledge, and since their training was inadequate, a mother's chances to survive even a normal delivery were rather slim. It has also been pointed out that the midwife's dirty hands, her ignorance and clumsy tactics, to the extent of sheer butchery, often resulted in puerperal fever, and in the death of the mother (Bettmann 1956, p. 83). But since childbirth was not listed in the medieval medical books, a woman had no other choice but to call on the midwife to help her in her hour of need.

While this was the state of affairs in Europe between the fifth and the eleventh centuries, also called the Dark Ages, Hārūn al-Rashīd and al-Ma'mūn in the East were encouraging the seeking of knowledge through the accumulation and translation of ancient manuscripts. And soon Arabic influence would be felt in the West.

Arabic medicine reached Europe mainly through Syria, Spain, and Sicily. And its first feeble revival was felt in the eleventh and twelfth centuries, due directly and indirectly to the Crusades. Sicily, situated in the center of the Mediterranean, was the first to profit from the
situation. Being at the crossroads of the great seaways, it became the source of Greek and Arabic learning for Western Europe. One city that comes to mind here is Salerno, near Naples, where Orient met Occident. It had already prospered in the ninth century and had been a health resort before that. Patients came there to find a cure for their ailments and physicians, as a result, were also attracted to the place. Some are convinced that its medical school gained prominence during the Crusades, because it happened to be on the line of march to the Holy Land, where the Crusaders stopped for ships to make the journey to Constantinople. This school was not part of a monastery and was probably the first non-ecclesiastical, co-educational center of education in all of Christian Europe. Legend has it that the school was founded by four men: a Jew, a Greek, an Arab, and a Latin scholar, whose name was "Salernus." Each of these men gave lessons in his own language.

It has also been suggested that Charlemagne, who was a contemporary of Harūn al-Rashīd, had founded this school. Be that as it may, it has been documented, that Charlemagne had been a student at nearby Monte Cassino, and that he recognized the value of medicinal plants to the extent, that he initiated the planting of herb gardens (Hurd-Mead 1938, p. 105).
One of the people who bridged the gap between East and West, particularly as far as medical teaching is concerned, was Constantinus Africanus. He was a native of Carthage who had travelled much, and who was familiar with the sciences of the Babylonians, the Indians, and the Greeks. He retired to the Abbey of Monte Cassino, where he spent the rest of his days translating Arabic medical works into Latin (Major 1954, p. 270).

In Salerno, now under Arabic influence, medicine was taught for the first time in medieval times as a separate branch of science, in contrast to Monastic medicine which was taught everywhere else (Haggard 1933, p. 44).

Arab women are said to have taught not only at Salerno but also in other Italian cities, where they gained a reputation for patience and compassion with their patients (Hurd-Mead 1938, p. 174). And it was here in Salerno, where many of the medical women who travelled with the crusading armies, came in contact with the famous medical women at Salerno and benefitted from their example (Hurd-Mead 1938, p.167).

One lady in particular, known as TROTULA, made a name for herself in eleventh-century Salerno. She is said to have authored many books, although some hold the opinion that she never existed, since a man called Trottus is said to have lived in Salerno at the same time (Singer 1958,
p. 244). It has also been proposed that her name was a collective designation for midwives in general. A "trot" was a *vieille* [altes Weib, old woman], who trottet for a living. She was devoid of physical attraction, yet, wanted to be associated with sexual pleasures. And by being seen as a sorceress and a procuress, she had the reputation of 'une femme de mauvaise vie' (Rowland 1980, p. 4).

But it is now believed that Trotula did exist and authored a book on obstetric procedures, which also included magical formulae to aide delivery, like hanging coral around the neck, or holding a lodestone [a piece of magnetite] in the right hand (Mettler 1947, p. 949). Some also say that her books were authored by her husband, Johannes the Elder. But according to the latest information discovered in 1916 in ancient manuscripts in Salerno (Rich 1967, p. 21), she was the author of *De passionibus mulierum*, which describes the diseases of women before, during, and after labor. This treatise was also called *Trotula major* or simply *Trotula* (Hughes 1943, p. 101). In the preface to her translation of Trotula's *Passionibus mulierum curandorum*, Elizabeth Mason-Hohl states that according to church records, Trotula died in 1097 A.D. and that the funeral procession was two miles long.
After having established her existence, here are excerpts from the first book written on obstetrics in Western Europe by a Christian author:

Galen gives the report that the foetus is fastened in the womb just as the fruit is on the tree, which when it comes forth from the blossom is very tender and falls from any occasion whatsoever. When it has become full grown, riper, and established, it clings to the tree and will not fall on slight occasion. When it has become completely ripe it will fall of itself and not of any other occasion. Thus when a child is first produced from a conceived seed the ligaments by which it is fastened to the womb are tender and unfirm and therefore it is easily let fall by abortion. On account of a cough, diarrhoea, dysentery, excessive activity or anger, or loss of blood, a woman can lose her foetus. But when a soul or life has been infused into the child it clings a little more firmly and does not slip quickly... (Mason-Hohl 1940, p. 20).

After this example of Galenic theory we have some regulations for pregnant women:

When a woman is first pregnant care must be taken that nothing be named in her presence which cannot be had because if she shall ask for it and it not be given to her she has occasion for miscarrying. But if she should seek to have potters earth or chalk or coals, let beans cooked with sugar be given to her. When the time for parturition is imminent the woman should be bathed often; anoint her abdomen with olive oil or oil of violets and let her eat light and digestible foods. If her feet have swollen, let them be anointed with oil of roses and with vinegar...(p. 21).

When reading that the cravings of a pregnant woman had to be satisfied in order to avoid a miscarriage, one may wonder whether today's prospective fathers are aware of the medieval origin of this belief.
Trotula further tells us that "there are certain physical remedies which are obscure to us, but which are advanced as done by midwives. They let the patient hold a magnet in her right hand and find it helpful. Likewise they let her drink a powder of ivory or they find that coral suspended on the neck is helpful" (p. 22). But first and foremost, she advises, that "one must have recourse to God when difficulty in childbirth arises" (p. 23).

It is surprising to find only slim evidence of Arabic wisdom and advice in Trotula's work, like the suggestion to anoint the abdomen with fragrant oils, for example.

It has also been documented that uroscopy [diagnosis from the examination of the urine] was practiced at Salerno (Pollak and Underwood 1968, p. 84), a practice much observed in Arabic medicine. But since Salerno bridged the gap between East and West, the absence of al-Rāzī's and Abū al-Qāsim's pragmatism is astonishing. Yet Trotula's work was considered a practical treatise on gynecology and was viewed as the great authority for women doctors and midwives, to the extent, that it was copied and consulted for hundreds of years.

It has also been pointed out that much of her knowledge came from a variety of earlier sources. But her own contribution to the already existing body of knowledge
does not seem to have exceeded the general level of eleventh-century medical know-how. Trotula was not a medicae, since the first Doctor of Medicine degree at Salerno was conferred only to men in 1180 A.D. The first woman received her degree here in 1430 A.D. (Marks and Beatty 1972, p. 46).

Salerno continued to flourish for many more years, and its skeletal remains were finally abolished by Napoleon in 1811 A.D. (Haggard 1933, p. 44).

4.2 France

In other parts of Europe, particularly in twelfth-century France, women were placed either in a pit or on a pedestal. In the Age of Chivalry, the lady of the manor, or of the upper classes, was an important member of society, for whom chivalrous deeds were performed. She often was a "women of property." While her husband was away on Crusade or fighting some other worthy cause, she was solely responsible for the management of large estates, for her children, and for countless servants. This was a time, when European knights held tournaments and fought bloody battles on a daily basis, and when troubadours praised the beauty and virtue of women.

A married woman at that time had as many children as possible. She brewed the ale, did some of the spinning and
weaving and knew how to treat the various ailments of her household, and of her community. It should be mentioned here that women of nobility and of the upper classes were generally literate. And if they themselves could not read, they had someone to do it for them (Hughes 1943, pp. 18-19).

The daily routine of a highborne lady is set forth in the following: "She arises early when the watchman on the tower blows his horn; she washes her face in perfumed water, says her prayers, and eats a bowl of soup. She then makes the rounds of the estate, visits the sick and injured and arranges the daily work for the servants" (Hurd-Mead 1938, p. 163).

If home life was dreary, uncomfortable and drafty in the feudal manor, the ordinary house was a simple shelter with no chimney and no glass windows. Smoke from heating and cooking was let out through a hole in the ceiling, and people slept on straw and shared their sleeping quarters with other members of the family. Chickens, pigs, and donkeys shared the living quarters with the rest of the family (Hurd-Mead 1938, p. 161).

By this time hospitals began to be established by such religious orders as the Teutonic Knights and the Knights Hospitalers. But they were intended mainly for the care of the wounded during the Crusades and were located in the towns along the lines of march, so that the average
person had no access to them. These hospitals were far from being modern facilities and had few available beds, so that patients, for the most part, slept on straw. Men and women shared the same quarters, and patients with contagious diseases lay next to those who were only slightly indisposed (Fischer-Kamel 1981, p. 43). There were no special facilities for laboring women either, and the physicians, nurses, and midwives performed their task under most difficult conditions (Hurd-Mead 1938, p. 161).

Women also performed valuable nursing services near the battlefields of the Crusaders, where they provided first aid for the injured heroes. But most of the healing work was carried out by women who had no medical training (Hughes 1943, p. 62). While they continued the tradition of gathering herbs for soothing and healing poultices, they used methods that were handed down from generation to generation by word of mouth (Hurd-Mead, 1938, p. 161).

Before universities were established, men and women learned some theory and treatment from experienced physicians, from surgeons, and from barber surgeons. The reputation of a physician depended on the number of cures he effected. When universities came into being, women were not allowed to attend. As a result, they continued to receive their training from physicians, empirics and charlatans (Hughes 1943, p. 82). But women managed to pursue healing,
and many studied privately at Montpellier, for example, as clients of physicians, Jews, Arabs or Spaniards (Hurd-Mead 1938, p. 156).

According to the accounts of some practitioners, women were very active in the healing profession, and French records show a number of names given to women in the medical field:

...fisiciennes, miresses, chirurgiennes, barbières, médecines, guarisseuses, nourices, sage-femmes, and vielles femmes. The terms "fisicienne," "mirese," and médecin," were used interchangeably to refer to the woman physician who treated internal ailments. The work of the "chirurgienne" was chiefly concerned with external lesions and major operations. A barbière engaged in hairdressing, phlebotomy, tooth-pulling, and in making minor incisions. Sometimes the barber went outside her rightful domaine and, like the men, took upon herself the work of a surgeon. The "guarisseuse" and the "vielle femme" used remedies of their own concoction and based their healing upon their own experience. Several types of nurses worked in the medieval period: the wet nurse, the nurse engaged to take care of the children in a family, and the one who performed nursing services in a hospital. The special task of the "sage-femme" or "ventrière" was the care of women during childbirth (Hughes 1943, p. 86).

Some women acquired sufficient medical training to be called into royal service. Two such women, Hersend and Guillamette de Luys, are mentioned who accompanied Louis IX of France to the Holy Land in 1249 A.D. They not only attended the queen, when she gave birth to her fourth son, but also cared for the women who were part of the crusading armies (Hughes 1943, pp. 88-89).
The case of Jacoba, a Jewess and medical practitioner, although not a licenced medicus, was brought in front of the magistrare of Paris in the year 1280 A.D. In the following she pleads for the need of women doctors on grounds of modesty:

It is better and more honest that a wise and expert women in this art visit sick women, and inquire into the secret nature of their infirmity, than a man to whom it is not permitted to see, inquire of, or touch the hands, breasts, stomach, etc. of a woman; nay rather ought a man shun the secrets of women and their company and flee as far as he can. And a woman before now would permit herself to die rather than reveal the secrets of her infirmity to any man, because of the honor of the female sex and the shame which she would feel. And this is the cause of many women and also men dying of their infirmities, not wishing to have doctors see their secret parts. And on this there has been public sentiment, and the Dean and Masters will not deny it (Hughes 1943, p. 91).

In the thirteenth century the famous Hospital "Hôtel Dieu" was established with a special ward for women, where "le service d'accouchement était dirigé par une religieuse dite 'Dame des Accouchées' qui avait sous ses ordres les sages-femmes dont la Maitresse, choisi parmi les veuves,.. (Pecker and Roulland 1958, p. 164).

Medieval French men, as for example Philippe de Navarre, and the Knight of La Tour Landry, to name only two, "wanted to constrict women's minds as the Chinese constricted their feet," so that they were often forbidden
to read and write for fear that they might read romances instead of scriptures and write love letters (Power 1975, p. 80).

Power (pp. 86-87) also points out that a woman who set up practice and seemed to do more than her amateur standard in the eyes of the male physician allowed her to do, would provoke an outcry of opposition. She claims that traces of this can still be found in the reluctance to let women enter medical schools as late as the nineteenth century.

Women doctors and midwives often learned their craft from relatives who were in the medical profession. Some learned from their mothers and friends how to prepare herbal concoctions, while others often resorted to magic, charms, and incantations. Superstition ran rampant, and ordinary lay healers and physicians believed in astrology and were convinced that the stars and other heavenly bodies influenced man's nature and health (Hughes 1943, p. 21).

In this atmosphere of superstition the herb-gathering *viselle* flourished. She was a midwife who travelled from home to home and from village to village. Among the people she was known as "wise woman," but the authorities called her a charlatan, or a witch and accused her of performing abortions and of giving contraceptive aid (Ehrenreich and English 1973, p. 3). With her natural
talent for healing, she earned her meagre existence with the application of secret remedies, amulets and charms, so that the physicians, who discriminated between magic and science, soon classified her with witches and sorceresses who deserved severe punishment (Hughes 1943, p. 93).

Towards the end of the Middle Ages the "wise woman" and her remedies came more and more under the suspicion of medical authorities. In the thirteenth century even Thomas Aquinas is said to have supported the belief that Devils could take fleshy shape, and that evil old women could hurt children through the power of the evil eye. But it was not until the fourteenth century that the belief in witchcraft began to became more widespread and gained a foothold in Europe. In 1484 Pope Innocent III issued a bull that declared witchcraft punishable and an alliance with the Devil (Hughes 1943, pp. 95-96). This is what he had to say in his Malleus Maleficarum:

There are seven methods by which they infect with witchcraft the venereal act and the conception of the womb: First, by inclining the minds of men to inordinate passion; second, by obstructing their generative force; third, by removing the members accommodated to that act; forth, by changing men into beasts by their magic act; fifth, by destroying the generative force in women; sixth, by procuring abortion; seventh, by offering children to the devil, besides other animals and fruits of the earth with which they work much harm... (Ehrenreich and English 1973, p.11).
While he had this to say about women in general, Pope Innocent III also states that "if a woman dare to cure without having studied, she is a witch and must die" (Ehrenreich and English 1973, p. 19).

But in the sixteenth century, a French woman by the name of Louyse Bourgeois (1563-1636), who was a student of the famous army surgeon Ambroise Paré, wrote a book on midwifery for midwives. She was married to an army surgeon and became the official royal midwife to Marie de Medici (Radcliffe 1967, p.19).

Although the feminine skill in midwifery was to be vehemently challenged in the seventeenth, eighteenth, and nineteenth centuries, the following excerpt from Guy de Maupassant's early twentieth-century work Une Vie shows clearly that the ancient art of midwifery was still practiced at that time:1

...and the widow Dentu was standing erect at the end of the bed with a business-like countenance, the countenance of a woman with experience, whom nothing surprises. She was nurse and midwife, and stood vigil over the dead. She received those that come into the world; hears their first cry, washes their virgin skin, and wraps them in their first linen. And with the same stoicism, she witnesses the last words, the last death-rattle, and the last shiver, and lays out the body of those that are

1. See Appendix B, quotation 9.
leaving this world: washing their worn bodies with vinegar, wrapping it in its last sheet. She faces the events of birth and death with resolute indifference (pp. 127-128).

4.3 Germany

Wenn die Henne kraeht vor dem Hahn, 
Und das Weib redet vor dem Mann, 
So soll man die Henne braten, 
Und das Weib mit Pruegeln berathen.

(When the hen crows before the rooster 
And the woman speaks before the man, 
Then the hen should be roasted 
and the woman should be beaten 
(Forbes 1966, p. 2).

Since this was the general attitude towards women, many women sought refuge in monasteries, where they could pursue some kind of a worthwhile life. In German-speaking countries, where medicine was also monastic, as it was in Italy and France, women occupied their time by caring for the sick, so that healing was also mainly the domaine of women. Benedict convents for women spread all over Europe, throughout Italy, Germany, France, and England. Some of these women of whom we have record, were Benedictine Abbesses and Prioresses, who travelled among rich and poor, caring for the sick with patience and compassion.

In the northern city of Braunschweig, for example, lived Hrosvitha (935-1000), a learned Benedictine nun at the Monastery of Gandersheim. She gathered herbs for medical
remedies, taught medicine and treated patients like any other woman doctor (Hurd-Mead 1938, p. 112).

Approximately one century later we hear of another Benedictine nun, who has since been known as Saint Hildegard of Bingen. She travelled on horseback from village to village, accompanied by many of her nuns, and continued this activity until she was almost eighty years old (Marks and Beatty 1972, pp. 49-50).

She was a prolific writer and is said to have tackled all branches of medical science. It may also be mentioned that she was a close friend of Saint Bernard of Clairvaux [leader of the second Crusade in 1145 A.D.], who might be thought of as one of the most influential personages in Europe at the time (Walsh 1920, p. 161).

Hildegard's work has been critically reviewed by some medical scholars. One of them, Dr. Melanie Lipinska, declares her the most important medical writer of her time (Walsh 1920, p. 162). Whether or not she ever took charge of obstetric cases is not known, but for cases of difficult labor she advises to "place the heart of a lion over the umbilicus of the patient for a short hour, then bury it. If not effective, the heart must be steeped in water and taken as a tea (Hurd-Mead 1938, p.193). But since the Rhineland is not now, nor was then a natural habitat for lions, it may be assumed that this remedy was not available too frequently.
It is also known that she believed in great cleanliness as far as open wounds were concerned and in regard to women in labor (Hurd-Mead 1938, p. 193). For sterile women she has the advice to "dine on the uteri of virgin cows and sheep" (Bettmann 1956, p. 83) But since great healing power was attributed to medieval saints, it may well be possible that Saint Hildegard had other powers working in her favor. She died in 1178 A.D. at the age of eighty. Hurd-Mead 1938, p. 112) states that the monastery at Gandersheim, and others like it, were the forerunners of our present day women's colleges.

Universities, except in Italy, refused entry to women. Besides, a university education was so expensive that it did not occur to parents to send their daughters to a university. But since regulations for the practice of medicine did not exist in medieval Germany, except in very few cities, the services of both men and women empirics were much needed. Furthermore, these empirics assumed the name of Arzt or Aerztin, although they did not hold a medical degree. In 1288 A.D. we hear of the first woman doctor who practiced in Mainz, and in 1393 a woman doctor was first mentioned in Frankfurt. During the fourteenth and fifteenth centuries twelve women doctors are said to have been registered in Frankfurt. But apart from those mentioned, there were also midwives who not only worked in that
capacity, but who also had general medical practices (Hughes 1943, p. 85).

In the following translation from his original thirteenth-century work, Albert von Boellstaedt, also known as Albertus Magnus, a Dominican priest, puts forth Aristotelian ideas on chastity, menstruation, conception, and on breech-presentation. He also discusses multiple pregnancies as well as reasons for difficult delivery, and mentions briefly the role of the midwife: ²

...since it happens that during the birth process the hand or the foot of the fetus comes out first, which is bound to cause great pain. Even though the midwives push the fetus back skilfully, it can not be helped that the mother feels the cruel pain. This is why many women, if they are not extremely strong and robust, find themselves so weak, that their life becomes endangered (p. 27).

Many women did indeed die in childbed during the Middle Ages. According to poll and hearth taxes, the death rate for women between the ages of twenty and forty was higher than that of men and was attributed to child-bearing and greater vulnerability to infectious diseases (Tuchman 1978, p. 216). Hurd-Mead (1938, p. 183) mentions that prolonged labor, or the inefficiency of an uneducated midwife often had serious consequences, so that nothing remained but to bury the women, after having removed the

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2. See Appendix B, quotation 10.
fetus by caesarean section or piece-meal. She also mentions that such deaths were not only peculiar to one country, or to the common people, but that they occurred among the rich and the poor alike.

The following case shows just how much obstetrics and midwifery were restricted to women and that a male physician's interference could prove fatal:

A midwife was unable to terminate a difficult birth. Veithes [name of a Hamburg physician] accepted the case and thereby saved the mother and the child. Since at that time obstetric operations were not carried out by the physicians but by the surgeons, who were less highly thought of, the physician dressed himself as a midwife for the event. When this became known, he was imprisoned and burnt to death (Pollak and Underwood, 1968, p. 91).

Qualified physicians could not be found in rural areas so that the lady of the manor, or the illiterate, old wise women was called in medical emergencies and in cases of childbirth.

Thirteenth-century French medical treatises in French and English suggest that women recognized the importance of these books, since they helped them to diagnose and treat their own ailments. Trotula's book was also translated in the fourteenth century. But in 1513 A.D. the first obstetric textbook, Eucharius Roesslin's
Der Swangern Frauen und Hebammen Rosengarten [The Rose-garden for Pregnant Women and Midwives] appeared in the vernacular language. This book has been described as a "translation of the Greek - Arabic - Latin jumble that most medical knowledge had become." Its 'several quaint woodcuts depicting single and multiple feti within fanciful wombs in extraordinary attitudes, presentations and conditions, guaranteed immediate success.' This book was translated into English in 1540 A.D. and became known as *The Byrth of Mankynde* (Gebbie 1981, p. 54).

At this time Jakob Rueff's (1554 A.D.) *Ein Schoen Lustig Trostbuchle* was printed in German. This book was meant for midwives and for the comfort of pregnant women. It contains much that sounds like excerpts from the Arabic texts since it mentions the birth chair, the anointing of the midwife's hands, as well as the abdominal care of the child bearing woman, as can be seen from the following text:³

...the midwife must comfort and encourage the pregnant woman with wise and clever words, and remind her to be brave and practical, and to do her best to follow her [the midwife's] advice. She should do the same for the other women who are present. Then the pregnant woman and the other women with her should kneel down and call upon God Almighty, and pray the Lord's Prayer, so that he will grant them help and comfort and show his mercy

³ See Appendix C, quotation 1.
in a happy outcome. And after they have prayed, they should get up again and make the woman sit on the chair prescribed for this occasion [birth chair] as described in the following:... (p. xxxiii).

...After that the midwife should ask for two more women, or at least one, for either side, who talk reassuringly to the [child bearing] woman and let her know that everything possible is being done for her. Finally, the midwife should sit in front of the woman and rub her abdomen with a mixture of white Gilgen oil, sweet almond oil, and chicken fat. ... When that has been done and the midwife has also rubbed her hands with it, she should ask the pregnant woman politely to work with her, examining her with her fingers to find out the position of the child...(p. xxxiii).

Although not much practical wisdom seems to have been gained from Rueff's work, the fact that these books became popular seems to indicate that the attitude towards women in general, and to the midwife in particular, was changing. Some German cities introduced municipal midwives (Rhodes 1985, p. 52).

But for the most part, these women were accused of being witches. Yet, they themselves were so terrified of meeting one, that they would never travel alone if they were called at night, since they would also be guilty by association. They would either go with another women, or have men with lanterns accompany them as a precaution against meeting a witch. If a midwife had to make such a dangerous trip alone, however, she would carry two loaves of bread, so that the Devil would not cause her to lose her way.
According to the Augsburger Hebammenordnung, the Devil could also trick her into using incantations, or make her destroy the fetus before and after birth, since "in childbirth the midwives are busy with a thousand devilish things as well as with the women in travail." Furthermore, if a delivery had an unhappy outcome the midwife would be accused of witchcraft (Forbes 1966, p. 118-127).

These are but few examples to demonstrate the late medieval attitude toward the midwife and to show how far her social status had regressed. Once a valued and respected member of society, in medieval Europe she is now associated with witchcraft.

The Hebammenordnung of Regensburg, dated 1452, was one of the first efforts to regulate the practice of midwifery. It asked to assure the midwife's proper training, to make her equally available to rich and poor, and to have her call for a physician in difficult cases. In the town of Wuerzburg in 1555 A.D., regulations were issued which forbade midwives either to carry off or bury the placenta, but to cast it into running water.

And as late as 1711 A.D., a Brandenburg regulation for midwives forbade them "to hand or sell the fetal membranes, placenta, or umbilical cord, as these would be used in dark and nefarious manner" (Forbes 1966, p. 118-120). Yet, while she was accused of witchcraft, of
association with the Devil, and of other horrid crimes, it is a curious fact, that the Church allowed midwives to perform baptism in critical cases for fear of loosing an unbaptized soul to the Devil (Forbes 130, p. 130).

4.4 England

Although not much seems to be known about the midwife in medieval England, evidence suggests that she did fare slightly better than her sisters on the Continent. Unlike Germany and France, in England we do not hear of pious abbesses and prioresses who cared for the ailing. In short, monastic medicine, if it existed at all, does not seem to have been practiced to the extent that it was practiced on the Continent. Records show, however, that Charlemagne, as early as 794 A.D., founded Saint Albans not far from London, whose school and collection of chained books attracted students from all over Europe, especially in the ninth century, when Alfred was king (Hurd-Mead 1938, p. 105). The English prioress is said to have been less moral and devout than her counterpart on the Continent (Gebbie 1981, p. 54).

The midwife in medieval England is also likely to have been a married woman of middle age or older, who had borne children herself. Her religious beliefs and her
character were of utmost importance to the Church (Donnison 1977, p. 3).

Royal midwives are mentioned as early as 1442 A.D., when Henry VI queen, Margaret of Anjou, had her confinement. On this occasion we have the description of a familiar setting: "...in the second chamber must be a traverse which shall never but be drawn until she be purified. After that traverse there may not openly be no man officer or other come there nearer than the outer chamber. Instead of men officers must be gentlewomen" (Towler and Bramall 1986, p. 28).

Although the fear of witchcraft was stronger on the Continent, in 1481 the Rolls of York Minster show the prosecution of a midwife because she used incantations (Donnison 1977, p. 4). In 1591 A.D. a midwife in Edinburgh was burned at the stake for attempting to relieve a woman from labor pains (Rhodes 1985, p. 53). Also, two English midwives are said to have been barred from practice in 1661 and 1677 A.D. on suspicion of witchcraft. Others were suspected of the aid of a broomstick in unusually short confinements (Forbes 1966, p. 117). But officially, the Civil Courts prescribed the punishment befitting the crime, and witches were burnt for murder only (Towler 1986, p. 33).

It has also been stated that the development of surgeons' guilds in the thirteenth century was to have an
important effect on the work of midwives. Under the guild system the surgeon was the only one who was allowed to use surgical instruments. In cases of difficult labor, therefore, he would remove the fetus piece-meal with hooks and perforators, or perform caesarean section on the dead mother. Thus, his presence in the lying-in chamber always bade ill for the mother. And if a surgeon was not available for such an operation, the task fell to the midwife, since the Church demanded that the child be saved and baptized in order to save its soul (Donnison 1977, pp. 2-3).

Many illiterate village women were earning their living as midwives as late as the nineteenth century. They were also called-in for sick nursing and for laying out the dead [similar to what we have seen in Maupassant's description of la veuve Dentu]. The better class of midwife, however, would spend many years in training, either with her mother, or with another trained midwife (Donnison 1977, p. 8).

But the contempt for woman as physicians, midwives, and patients eventually resulted in the realization that women had special needs and required treatment which was best undertaken by another woman. It would be some time, however, before women were fully accepted in the medical profession.
4.5 Jewish Medical Women

Closely connected with Islamic culture is the influence of the Jews upon European medicine. Under Arab domination Jewish physicians were prominent figures at the courts of the caliphs. In the Western Caliphate Jewish physicians practiced successfully until they were banished in 1492 A.D.

Jews translated Greek or Latin manuscripts into Hebrew and Arabic. They taught at Salerno and lived in the cities around Salerno from the ninth century A.D. onwards. They also welcomed the Arab invasion, since Byzantine rulers did not look favorably on Jewish presence in their part of the world (Singer and Sigerist 1924, p. 136).

In the tenth and eleventh centuries every monastery is said to have had its Jewish physician. But Christians were forbidden to employ them, and after 1300 A.D., they were no longer admitted to the medical school at Montpellier in France, although many remained in Avignon until the fifteenth century (Garrisson 1929, p. 138). Some of these Jewish women, for example Sarah of Saint Gilles, opened their own private medical school (Marks and Beatty 1972, p. 56).

During the twelfth and thirteenth centuries Jewish physicians, both male and female, were in great demand as eye doctors and surgeons, since they enjoyed the confidence
of the Christians, who considered them the best practitioners. Yet, if found out, Christians who were treated by Jewish physicians were excommunicated (Hurd-Mead 1938, p. 209). But since the monks and priests were forbidden to perform surgery, or to treat women, people had to turn to the Jewish physician for help.

Hurd-Mead (p. 226) says that it may be safely assumed that Jewish women practiced medicine in all parts of Europe in the thirteenth century, particularly in southern France, and that they were also able and much sought after midwives. Many of them, she claims, came from Spain and were educated at Salerno, where they became known as "The Ladies of Salerno."

In the German States a woman named Zerlin practiced in Frankfurt-on-the-Main. And Sarah, another Jewish woman, was given permission in 1419 A.D. to work as a doctor in Wuerzburg (Friedenwald 1944, p. 219, v. i). According to the same source, the Archives at Frankfurt show the names of many Jewish women physicians. But since they did not leave any written records, we know very little about them, except that they were very popular and carried out their profession by adhering to the rules of medical etiquette laid down long before Hippocrates (Friedenwald 1944, p. 220, v. i).
5.1 Ancient Civilizations

From the beginning of time, people have tried to extinguish the growing life in the mother's womb. This was often achieved through medicinal herbs, or through manipulation of the fetus, or by applying external and internal force. Although different means of bringing about an abortion were known in the ancient world, one may safely say that abortions were not gladly performed anywhere and were often punished.

This was the case in Ancient Egypt, for example, where such practice was judged severely. The Ebers papyrus, for instance, mentions only one remedy to achieve an abortion, either in the first, second or third period, with a concoction made of dates, onions, and the fruit of the *acanthus*. This mixture, crushed in a vessel with honey, was sprinkled on a cloth and applied to the vulva. Remedies to hasten labor, however, are said to have been plentiful (Bryan 1974, p. 83).

Among the Persians, Ploss points out, "gab es alte Weiber, welche den geschwaengerten Maedchen die Frucht
The Hebrews were emphatically against abortion, (Ploss 1902, p.853), and although they were done openly in Egypt, both the Egyptians and the Hebrews regarded abortion as a great sin (Leonardo 1944, p. 36). Yet, the Talmud recommends emetics, purgatives, digestives, etc., as well as various types of plasters, poultices and compresses, to achieve the desired effect (Rosner 1977, p. 34). According to the Talmud, a fetus begins to assume form and shape at 40 days after conception. Prior to that time, it is mere fluid. But if a child is formed enough and dies inside the womb, the midwife who touches it, is considered unclean for seven days. The mother, however, remains clean until the dead child leaves her body (Ploss 1902, p. 826).

The Ancient Greeks, who authored the Hippocratic Oath, were similarly not in favor of abortion. Hippocrates himself advises to eat much garlic, in order to avoid a miscarriage. He believed that garlic caused flatulence and that flatulence was beneficial to pregnancy (Plcss 1902, p. 836).

In his Oath, Hippocrates recommends that the woman on the sixth day of her pregnancy should perform a number of mighty leaps, making her head touch her buttocks. After the
seventh leap, he says, the "seed" will fall out of her with a clatter" (Rowland 1980, p. xv). But Hippocrates states emphatically that "I will not give a fatal draught to anyone if I am asked, nor will I suggest any such thing. Neither will I give a woman means to procure an abortion" (Rhodes 1985, p. 14). His sentiment is also substantiated in the following German text:

In his book De natura pueri Hippocrates recommends an abortifacient to a harp player. He states that no woman should be given a Phthorion, since it was the object of the healing arts, to protect and safeguard the creation of nature. In this case, however, he was able to effect the abortion of a supposedly six day old fetus, after the woman jumped seven times. This he describes in great detail (Ploss 1902, p. 853).

There was yet another way for a couple to rid itself of an unwanted child. It was common practice for a father to reject his child and to let it die from exposure, if the child showed any imperfections, or if it was weakly, or of the feminine gender. It must be understood in this context, that a child was not considered worth living, as long as the father did not recognize it (Ploss 1902, p. 864).

In Greece, circa 300 B.C., women doctors were accused of performing abortions and were generally barred from practice (Marks and Beatty 1972, p. 42). A case in point is Agnodike, known as "the Midwife of Athens", who was

1. See Appendix C, quotation 2.
put on trial for practicing under false pretenses. She was considerate of women's modesty and sensitive to their objections to be examined by male doctors. Disguised as a man, she studied midwifery under a famous physician and anatomist in Athens. Those women, to whom she revealed her true identity, demanded her services and appealed for clemency for her, when she was charged with having illegally practiced midwifery (Towler and Bramall 1986, p.14). She was also charged to have corrupted men's wives, when the true reason is thought to have been the fact that the demands for her services affected the livelihood of the male physician (Towler and Bramall 1986, p. 14).

Among the Romans, Soranus declared all abortions to be a dangerous undertaking. Even though he may have advocated it in certain cases, he believed more in the prevention of pregnancy than in the extinction of the embryo. To remove a dead child from the womb, he advocates dry sponges or the insertion of papyrus into the orificium. In order to bring about abortion, Soranus recommended compresses, enemas made of astringents, emetics and similar remedies (Ploss 1902, p. 853).

As shown in the following translation from a French text, a fetus was not considered a living being: "The philosophy prevalent in the neo-stoic empire considered the fetus no more than a part of the viscera [internal organs]
of the mother, as long as it had not received the breath of life, or anima, that is to say, until the moment of his birth, when he breathes for the first time" (Gourevitch 1984, p. 214). 2

Byzantium, which inherited Greek and Roman medical customs, consequently also rejected the idea of abortions. The Greek physician, Aetius of Amida/Mesopotamia (500-550 A.D.), who lived in Constantinople, says that abortions have to be avoided during the second and fourth month. To bring about an abortion, he suggests that the patient fast and take sitz-baths, or use wine-soaked tampons, and be bled. He further advises the use of pessaries of iris, gallanum, turpentine, etc. (Leonardo 1944, p. 131). It is also advised that the patient, on the thirteenth day of a missed period lift heavy burdens, use douches of strong herbs, and be jerked about by several people. The child will be dead on the fourth month, he says, and labor will commence. He further advises that the woman be bled profusely after labor (Leonardo 1944, p. 140).

2. See Appendix B, quotation 11.
5.2 The Islamic Era

In the tenth century Ibn Sina performed abortions by inserting a metal probe, mallow stalks, or paper soaked in ginger. But this was done until the third month only, and since Ibn Sina regarded the fetus as a uterine tumor until the third month, abortion until that point did not seem to weigh too heavily on his conscience. After the third month, however, Ibn Sina needed a medical reason to induce it.

According to Elgood, folkmedicine advocated that "the best abortefacient was an infusion of roots of asparagus and dyers madder to which a text of the Qur'an has been added. The text should be written on the bottom of the cup from which the mixture is drunk" (Elgood 1970, pp. 243-244).

In the tenth and eleventh centuries, as Hurd-Mead points out, barbarous operations were often performed to effect an abortion. Ignorant midwives waited until the infant and the mother were dead, before extracting the fetus. But even today, there are said to be native doctors in Egypt and Morocco who still perform abortions in medieval fashion (Hurd-Mead 1938, p. 110).

In Safavid Iran a uterine syringe was used for the injection of drugs that would result in an abortion (Elgood 1970, p. 267). But the woman herself, as well as her father and also the person who performed the abortion, were guilty
of a horrible deed, if it was performed after four months and ten days, since at this time the fetus was considered to have a soul. After an abortion or after a miscarriage, elaborate purification rules had to be followed. The woman, for example, had to drink cow's urine and also douche with it. She was allowed food and wine, but no water.

In Tunis and in Turkey, women resorted to very simple means to bring about the desired effect. They tried to abort by taking baths that were too hot, by stretching vigorously while hanging up the laundry, or by travelling on bumpy roads (Ploss 1902, p. 834).

Ploss also tells us that in Turkey, in 1877, there was concern regarding the unscrupulous behavior of midwives. While some carried out their profession in an honorable manner, others are said to have lacked ethical behavior, and to have been disreputable, as well as ignorant. Although midwives in Turkey still attend to women and children as they did in ancient times, they are said to be mainly associated with unwholesome practices and employed to perform abortions. (Ploss, p. 834)

In his work al-Rāzī, al-Rāzī devotes many pages to the subject of abortion. He speaks of difficult cases that require the expertise of the midwife, as for example, the podalic version. But he says that the most difficult situation arises, when the child's position is sideways.
To bring about the expulsion of a fetus, he recommends to drink an infusion of *Juniperus sabina* and lupine (p. 141).³ This he repeats many times throughout the chapter, naming the herbs or spices to be used for making an infusion which the pregnant mother needs to drink three times a day or more. He further explains the procedure necessary for the removal of a dead fetus and advises to cover the woman's face, lest she comprehend what goes on:⁴ on dissecting the fetus according to Hippocrates: If it dies inside the womb, you want to cover the woman's face that she will not see and comprehend what is being done to the fetus...(p.147).

And to bring forth the afterbirth al-Rāzī advocates to sit in cooked garlic, i.e. to fumigate the patient's private parts with it (p. 155).

Abū al-Qāsim, who practiced approximately a century later (936-1013) in Islamic Spain, does not seem to add anything new to this subject. He, like al-Rāzī and Ibn Sīnā before him, used infusions made of a variety of herbs and spices, for example, *Calendula officinalis* [marigold], *Juniperus sabina* [juniper berries], sesame, cardamom, safran, and pepper, to name only a few. But apart from

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3. See Appendix A, quotation 10.

4. See Appendix A, quotation 11.
drinking the mixture made with these ingredients, they were also introduced into the uterus directly. Either method, or a combination of the two, would bring about severe, life-threatening bleeding and was often done by the woman herself, or with the help of a midwife (Ploss 1902, p. 853).

Abū al-Qāsim also mentions the importance of the midwife to be well informed, or prepared for unusual cases, such as multiple pregnancies:

A note on the fetuses that may form in the womb and abort. Sometimes there may be one, two, three, four, five, six, seven, or more than ten. And I vouch that a woman aborted seven [fetuses] and another one fifteen, all of them formed. This is by decree of God Almighty, the Wise. And all this should be part of the midwife's knowledge, since one day she may encounter such a case and must know what should be done... (p. 475).

5.3 Medieval Europe

Records of medieval European abortion practice are very scarce. But since midwives were experts in birth control, they were suspected of performing abortions and infanticides.

During the fifth and eighth centuries, Hurd-Mead (1938, p. 104) tells us, that the person who performed an abortion would lose her life, if a patient died as the

5. See Appendix A, quotation 12.
result of it, and that her descendants to the seventh generation were obliged to pay indemnity to the family of the deceased.

In view of such heavy penalty it may be explained why not too many records of abortion practice can be found. But abortions were performed inspite of impending peril.

In Jakob Rueff's (1554 A.D., p. xxvi) Ein Schoen Lustig Trostbuechle, he warns against this practice and differentiates between the "fromme frouw" and the "fromme Appotecker" [pious women and pious apothecary] and "einem lasterhafften, abgefeimten, boesen wyb," [a wicked, cunning, evil woman]. If fumigations, hot baths, and herbal potions do not bring the desired effect, the midwife will take the woman to the barber surgeon, who does not know much of such matters but works until the child will perish in its mother's womb "das kind in muterlyb verderbt und zu nueti gemacht wirt."

The midwives were charged repeatedly, rightly or wrongly, with killing fetuses, so that Satan was able to steal the soul of the unbaptized baby. "The Devil himself was believed to arrange the abortive death of a foetus to prevent the soul from being christened, and thus saved." Furthermore, with the aid of the midwife, he was thought to have caused newborn babies to be secretly consecrated to himself (Forbes 1966, p. 117).
Towards the end of the sixteenth century, Church and State decided to appoint a capable midwife to oversee midwifery practices in the villages. This head-midwife had to be able to administer 'le bon baptême et décider une femme a conserver son fruit' (Knibiehler and Fouquet 1983, p.178). And according to the same authority, the midwives recognized that their battered reputation would only profit from such a move so that they adhered to the ruling without protest (p. 178).
CHAPTER 6

CONCLUSION

Mankind has always been fascinated with natural phenomena and has looked for explanations. This applies especially to the mysteries surrounding the birth process, in which each one of us has been a participant. We are awed and bewildered by the mysteries of birth, which have stimulated the imagination of man from the beginning of time.

At some time in prehistory bands of men, women and children were moving together in groups and joined together to form more effective hunting teams. It is conceivable that the man remained with his wife and helped her when she gave birth to a new member of the group.

But with increasing civilization the husband, as birth attendant, was replaced by an experienced woman from within the family or tribe, so that these women became the first midwives.

At the beginning of recorded history women, for the most part, helped each other in their time of need and gained their experience with practice, and by watching older, more experienced women.
In Pharaonic Egypt, for example, and also in Ancient Greece, obstetrics was the domaine of midwives exclusively, while the diseases of women were treated by female doctors. These women doctors and midwives were professionals in their own right who, for the most part, did not have to call a male physician in difficult cases.

During the late Middle Ages, when medical education was available to men only, and when women had no access to medical training, women continued to train themselves to the best of their ability, so that they could better help their suffering family members and their friends.

But in medieval Islamic countries, as we have seen, the situation is a different one. Here midwives and doctors worked together as partners. While the midwife actually attended the parturient women at the bedside, the male physician, in difficult cases, guided her from behind a curtain.

In medieval Europe, however, we see a very different picture. The Church now decrees that faith is the only healer, so that the practice of medicine is not only frowned upon but becomes exclusively a Church and male dominated field.

This was particularly the case as far as childbirth was concerned. Since the Church associated women with sex all pleasure in sex was condemned and was associated with
the Devil. As a result, labor pains were seen as the "Lord's just punishment for Eve's original sin" (Ehrenreich and English 1973, p. 14).

Midwives, therefore, were charged repeatedly, rightly or wrongly, with killing fetuses for Satan, so that he could steal the soul of the unbaptized baby. The Devil himself was believed to arrange the abortive death of a fetus, to prevent the soul from being christened, and thus saved. Furthermore, Satan was thought to have caused newborn babies to be secretly consecrated to himself (Forbes 1966, p. 117).

Despite these setbacks women continued to work as empirics, midwives, and nurses, since with few exceptions, they were not admitted to medical schools.

But with men's increasing mistrust of women in general, and of the female physician or midwife in particular, the once respected midwife falls from grace. She stands accused, quite simply, of "female sexuality," and for centuries to come would be associated with witchcraft and other evil deeds.
APPENDIX A

ARABIC TEXTS (REPRODUCTION OF ORIGINAL)

Quotation 1
في البواسير والثرثرة، قال: ضع المرآة تحت المرأة لترى الشيء كهنه، فإن هناك أوجاع شديدة فأجلسها في طيّ من المرخات وحملها المشابرات حتى يسكن الوجع، فإذا أردت العلاج النافع فأقتعها وضع عليها أدوية تحس الدم كالعفص السحique أو النورس ثم عالج الجرح بمرهم التواتا، وإن كان عازرا داخل الرحم فأراك وقلبه فانه يهلك المرأة، لكن عالج بالمياه القالبة حتى يذيل ويسوت. قال: دم البواسير يخرج.

Quotation 2
طمّن وورم، ويتين الشقاق بالمرأة إذا وضعت تحت المرأة وفتح فم الرحم نحا، فإن كان في الحلقة فداوه بزيتى وصفة الليث، فإن هذا نعويه من الليمبات بعد أن يذهب الشقاق من هامته، وإن كان غائراً فحمل قشور النحلس والزواج فإنه يذهب به.

Quotation 3
أشد من هذه لؤلؤه النسوة، ورأيت امرأة قبيت أرملة مدة طويلة، فمرض لها هذا العرض وقالت القالة: إن رجها قد (الف ب. 193)، تكسر إلى فوق فأقرت إلى أن يستعمل الأشياء التي تحمل هذه المرأة.
لاستماع
كمية: فين فعلت تلك الأشياء عرض لها من مس الإصابع وحرارة تلك الأشياء بفعل وقع مشون بلدة كالنحل عند الجاع وخرج منها شيء غليظ فاسترحت من تلك الأعراض التي كانت بها وكذا في الآرام.

شعائر
وضع الرحم بالحلوق والأشياء الطبية الروائح، وأمر القابلة أن تمسح فم الرحم ببعض الأدوية الطفيفة كدهن البابونج والغار والقصوم والسوين مسحا رقيقا، وضع المحاجم على باطن الفخذ بلا شرط وأعدها.

تماس
علامة الحبل: انضم فم الرحم. ج: فم الرحم يضم عند الاشتيال. وعند الورم فيه، وفرق بينما أن مع الورم صلابة، وفاضل الامض للاشتيال لاصلاحة به على الحال الطبيعية، وقد تدخل القابلة اصبعها.

معروف ذلك. ج: وعذا أعظم دلائل الرحم أنها قد غلقت.
Quotation 7

919 فإن دناً وَبَلْغُوا لَوْدَوُضٍ حَمْلِهَا، وَفَتْنَ أَمُرَّ وَبَضَمَهَا بِهِلْهَهَا
920 الدُّلْكُ في التَّجْرِبَةِ لِلَاخْصَاصِ، وَمَا بَقَى الْحَمْلُ مِنَ الأَقْطَانَاءِ
921 بِالْبَهْرِ كَمَا يَسْتَلِينُ النَّصَبُ، وَلاِيُكَنْ عَلَى وَضْعٍ تَمَّ أَن
922 وَاجْعَلْ غَيْظًا مَا الْسَمَّاءَ، وَأَحْصِهَا مِنْ مَرَقِ الْجَهَنُ
923 وَاحْذِرْ عَلَى صَيْحَةٍ أَوْ تَمْبُّهُ، أَوْ رُوَعَةٌ أَوْ صَرْحَةٌ أَوْ ضَرْبَهَا
924 وَأَسْقِهَا مِنْ شَشْدَةٍ، طَيْبَ تَمْرُ فِي مَاءِ حَلْبِهَا
925 وَاجْعَلْ لَهَا قَالِةً فِي فِطْنَةٍ، تَمْدُدْ رَجُلَهَا بِنَبِرٍ حَمْلَهَا
926 ثُمَّ أَذَا تَمِّعْهَا بِشَشْدَةٍ، عَاصِرَةً لَهَا بِحَكْمَةٍ

Quotation 8

نَحْي وَعِلَتْ يَنِينِي أن تَجَلَّل الْمَرْأَةَ عَلى كَيْسٍ لَهُ مَقَعِدَةً، وَيَسْتَدِعَ عَلَى
95 ظَهْرَهَا وَيَتَجَمَّعُ رَجُلَهَا إِلَى نَاحِيَةٍ أَسْفَلِ الْبَطْنِ وَيُقْنِي نَخَادِهَا
96 مِنْ فِرْجَتٍ وَيُصِرُّ ذَرِيعَهَا تَحْتُ رَكْبِهَا وَيُرِطِبَهَا بِرِيَاضٍ يَصِلُهُ لِذَلِكَ، ثُمَّ
تَجَلَّل الْقَابِلَةَ مِنَ الْجَانِبِ الأَبْينِ وَيَتَطَعَّمَ الآلَةُ الَّتِي يَفْتَحُ بِهَا بَعْدًا
97 الرَّحْمِ الَّتِي تَأْتِى صُورَهَا فِي بَعْدٍ، يَنِينِي أَذَا أَرَدْتَ استِعْمَالَ
لفصل الخامس والسبعون في تعليم القوالب كيف يعالج النحاس

الأحياء إذا خرجوا على غير النمط الطبيعي

ينبغي للقابلة أن تعرف أن ذلك نمط القوالة الطبيعي

علاماتها إذا رأت المرأة تترمز إلى أسفل وتشتاق أن تتم الهواء.

وهي على ما هي عليه من النمط وسرع خرج الجنين فاعظم أن

هذه الولادة تكون على النمط الطبيعي وكون خرجه على رأسه

والشيمة معه أو متعلقة من سرته، فإذا رأت هذه العلامات نينبغي

أن تعصر بطنها لكي يخرج الجنين بسرعة فإنه إذا نزل على رأسه

نزلت الشيمة معه وتتشفي من تلك النفلات تنظيفا حسنا، وما خلاف

10 هذه الولادة فهي غير طبيعية مذمومة لأنه قد يخرج الجنين على

رجليه ويخف بديقة قبل رأسه ورجليه ويد واحدة أو رجل واحدة

وأي خرج رأسه ويد أو يخرج منطوبا وربما انقلب على قفا ونحو ذلك

من الأشكال المذمومة، نينبغي للقابلة أن تكون حازمة لطيفة بهذه

الأميا، كلها تتحذر الزلل والمخاطر، وأنه مبين كل شك منها وكيف

15 الحالة فيه ليستد بذل وقت عليها.

إذا خرج الجنين على رأسه الخرج الطبيعي وانتقد على المرأة

ذلك وسرع عليها الطلق وأدبتها قد ضعفت، فلأسلما على كرسى

أو أم نسما بضبيتها وآتى رحمها بالحلبة الطبوخة والأدبان الرطبة،

ثم تدخل القابلة بين أصابعها مسعا صغيرا فتحق به الشيمة أو

تشقها وظفرها حتى يسيل ما فيها من الرطوبة وتعرض بطن المرأة

10 لونها قد ضعف 3. بجده 2 AH. على يده 1. P. بطنه

P. رجلها 4. AH.
مفردة ج: الأهل يخرج الأجنحة الإحياء والأرومات، الترمض
يشرب طبيخه البمر والذباب فيخرج الأجنحة بقوة، وكذلك متي احتفل
حب الحاشا يخرج الأجنحة، الفودح النهرى متي بيس وشرب بباء العسل 5
أ ... عصارته أو احتمل أخرجت أجنحة بقوة ؛ والحبل أقوى في ذلك

من تشريح الأجنحة لابقراط: الذين يمرون في الأرحام إذا أردت
ذلك فقط وجه المرأة ثلاثراً ما تفعل وتناول ما برز من الجنين فضع
اللولب في ذراعه فإذا ظهر العظم فقد أصاب يده ثلاث يلقت اللحم ثم
قطع اللحم عن الكتف و المتكب ثم أخرجهما ثم ضع الرأس بعد ذلك 10
وضما طيما و اجذبه إليك قليلًا ثم ادفعه إلى داخل قيللا و شد بالسكي

ذكر ما يتصرف في الرحم من الأجنحة فيسقطون، قد يصرف في
الرحم واحد واثنان وثلاثة وأربعة وخمسة وستة وبعة وأكثر من عشرة
وقد صى عندى أن امرأة أسقطت سبعا وأخرى خمسة عشر كلههم
متنشفين ذلك بتقدير العزيز العلمي، فهذا كله ينبغي أن يكون في
علم القابلة نرى ما يقع إليها مثل ذلك يوماً ما تتقبله بما ينبغي،
Les maladies des femmes, la gynécologie, l'obstétrique et l'art des accouchements ont occupé une place de choix dans la pratique médicale de l'Égypte Antique. On est d'ailleurs confondu de voir le degré de maturité atteint par la science pharaonique dans ce domaine. Divers documents étudient les troubles menstruels, le prolapsus utérin, les métrites. L'on va jusqu'à prétendre que les Égyptiens ont eu connaissance du cancer de l'utérus. La Cesarienne semble avoir été pratiquée sur les bords du Nil dès le 3e millénaire avant J.C.

Indications intéressantes sur les activités des sages-femmes et leurs divers emplois: administration de médicaments, recettes particulières pour hâter l'accouchement et les rendre moins douloureux. Elles avaient le droit de provoquer des avortements quand cela leur paraissait nécessaire. Leur rôle était donc considérable et l'on comprend qu'on leur demandait une grande et longue expérience; on exigeait d'elles qu'elles fussent mères de famille, mais elles ne pouvaient exercer qu'après l'âge où on ne peut plus avoir d'enfants. Les femmes stériles étaient exclues de la profession; la nature humaine, disait Platon, étant trop faible pour pratiquer un art dont elles n'auraient aucune expérience personnelle.
Quotation 3

L'œuvre de Soranus d'Ephèse (98-130), que l'on peut considérer comme le fondateur de la gynécologie et de l'obstétrique, n'influença donc pas la pratique des matrones, ni l'œuvre de Trotula (début du XIIe siècle), femme-médecin de l'École de Salerne, qui est l'auteur du premier traité européen de gynécologie et d'obstétrique. De mulissum passionibus ante et post partum et qui fit découvrir au monde savant plusieurs procédés obstétriques de Soranus. Là encore l'écart reste grand entre la théorie et la pratique et les illustrations montrent combien grande reste l'ignorance.

Quotation 4

La sage-femme à Rome a plutôt mauvaise réputation; c'est une ivrognesse qui le plus souvent ne sait pas ce qu'elle fait. On la considère aussi comme une avorteuse, utilisant comme le médecin, des drogues dangereuses dont l'usage est interdit autant que nécessaire.

Quotation 5

Les événements marquants de la vie d'une femme, pendant sa période d'activité génitale,, sont ses grossesses et ses accouchements. La sage-femme alors joue un rôle considérable; elle acquiert un grand pouvoir sur l'esprit de l'accouchée; elle impose sa présence dans les autres incidents ou maladies qui peuvent atteindre la sphère génitale.
L'accouchement occupait à l'époque mamlouke une place particulièrement importante.... Il célébra l'événement par une grande fête qui dura sept jours et sept nuits, à laquelle assistèrent toutes les femmes des émirs. ...Les femmes des notables se réunissaient autour de la mère pour la féliciter et prendre part à la réception somptueuse... (pp. 199-200). Comme à toutes les époques antérieures, l'accouchement fut considéré au temps des Mamlouks comme une affaire de femmes.... Deux ou trois jours avant le moment attendu pour l'accouchement, on faisait appel à elle [la sage-femme]. celle-ci envoyait à la maison de la future mère la chaise rituelle de l'accouchement (Kursi al-wilada),... Une fois arrivée, la sage-femme examinait la future mère et aidée par ses parents, préparait tout ce dont on avait besoin: après quoi elle installait la patiente sur la chaise, l'encourageait et rassurait ses angoisses. ...il était de coutume que la sage-femme ramassât après l'accouchement le linge préparé pour recevoir le nouveau-né.... (pp. 62-63). En résumé, les fêtes à l'occasion des naissances dans la caste militaire ressemblait beaucoup à celles des noces.

Ainsi la mère du nouveau-né revêtait des habits neufs, et faisait le tour du foyer avec cérémonie, entourée de bougies et précédée par la sage-femme qui portait le bébé. En tête de ce cortège une autre femme tenait un plat contenant un mélange de sel et de cumin qu'elle jetait à la volée dans la maison. En outre, on brûlait un encens spécial, dit 'encens d'accouchement' qui protégeait des maladies et du mauvais œil.
La sage-femme marocaine, personnage important de son quartier, souvent âgée, veuve et respectable, pleine d'expérience et de sagesse, un peu sorcière, allant de maison en maison, au courant de la vie familiale de toutes ses clientes, jouit malgré son habituelle pauvreté d'une certaine considération. On l'invite à participer à la plupart des événements importants de la vie. En dehors de l'accouchement proprement dit, de la cérémonie de l'imposition du nom et de la sortie du nourrisson le quarantième jour, la 'qabla' assiste à la circoncision.

C'est elle aussi qui tient la mariée au henné, qui intervient dans les querelles du ménage pour les appaiser, qui ramène chez elle la femme qui s'est enfui chez sa mère, après une scène avec son mari.

Elle est aussi laveuse de morts (ghessala). Si elle est appelée chez une femme avant qu'elle n'ait rendu le dernier soupir, elle se penche sur l'agonisante et lui dit la formule 'la ilaha illa llah.' Après la mort elle ferme les yeux du cadavre, le nettoie et le lave avant de l'envelopper dans un nombre impair de vêtements ou de pièces d'étoffes entre lesquelles elle met des aromates.

...et la veuve Dentu se tenait debout aux pieds du lit avec un visage de circonstance, un visage de femme d'expérience que rien n'étonne. Garde-malade, sage-femme et veilleuse des morts, recevant ceux qui viennent, recueillant leur premier cri, lavant de la première eau leur chair nouvelle, la roulant dans le premier linge, puis écoutant avec la même quiétude la dernière parole, le dernier râle, le dernier frisson de ceux qui partent, faisant aussi leur dernière toilette, épongeant avec du vinaigre leur corps usé, l'enveloppant du dernier drap, elle s'était fait une indifférence inébranlable à tous les accidents de la naissance ou de la mort.
...parce-qu'il arrive que dans l'accouchement le foetus en sortant présente la main ou le pied, ce qui immanquablement cause de grandes douleurs. Pour lors, quoiqui les sages-femmes repoussent adroitement le foetus il ne se peut faire que la mère n'en ressente pas de cruels maux: d'ou vient que beaucoup de femmes, si elles ne sont extrêmement fortes et robustes, s'en trouvent tellement faibles, qu'elles sont en danger d'en mourir.

La philosophie qui domine sous l'empire néostoicisme, considère en effet que le foetus n'est qu'une partie des viscères de la mère tant qu'il n'a pas reçu le souffle vital ou anima, c'est à dire jusqu'au moment de sa naissance quand il respire pour la première fois.
APPENDIX C

GERMAN TEXTS (REPRODUCTION OF ORIGINAL)

Quotation 1

Das dritte
kennen, vor welcher sy mit hande es thüsse. Und wie bald
sy das weist, so es die zyt erlyden mag, und der handel
heit mag haben, sol die Gebärte die schwanger ströw mit
geleizt und gschickten worten trößen/stercken und erst
manen, dass sy wolle tapfret und handtlich syn/das best
thun/vnd strengvolgen. Gegen den anderen frauen die
ouch zügegen sind/ouch berlychen thun/vnd dem nach
die schwanger ströw/sampt den anderen wyberen heiss-
fen und der kniuen/vnd Gott den allmächtigen ermanet
anbättten und ansissen/mit einem andächtigen Vatter
unser/damit jen verlyhen und geben wolde sin hilff/
tröß stund und gnad darzu/mit einer glüchhaftigen stund.
Und so sy bätter hand/heissen widerum vsjon/ouch
die frauen in dem namen Gottes heissen sigen vsden
stāl darzu verordnet; der dass also gemacht sol syn/wie
härzhacht statt.

Quotation 2

Ein Abortivmittel rieth auch Hippocrates in dem
Buche De natura peri einer Harfenspielerin, und
obgleich er ausspricht, dass keiner Frau ein
Phthorion gereicht werden duerfe, weil es Sache der
Heilkunst sei, dass von der Natur Erzeugte zu
schutzen und zu erhalten, so hat er in diesem Falle
doch bewirkt, dass nach 7 maligem Springen eine
angeblich 6 Tage alte Frucht abging, die er
moeglichst genau beschreibt.
GLOSSARY OF MEDICAL TERMS

Astringent Tending to draw together or constrict tissue. An astringent substance or drug, such as alum.

Betony Stachys officinalis, native to Eurasia, having a spike of reddish purple flowers.

Calculus Abnormal concretion in the body, usually formed of mineral salts; a stone, as in the gallbladder, the kidney or urinary tract.

Cauterization Branding, used for scarring or burning the skin or tissues by means of heat or caustic chemicals.

Clavicle Collarbone.

Cranioclasty Breaking of the skull with a cranioclast, an instrument like a strong forceps used for crushing and extracting the fetal head after perforation.

Cupping Formation of a hollow or cup-shaped excavation. Application of a glass; formerly used as one of the methods to produce slow bleeding.

Dittany Origanum dictamnus. An aromatic Old World Plant, formerly believed to have magical powers.

Electuary A drug mixed with sugar or honey into a pasty mass suitable for oral administration.

Embryotomy Dissection of a fetus to aide delivery.

Emetic A substance that causes vomiting.
<table>
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<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>Ilium</td>
<td>The uppermost and widest of three bones comprising one of the lateral halves of the pelvis.</td>
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<tr>
<td>Mallow</td>
<td>Plant of the genus Malva.</td>
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<tr>
<td>Occipital</td>
<td>Pertaining to the occiput; located near the occipital bone, at the back of the head.</td>
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<tr>
<td>Orifice</td>
<td>A mouth or vent; an apperture of a cavity.</td>
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<tr>
<td>Penny Royal</td>
<td>Eurasian plant. Yields a useful aromatic oil.</td>
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<tr>
<td>Perineum</td>
<td>The portion of the body in the pelvis occupied by urogenital passages and the rectum.</td>
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<tr>
<td>Phlebotomy</td>
<td>Incision of a vein, as for letting of blood.</td>
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<tr>
<td>Phlegm</td>
<td>Thick mucus.</td>
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<tr>
<td>Podalic Version</td>
<td>Manipulation of a fetus in the uterus to bring it into favorable position for delivery.</td>
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<tr>
<td>Pubes</td>
<td>The pubic region.</td>
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<tr>
<td>Pudendum</td>
<td>The external genital organs.</td>
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<tr>
<td>Puerperal Fever</td>
<td>Infection of the endometrium and of the blood stream following childbirth. Also called &quot;childbed fever.&quot;</td>
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<td>Purgative</td>
<td>Tending to cleanse or purge; especially tending to cause evacuation of the bowels.</td>
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<tr>
<td>Putrefaction</td>
<td>Decomposition, break-down of organic matter, usually by bacterial action.</td>
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<tr>
<td>Symphysis</td>
<td>A growing together, especially of bones.</td>
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<tr>
<td>Uvula</td>
<td>The small conical fleshy mass of tissue suspended from the center of the soft palate above the back of the tongue.</td>
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<tr>
<td>Vaginal speculum</td>
<td>An instrument for dilating the opening of the vagina for medical examination.</td>
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<tr>
<td>Vescicle/vesical</td>
<td>Small bladder or sac containing fluid.</td>
</tr>
<tr>
<td>Viscera</td>
<td>Pl., internal organs of the body, esp. those contained in abdominal and thoracic cavities.</td>
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LIST OF REFERENCES CITED


General References


